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# **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 AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

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

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

#### **WARNING:**

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

Precaution Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006225829

#### 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.

For vehicle with 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 operation procedure below before starting the repair operation.

#### OPERATION PROCEDURE

Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

- 2. Turn the push-button ignition switch to ACC position. (At this time, the steering lock will be released.)
- Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
- Perform the necessary repair operation.

## **PRECAUTIONS**

#### < PRECAUTION >

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.)

Perform self-diagnosis check of all control units using CONSULT-III.

# Precautions For Xenon Headlamp Service

# INFOID:0000000006225830

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#### **WARNING:**

Comply with the following warnings to prevent any serious accident.

- Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.
- Never work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)
- Never touch the bulb glass immediately after turning it OFF. It is extremely hot.

#### **CAUTION:**

Comply with the following cautions to prevent any error and malfunction.

- Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)
- Never perform HID circuit inspection with a tester.
- Never touch the xenon bulb glass with hands. Never put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

Work INFOID:0000000006225831

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their
- 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:0000000006225832

	Tool name	Description
Engine ear	SIIA0995E	Locates the noise
Remover tool	JMKIA3050ZZ	Removes the clips, pawls, and metal clips
Power tool	PIIB1407E	
Hook and pick tool	JMJIA0490ZZ	Press tumbler stopper

# SYSTEM DESCRIPTION

**COMPONENT PARTS** DOOR LOCK SYSTEM

DOOR LOCK SYSTEM: Component Parts Location

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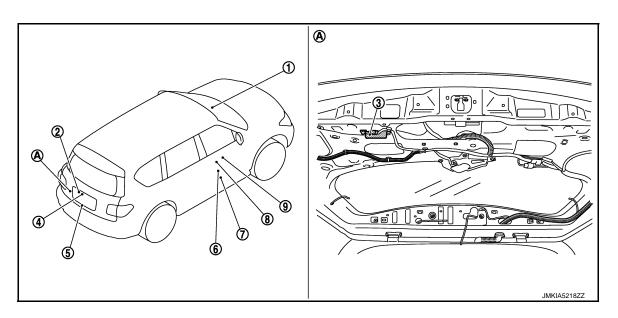
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1.	Fuel lid lock actuator	2.	Remote keyless entry receiver	3.	Inside key antenna (luggage room)
4.	Inside key antenna (console)	5.	Air bag diagnosis sensor unit Refer to <u>SRC-8</u> , "Component Parts <u>Location"</u>	6.	A/T assembly (TCM) Refer to TM-10, "A/T CONTROL SYSTEM: Component Parts Location"
7.	Inside key antenna (instrument center)	8.	IPDM E/R Refer to PCS-4, "Component Parts Location"	9.	Horn
10	. Intelligent Key warning buzzer	11.	BCM Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location"	12.	Power window main switch (door lock and unlock switch)
13	. Outside key antenna (driver side)	14.	Front door switch (driver side)	15.	Front door lock assembly (driver side)
16	. Front door request switch (driver side)				
A.	View with luggage side finisher lower LHD and rear speaker removed	B.	View with luggage side finisher upper removed	C.	Under the second seat seatback
D.	View with console rear finisher re-	E.	View with cluster lid C removed	F.	Engine room LH



- Push-button ignition switch
- Back door opener switch
- Front door switch (passenger side) 7.
- View with back door finisher inner removed
- Back door request switch
- Back door lock assembly

  - Front door request switch (passenger side)
- 3. Outside key antenna (back door)
- Front door lock assembly (passenger side)
- Outside key antenna (passenger side)

# DOOR LOCK SYSTEM: Component Description

INFOID:0000000006225834

Item	Function
BCM	Controls the door lock system
IPDM E/R	Sounds horn via CAN communication between BCM
Air bag diagnosis sensor unit	Transmits air bag signal to BCM Refer to SRC-9, "Component Description"

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

Item	Function
Combination meter	<ul> <li>Displays each operation method guide and warning for system malfunction</li> <li>Performs operation method guide and warning with buzzer</li> <li>Transmits vehicle speed signal to CAN communication line</li> </ul>
TCM	Transmits shift position signal to BCM via CAN communication line
Remote keyless entry receiver	Receives Intelligent Key operation and transmits to BCM
Inside key antenna	Detects if Intelligent Key is inside the vehicle
Outside key antenna	Detects if Intelligent Key is outside the vehicle
Push-button ignition switch	Inputs push-button ignition switch ON/OFF condition to BCM
Door switch	Inputs door open/close condition to BCM
Door lock and unlock switch	Detects if door lock and unlock switch is press/release     Integrated in the power window main switch and front power window switch (passenger side)
Door request switch	Detects if each door request switch is press/release     Integrated in the outside handle (driver side, passenger side) and back door opener switch assembly
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound
Intelligent Key	The following functions are available when having and carrying electronic ID  • Door lock/unlock  • Engine start  • Remote control entry function is available when operating on button
Hazard warning lamp	Warns the user of the lock/unlock condition and inappropriate operations with the lamps blink
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door
Fuel lid lock actuator	Output lock/unlock signal from BCM and locks/unlocks fuel filler lid

# **AUTOMATIC BACK DOOR SYSTEM**

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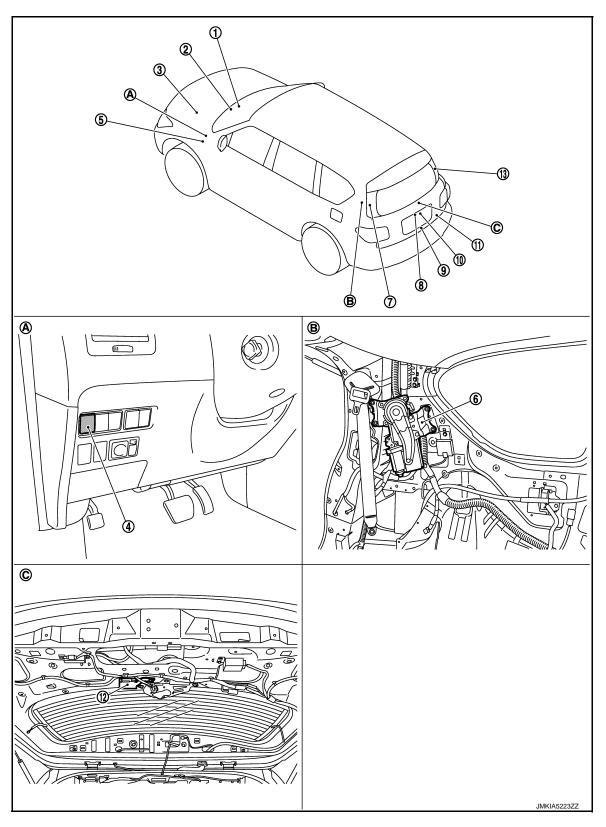
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# AUTOMATIC BACK DOOR SYSTEM : Component Parts Location

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- 1. Combination meter
- 2. BCM Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location"
- Automatic back door switch
- tion"

  5. Automatic back door main switch
- 3. ABS actuator and electric unit
  Refer to BRC-10, "Component Parts
  Location"
- 6. Automatic back door control module

# **COMPONENT PARTS**

# < SYSTEM DESCRIPTION >

per removed

- Touch sensor LH Back door request switch Back door lock assembly 10. Back door opener switch 11. Automatic back door close switch 12. Automatic back door warning buzzer 13. Touch sensor RH View with luggage side finisher up-View with back door finisher inner re-

# AUTOMATIC BACK DOOR SYSTEM : Component Description

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Item	Function
Automatic back door control mod- ule	<ul> <li>Automatic back door control unit, encoder, automatic back door motor and clutch are installed</li> <li>Automatic back door control unit: Controls the automatic back door system</li> <li>Encoder: Automatic back door control unit receives the pulse signals from encoders A and B that occurred due to synchronization with the back door operation. The automatic back door control unit calculates the back door position, operation direction, and operation speed according to the received pulse signals.</li> <li>Automatic back door motor: Inputs open/close signal from automatic back door control unit and activates the automatic back door open/close operation.</li> <li>Clutch: Performs the duty control of the power supply to control the operation speed of the back door.</li> </ul>
BCM	Transmits and receives signals to the automatic back door control module
ABS actuator and electric unit	Transmits vehicle speed signal to CAN communication line
Combination meter	Transmits vehicle speed signal to CAN communication line
Automatic back door warning buzzer	Warns the user of the automatic back door condition and inappropriate operations with the buzzer sounds
Touch sensor LH/RH	During back door close operation, the touch sensor detects any trapped foreign material
Back door opener switch	Detects if back door opener switch is press/release
Back door request switch	Detects if back door request switch is press/release
Automatic back door switch	Detects if automatic back door switch is press/release
Automatic back door main switch	Detects if automatic back door main switch is press/release
Automatic back door close switch	Detects if automatic back door close switch is press/release
Back door lock assembly	Back door closure motor, half latch switch, open switch, close switch and back door switch are installed  Closure motor: Inputs open/close signal from automatic back door control unit and activates the back door auto closure operation  Half latch switch: Starts the closure motor close operation  Open switch: Stops the closure motor open operation  Close switch: Stops the closure motor close operation  Back door switch: Inputs back door open/ close condition to BCM

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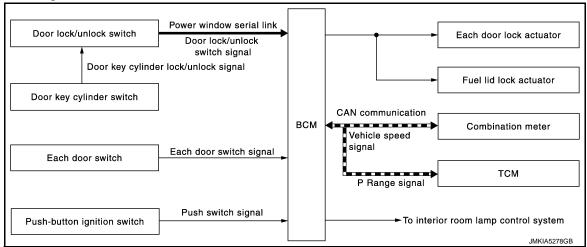
**DLK-15** Revision: 2010 May 2011 QX56

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# SYSTEM (POWER DOOR LOCK SYSTEM)

# System Diagram

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# System Description

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#### DOOR LOCK FUNCTION

Door Lock and Unlock Switch

- The door lock and unlock switch (driver side) is build into power window main switch.
- The door lock and unlock switch (passenger side) is build into front power window switch (passenger side).
- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all doors and fuel lid lock actuator are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors actuator and fuel lid lock actuator are unlocked.

#### Door Key Cylinder Switch

- With the mechanical key inserted in the door key cylinder on driver side, turning it to lock position, locks door lock actuator of all doors and fuel lid lock actuator.
- With the mechanical key inserted in the door key cylinder on driver side, turning it to unlock position once unlocks the driver side door, turning it to unlock position again within 60 seconds after the first unlock operation unlocks all of the other doors actuator and fuel lid lock actuator. (SELECTIVE UNLOCK OPERATION)
   Selective unlock operation mode can be changed using CONSULT-III.

Refer to DLK-39, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### DOOR KEY CYLINDER SWITCH POWER WINDOW FUNCTION

Driver side door key cylinder LOCK/UNLOCK operation can activate power window. Refer to <a href="PWC-8">PWC-8</a>, "System <a href="Description"</a>.

#### IGNITION POSITION WARNING FUNCTION

When door lock and unlock switch are operated while driver side door is open and ignition position is ACC or ON, door locks once but immediately unlocks.

## INTERIOR ROOM LAMP CONTROL FUNCTION

Interior room lamp is controlled according to door lock/unlock state, refer to <a href="INL-6">INL-6</a>, "INTERIOR ROOM LAMP CONTROL SYSTEM: System Description".

## AUTOMATIC DOOR LOCK/UNLOCK FUNCTION (LOCK OPERATION)

The interlock door lock function is the function that locks all doors linked with the vehicle speed or shift position. It has 2 types as per the following items.

#### Vehicle Speed Sensing Auto Door Lock

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

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

# SYSTEM (POWER DOOR LOCK SYSTEM)

## < SYSTEM DESCRIPTION >

P Range Interlock Door Lock

All doors are locked when shifting the selector lever from the P position to any position other than P.

BCM outputs the lock signal to all door lock actuators when it detects that the ignition switch is in the ON position, all doors are closed and the shift signal received from the TCM via CAN communication shifted from the P position to any position other than P.

Setting change of Automatic Door Lock/Unlock Function

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

(P) With CONSULT-III

The ON/OFF switching of the automatic door lock function and the type selection of the automatic door lock/ unlock function can be performed at the WORK SUPPORT setting of CONSULT-III.

Without CONSULT- III

The automatic door lock function ON/OFF can be switched by performing the following operation.

- Close all doors (door switch OFF)
- 2. Ignition switch: OFF→ON
- Press and hold the door lock and unlock switch for 5 seconds or more in the lock direction within 20 seconds after turning the ignition switch ON.
- 4. The switching complete when the hazard lamp blinks.

 $OFF \rightarrow ON$ : 2 blinks  $ON \rightarrow OFF$ : 1 blink

# AUTOMATIC DOOR LOCK/UNLOCK FUNCTION (UNLOCK OPERATION)

The automatic door lock/unlock function is the function that unlocks all doors linked with the key position or shift position. It has 2 types as per the following items.

IGN OFF Interlock Door Unlock

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

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

P Range Interlock Door Unlock

All doors are unlocked when shifting the selector lever from any position other than the P to P position.

BCM outputs the unlock signal to all door lock actuators when it detects that the ignition switch is in the ON position and the shift signal received from TCM via CAN communication is shifted from any position other than the P to P position.

Setting change of Automatic Door Lock/Unlock Function

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

(A) With CONSULT- III

The ON/OFF switching of the automatic door lock/unlock function and the type selection of the automatic door lock/unlock function can be performed at the WORK SUPPORT setting of CONSULT-III.

₩ Without CONSULT- III

The automatic door lock/unlock function ON/OFF can be switched by performing the following operation.

- 1. Close all doors (door switch OFF)
- Ignition switch: OFF→ON 2.

3. Press and hold the door lock and unlock switch for 5 seconds or more in the unlock direction within 20 seconds after turning the power supply position ON.

4. The switching is complete when the hazard lamp blinks.

 $\mathsf{OFF} \to \mathsf{ON}$ : 2 blinks  $\mathsf{ON} \to \mathsf{OFF}$ : 1 blink

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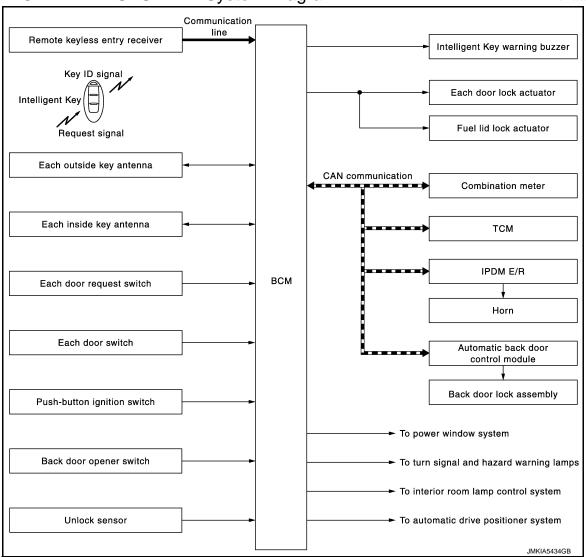
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# SYSTEM (INTELLIGENT KEY SYSTEM) INTELLIGENT KEY SYSTEM

# INTELLIGENT KEY SYSTEM: System Diagram

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# INTELLIGENT KEY SYSTEM: System Description

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The Intelligent Key system is a system that makes it possible to lock and unlock the door locks (door lock/unlock function) by carrying the Intelligent Key, which operates based on the results of electronic ID verification using two-way communication between the Intelligent Key and the vehicle (BCM).

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

- The settings for each function can be changed with CONSULT-III.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with CONSULT-III.

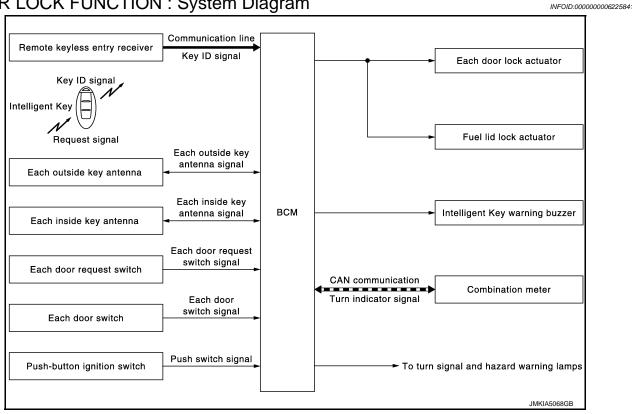
Function	Description	Refer
Door lock	Lock/unlock can be performed by pressing the request switch	DLK-19
Back door opener	The back door can be opened by carrying the Intelligent Key and pressing the back door opener switch	DLK-21
Remote keyless entry	Lock/unlock can be performed by pressing the remote controller button of the Intelligent Key	DLK-23

## < SYSTEM DESCRIPTION >

Function	Description	Refer
Key reminder	The key reminder buzzer sounds a warning if the door is locked with the key left inside the vehicle	DLK-26
Welcome light	When the Intelligent Key is carried, and vehicle doors are approached, the BCM illuminates interior room lamps and operates heart beat operation of the push-button ignition switch	DLK-26
Warning	If an action that does not meet the operating condition of the Intelligent Key system is taken, the buzzer sounds to inform the driver	DLK-27
Engine start	The engine can be turned on while carrying the Intelligent Key	SEC-12
Interior room lamp control	Interior room lamp is controlled according to door lock/unlock state	INL-6
Power window	Power window can be operated by Intelligent Key button operation	PWC-8
Automatic drive positioner	Automatic drive positioner system can be operated by door unlock operation	ADP-11
Panic alarm	When Intelligent Key panic alarm button is pressed, horn sounds	SEC-18

# DOOR LOCK FUNCTION

# DOOR LOCK FUNCTION: System Diagram



# DOOR LOCK FUNCTION: System Description

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

## **OPERATION DESCRIPTION**

- When the BCM detects that each door request switch is pressed, it activates the outside key antenna and inside key antenna corresponding to the pressed door request switch and transmits the request signal to the Intelligent Key. And then, check that the Intelligent Key is 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 BCM via remote keyless entry receiver.
- BCM receives the key ID signal and compares it with the registered key ID.
- BCM locks/unlocks each doors (except back door).
- BCM sounds Intelligent Key warning buzzer (lock: 2 times, unlock: 1 time) and blinks hazard warning lamps (lock: 2 times, unlock: 1 time) at the same time as a reminder.

**DLK-19** Revision: 2010 May 2011 QX56

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## < SYSTEM DESCRIPTION >

#### **OPERATION CONDITION**

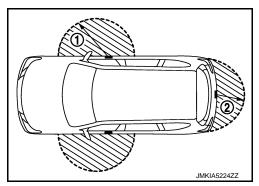
If the following conditions are satisfied, door lock/unlock operation is performed if the door request switch is operated.

Each door request switch operation	Operation condition
Lock	<ul> <li>All doors are closed</li> <li>Panic alarm is not activated</li> <li>P position warning is not activated</li> <li>Intelligent Key is outside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area*</li> </ul>
Unlock	<ul> <li>Panic alarm is not activated</li> <li>Intelligent Key is outside 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 locked/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, passenger door handles (1) and back door handle (2). However, this operating range depends on the ambient conditions.



#### SELECTIVE UNLOCK FUNCTION

#### **Lock Operation**

When an LOCK signal is sent from door request switch (driver side, passenger side, back door), all doors and fuel filler lid are locked.

#### **Unlock Operation**

- When an UNLOCK signal from driver side door request switch is transmitted, driver side door and fuel filler lid are unlocked. When another UNLOCK signal is transmitted within 60 seconds, all other doors (except back door) are unlocked.
- When an UNLOCK signal from passenger side door request switch is transmitted, passenger side door is unlocked. When another UNLOCK signal is transmitted within 60 seconds, all other doors (except back door) and fuel filler lid are unlocked.
- When an UNLOCK signal from back door request switch is transmitted, back door open permission is set.
   When another UNLOCK signal is transmitted within 60 seconds, all doors (except back door) and fuel filler lid are unlocked.

#### **How To Change Selective Unlock Operation Mode**

Selective unlock operation mode can be changed using CONSULT-III.

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

#### HAZARD AND BUZZER REMINDER FUNCTION

During lock or unlock operation by each door request switch, the hazard warning lamps and Intelligent Key warning buzzer blinks or honks as a reminder.

Operating Function Of Hazard And buzzer Reminder

Operation	Hazard warning lamp blinks	Intelligent Key warning buzzer honks
Unlock	Once	Once
Lock	Twice	Twice

Hazard and buzzer reminder does not operate in the following conditions.

Ignition switch position is ON

## < SYSTEM DESCRIPTION >

Door is open (only lock operation)

## **How To Change Hazard And Buzzer Reminder Mode**

Hazard and buzzer reminder mode can be changed using CONSULT-III.

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

#### AUTO DOOR LOCK FUNCTION

After door is unlocked by door request switch operation and if 60 seconds or more passes without performing the following operation, all doors and fuel filler lid are automatically locked. However, operation check function does not activate.

Operating condition	<ul><li>Door switch is ON (door is open)</li><li>Door is locked</li><li>Push switch is pressed</li></ul>
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#### **How To Change Auto Door Lock Operation Mode**

Auto door lock operation mode can be changed using CONSULT-III.

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

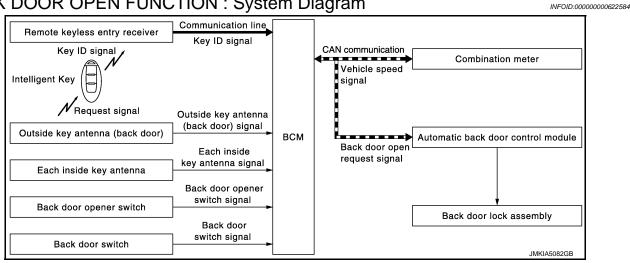
#### LIST OF OPERATION RELATED PARTS

Parts marked with  $\times$  are the parts related to operation.

Function	Intelligent Key	Remote keyless entry receiver	Door switch	Door request switch	Door lock actuator	Fuel lid lock actuator	Inside key antenna	Outside key antenna	CAN communication system	BCM	Hazard warning lamp	Intelligent Key warning buzzer	Push-button ignition switch
Door lock/unlock function	×	×	×	×	×	×	×	×		×			
Hazard reminder function									×	×	×	×	
Selective unlock function	×			×	×	×	×	×		×			
Auto door lock function	×				×	×				×			×

# BACK DOOR OPEN FUNCTION

# BACK DOOR OPEN FUNCTION: System Diagram



# BACK DOOR OPEN FUNCTION: System Description

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This section describes the operation of the back door opener switch.

**DLK-21** Revision: 2010 May 2011 QX56

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## < SYSTEM DESCRIPTION >

- The back door open function can open the back door by pressing the back door opener switch while carrying the Intelligent Key and all doors (except back door) are locked.
- The back door open function enables the back door to be opened by pressing back door opener switch after BCM transmits UNLOCK signal to each door.Refer to <a href="DLK-31">DLK-31</a>, "System Description".

#### **BACK DOOR OPEN**

While back door open in the permitted state, back door opens when back door opener switch is pressed after back door request switch is operated. Back door open also can be operated according to the following procedure.

- When the BCM detects that back door opener switch is pressed, it activates the outside key antenna (back door) and inside key antenna and transmits the request signal to the Intelligent Key. And then, check that the Intelligent Key is near the back 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 BCM via remote keyless entry receiver.
- BCM receives the key ID signal and compares it with the registered key ID.
- If the verification result is OK, BCM transmits the back door open request signal to automatic back door control unit via CAN communication.
- Automatic back door control unit transmits back door open request signal to back door lock assembly and back door is open.
- When the back door is open, automatic back door system performs waiting operation for next back door close operation.

The operation of then back door open is the same as the automatic back door system, refer to <a href="DLK-31">DLK-31</a>, <a href="System Description"</a>.

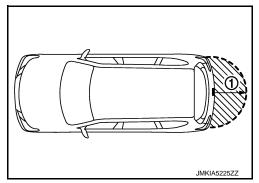
#### OPERATION CONDITION

If the following conditions are not satisfied, back door open operation is not performed even if the back door opener switch is operated.

Back door opener switch operation	Operation condition
Back door open	Vehicle speed is less than 5 km/h (3 MPH) Intelligent Key is within outside key antenna (back door) detection area Back door is closed Panic alarm is not activated

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

The outside key antenna detection area of back door open function is in the range of approximately 80 cm (31.50 in) surrounding the outside key antenna (back door) (1). However, this operating range depends on the ambient conditions.



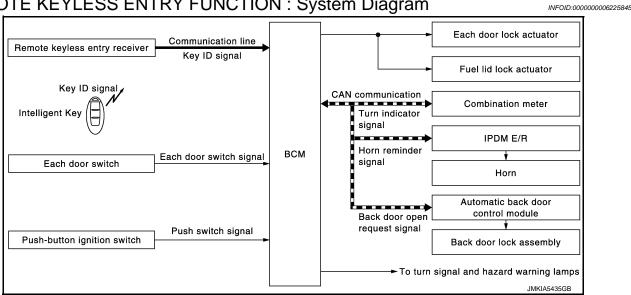
# LIST OF OPERATION RELATED PARTS

Parts marked with  $\times$  are the parts related to operation.

Function	Intelligent Key	Remote keyless entry receiver	Back door opener switch	Back door lock assembly	Inside key antenna	Outside key antenna (back door)	CAN communication system	BCM	Automatic back door control module
Back door open function	×	×	×	×	×	×	×	×	×

# REMOTE KEYLESS ENTRY FUNCTION

# REMOTE KEYLESS ENTRY FUNCTION: System Diagram



# REMOTE KEYLESS ENTRY FUNCTION: System Description

INFOID:0000000006225846

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

# **OPERATION**

Remote keyless entry system controls operation of the following items.

- Door lock/unlock function
- · Selective unlock function
- Auto door lock function
- Hazard and horn reminder function
- Automatic back door open/close function

#### OPERATION AREA

To check that the Intelligent Key works normally, use within 1 m (3 ft) range of each doors, however the operable range may differ according to surroundings.

#### DOOR LOCK/UNLOCK FUNCTION

- When door lock/unlock button of the Intelligent Key is pressed, lock signal or unlock signal transmitted from Intelligent Key to BCM via remote keyless entry receiver.
- When BCM receives the door lock/unlock signal, it operates all door lock actuators and fuel lid lock actuator, blinks the hazard lamp (lock: 2 time, unlock: 1 times) and horn chirp signal to IPDM E/R at the same time as a reminder.
- IPDM E/R honks horn (lock: 1 time) as a reminder.

**DLK-23** Revision: 2010 May 2011 QX56

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## < SYSTEM DESCRIPTION >

## **OPERATION CONDITION**

If the following condition are satisfied, remote keyless entry operation is performed when the Intelligent Key is operated.

Remote controller operation	Operation condition			
Lock	<ul><li>Panic alarm is not activated</li><li>P position warning is not activated</li></ul>			
Unlock	Panic alarm is not activated			

#### SELECTIVE UNLOCK FUNCTION

- When an LOCK signal is transmitted from Intelligent Key, all doors and fuel filler lid are locked.
- When an UNLOCK signal is transmitted from Intelligent Key once, driver side door and fuel filler lid are unlocked.
- Then, if an UNLOCK signal is transmitted from Intelligent Key again within 60 seconds, all other doors (except for back door) are unlocked.

# How to change selective unlock operation mode.

Selective unlock operation mode can be changed using CONSULT-III.

Refer to DLK-39, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### **AUTO DOOR LOCK FUNCTION**

After door is unlocked by Intelligent Key button operation and if 60 seconds or more passes without performing the following operation, all doors are locked. However, operation check function does not activate.

Operating condition	<ul><li>Door switch is ON (door is open)</li><li>Door is locked</li><li>Push switch is pressed</li></ul>
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#### How to change auto door lock operation mode.

Auto door lock mode can be changed using CONSULT-III.

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

# HAZARD AND HORN REMINDER FUNCTION

When doors are locked or unlocked by Intelligent Key, BCM blinks hazard warning lamps as a reminder. The hazard and horn reminder has a horn chirp mode (C mode) and a non-horn chirp mode (S mode).

Operating Function of Hazard and Horn Reminder

	C n	node	S mode			
Intelligent Key operation	Lock	Unlock	Lock	Unlock		
Hazard warning lamp blinks	Twice	Once	Twice	_		
Horn sound	Once	_	_	_		

Hazard and horn reminder does not operate in the following conditions.

- · Ignition switch position is ON.
- Door is open (only lock operation)

# How to Change Hazard and Horn Reminder Mode

## (II) With CONSULT-III

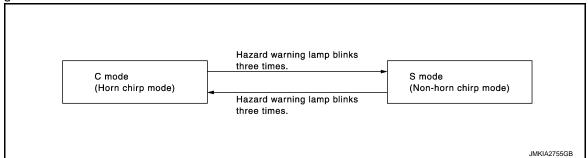
Hazard and horn reminder operation mode can be changed using CONSULT-III.

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

# **Without CONSULT-III**

# < SYSTEM DESCRIPTION >

When LOCK and UNLOCK signals are sent from the Intelligent Key for more than 2 seconds at the same time, the hazard and horn reminder mode is changed and hazard warning lamp blinks and horn sounds as per the following items:



#### AUTOMATIC BACK DOOR OPEN/CLOSE FUNCTION

When back door button of Intelligent Key is pressed for 0.4 second or more, back door open automatically for detailed description, refer to <u>DLK-31</u>, "System <u>Description"</u>.

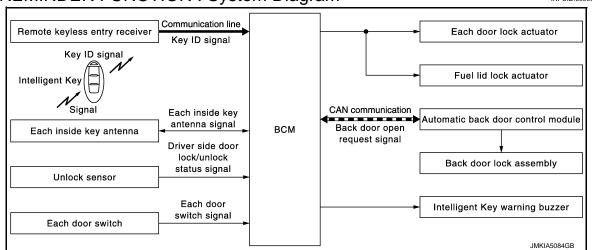
#### LIST OF OPERATION RELATED PARTS

Parts marked with  $\times$  are the parts related to operation.

Function	Intelligent Key	Door switch	Door lock actuator	Fuel lid lock actuator	Push-button ignition switch	CAN communication system	ВСМ	IPDM E/R	Horn	Combination meter	Hazard warning lamp	Automatic back door control module	Back door lock assembly
Door lock/unlock function	×	×	×	×			×						
Selective unlock function	×	×	×	×			×						
Auto door lock function	×	×	×	×	×		×						
Hazard and horn reminder function						×	×	×	×	×	×		
Automatic back door open/close function	×					×	×					×	×

# KEY REMINDER FUNCTION

# **KEY REMINDER FUNCTION: System Diagram**



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# KEY REMINDER FUNCTION: System Description

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Key reminder is the function that prevents the key from being left in the vehicle. Key reminder has the following 3 functions.

Key remainder func- tion	Operation condition	Operation
Driver door closed*	Right after driver side door is closed under the following conditions  Door lock operation is performed  Driver side door is open  Driver side door is in lock state	All doors (except back door) and fuel filler lid unlock
Door is open or closed	Right after all doors are closed under the following conditions Intelligent Key is inside the vehicle Any door is open All doors (except back door) are locked by door lock and unlock switch or door lock knob	All doors (except back door) and fuel filler lid unlock     Honk Intelligent Key warning buzzer
Back door is closed	Right after back door is closed under the following conditions  Intelligent Key is inside vehicle  All doors (except for back door) are closed  All doors (except for back door) are locked	All doors (except for back door) and fuel filler lid unlock     Back door can open with back door opener switch     Honk Intelligent Key warning buzzer

<sup>\*:</sup> If the door closing impact shocks the door lock knob, or contacts against baggage with the door lock knob might activate the door locks accidentally but unlock operation is perform in these cases.

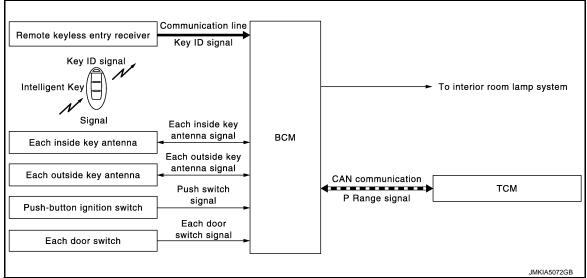
#### CAUTION:

• 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 does 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 for the open door.

# WELCOME LIGHT FUNCTION

# WELCOME LIGHT FUNCTION: System Diagram

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# WELCOME LIGHT FUNCTION: System Description

INFOID:0000000006225850

The welcome light function operates as per the following. When the Intelligent Key is within the outside key antenna detection area, the BCM turns on interior room lamp\* and operates heart beat operation of the push-button ignition switch.

\*: Settings for map lamp, foot lamp, personal lamp, and puddle lamp are available.

#### OPERATION DESCRIPTION

## < SYSTEM DESCRIPTION >

- When the BCM detects that the Intelligent Key is within the outside key antenna detection area. BCM transmits the request signal to the Intelligent Key and check it is near the door.
- Intelligent Key receives the request signal and transmits the key ID signal to the BCM via remote keyless entry receiver.
- BCM receives the key ID signal and compares it with the registered key ID.
- BCM illuminates lamps that are set, when key ID verification is OK.

#### TIMER FUNCTION

BCM can operate welcome light function, using the timer function, for 9 days, after key switch is turned OFF. The timer function resets when the engine is started. Operating period of timer function may differ depending on battery size.

: Timer function does not stop if another Intelligent Key that has a different key ID is detected within the interior antenna detection area, when starting the engine.

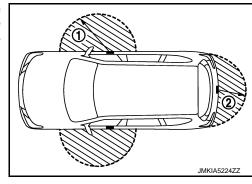
#### OPERATION CONDITION

If the following condition are satisfied, welcome light function is operated.

Function	Operation condition
Welcome light function	<ul> <li>All door are closed</li> <li>All doors is locked</li> <li>Ignition switch: OFF position</li> <li>Shift position: P position</li> <li>Intelligent Key is outside the vehicle</li> <li>Timer function is activated</li> </ul>

## **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, passenger door handles (1) and back door handle (2). However, this operating range depends on the ambient conditions.



## WELCOME LIGHT FUNCTION SETTING

Welcome light function operation mode can be changed using CONSULT-III

With CONSULT-III

Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

The welcome light function ON/OFF can be switched by performing the following operation.

- Turn ignition switch: OFF→ON
- Press and hold the driver side door request switch for 5 seconds or more within 20 seconds after turning the ignition switch ON.
- The switching is complete when combination meter buzzer sounds.

# WARNING FUNCTION

# WARNING FUNCTION: System Description

# **OPERATION DESCRIPTION**

The warning function are as per the following items and are given to the user as warning information and warnings using combinations of Intelligent Key warning buzzer, combination meter buzzer, KEY warning lamp and information display in combination meter.

- Intelligent Key system malfunction
- OFF position warning
- P position warning
- ACC warning

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# < SYSTEM DESCRIPTION >

- · Take away warning
- Door lock operation warning
- Engine start information
- Steering lock information
- Intelligent Key low battery warning
- Key ID warning
- Key ID verification information

# **OPERATION CONDITION**

Once the following condition from below is established, alert or warning is executed.

Warning/Inform	nation functions	Operation procedure
Intelligent Key system ma	alfunction	When a malfunction is detected on BCM, "KEY" warning lamp illuminates
	For internal	<ul><li>Ignition switch: ACC position</li><li>Door switch (driver side): ON (Door is open)</li></ul>
OFF position warning	For external	OFF position warning (For internal) is in active mode, driver side door is closed <b>NOTE:</b> OFF position (For external) active only when each of the sequence occurs as below: P position warning → ACC warning → OFF position warning (For internal) → OFF position warning (For internal)
P position warning	For internal	<ul> <li>Shift position: Except P position</li> <li>Engine is running to stopped (Ignition switch is ON to OFF)</li> </ul>
P position warning	For external	Warning is activated when driver door is closed from the open position while the P position warning (for inside vehicle) is ON
ACC warning		<ul> <li>When P position warning is in active mode, shift position changes P position</li> <li>Ignition switch: ACC position</li> </ul>
	Door is open to close	<ul> <li>Ignition switch: Except LOCK position</li> <li>Door switch: ON to OFF (Door is open to close)</li> <li>Intelligent Key cannot be detected inside the vehicle</li> </ul>
Take away warning	Door is open	<ul> <li>Door switch: ON (Door is open)</li> <li>Key ID verification every 5 seconds when registered Intelligent Key cannot be detected inside the vehicle</li> </ul>
	Push-button ignition switch operation	<ul> <li>Ignition switch: Except LOCK position</li> <li>Press push-button ignition switch</li> <li>Intelligent Key cannot be detected inside the vehicle</li> </ul>
Door lock operation warn	ing	When door lock operation is requested while door lock operating condition of door request switch or Intelligent Key are not satisfied
	Ignition switch is ON position	<ul> <li>Ignition switch: ON position</li> <li>Shift position: P position*</li> <li>Engine is stopped</li> </ul>
Engine start information	Ignition switch is except ON position	<ul> <li>Ignition switch: Except ON position</li> <li>Shift position: P position*</li> <li>Intelligent Key is inserted in key slot or Intelligent Key can be detected inside the vehicle</li> </ul>
Steering lock information	1	When steering lock cannot be released after ignition switch is turned ON
Intelligent Key low battery warning		When Intelligent Key is low battery, BCM is detected after ignition switch is turned ON
Key ID warning		When registered Intelligent Key cannot be detected inside the vehicle after ignition switch is turned ON
Key ID verification information		<ul> <li>When registered Intelligent Key cannot be detected inside the vehicle</li> <li>Intelligent Key battery is discharged</li> <li>When NATS antenna amp cannot be detected NATS ID</li> </ul>

# WARNING METHOD

The following table shows the alarm or warning methods with chime.

# < SYSTEM DESCRIPTION >

		"KEY"	Information disclar	Warning chime	
Warning/Info	ormation functions	warning lamp	Information display (combination meter)	Combination Intelligent Key warning buzzer	
ntelligent Key	system malfunction	Indicate	_	_	_
OFF position warning	For internal For external	_	_ _	Activate —	— Activate
	For internal			Activate	_
P position warning	For external	_	SHIFT JMKIA0037GB	_	Active
ACC warning		_	PUSH  JMKIA0047GB	Activate	_
	Door is open to close		JININAU47GB	Activate	Activate
Take away warning	Push button-ignition switch operation	_	NO KEY	— Activate	
	Request switch		JMKIA4906ZZ		
Door lock op- eration warn-	operation	_	_	_	Activate
ng	Intelligent Key	_	_	_	Activate
Key ID warnin։	9	_	NO KEY  JMKIA4906ZZ	_	_
Engine start in	formation	-	BRAKE JMKIA0032GB	_	_
Steering lock ii	nformation	_	JMKIA0033GB	_	_

# < SYSTEM DESCRIPTION >

	"KEY"	Information display	Warnii	ng chime
Warning/Information functions	warning lamp	(combination meter)	Combination meter buzzer	Intelligent Key warning buzzer
Intelligent Key low battery warning	_	JMKIA3049ZZ	_	_
Key ID verification information	_	JMKIA4907ZZ	_	_

# LIST OF OPERATION RELATED PARTS

Parts marked with  $\times$  are the parts related to operation.

Warnir	ng function	Intelligent Key	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter buzzer	CAN communication system	BCM	Information display	"KEY" warning lamp
Intelligent Key system malfu	ınction									×	×		×
OFF position warning	For internal			×					×	×	×		
Of F position warning	For external			×				×			×		
P position warning			×						×	×	×	×	×
ACC warning			×						×	×	×	×	
	Door is open or close	×		×		×		×	×	×	×	×	×
Take away warning	Door is open	×		×		×				×	×	×	×
	Push-button ignition switch operation	×	×			×			×	×	×	×	×
Door lock operation warning	J	×		×	×	×	×	×			×		
Key ID warning			×			×				×	×	×	×
	Ignition switch is ON position	×	×			×				×	×	×	
Engine start information	Ignition switch is except ON position	×	×			×				×	×	×	
Steering lock information			×							×	×	×	
Intelligent Key low battery w	arning	×				×				×	×	×	×
Key ID verification informati	on	×				×				×	×	×	

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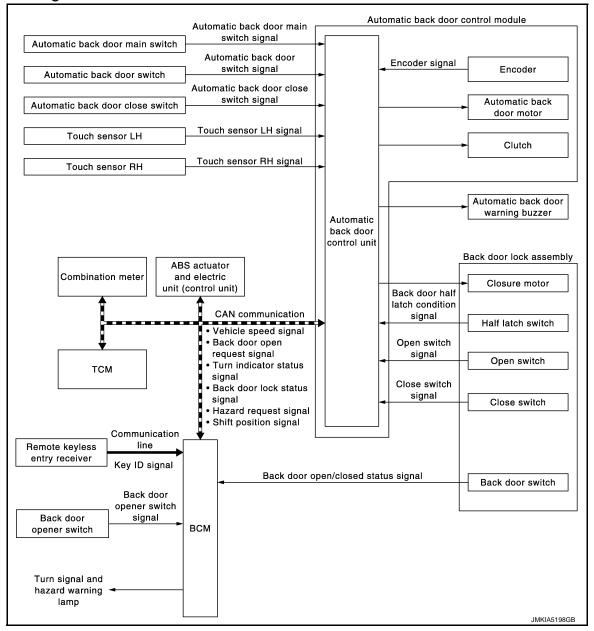
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< SYSTEM DESCRIPTION >

# SYSTEM (AUTOMATIC BACK DOOR SYSTEM)

System Diagram



# System Description

The automatic back door system performs the automatic open/close operation of the back door by operating the automatic back door switch, the automatic back door close switch, the back door opener switch, and Intelligent Key.

#### AUTOMATIC BACK DOOR OPEN/CLOSE FUNCTION

- In the case of the back door fully closed, operate the automatic back door switch, Intelligent Key or back door opener switch with the back door unlock. The back door closure motor releases the latch, then the automatic back door motor opens the back door to the fully open position. Reverse the closure motor to the neutral position simultaneously.
- In the case of the back door fully open, operate the automatic back door switch, Intelligent Key or automatic
  back door close switch. The automatic back door motor closes the back door to the half-latch position, then
  the back door closure motor to the full latch position. Then, reverse the closure motor to the neutral position.

#### BACK DOOR AUTO CLOSURE FUNCTION

## < SYSTEM DESCRIPTION >

#### Open Function

When back door opener switch is pressed and automatic back door main switch in the OFF position, BCM transmits the back door open request signal to automatic back door control unit via CAN communication, and automatic back door control unit opens back door lock assembly.

#### Closure Function

When the back door is closed to the half-latch position, the motor drives to rotate the latch lever and pulls it in from half latched to fully latched and automatically closes the door. Then, reverse the closure motor to the neutral position.

## WARNING FUNCTION

The warning function is as follows and gives the user warning information and warnings using automatic back door buzzer and hazard.

# **Buzzer Operation Condition**

	Pattern	Time	Description
А	ON 200ms OFF JMKIA1862ZZ	0.75 sec.	Operation start announcement  Anti-pinch operation start announcement
В	Pi	2.0 sec.	During the closure operation, the touch sensor detects any trapped foreign material and stops halfway
С	Pi	Back door fully closed or vehi- cle is stopped	The conditions are not satisfied in the fully open position or during the operation, and then the operation continues
D	250ms 750ms OFF  JMKIA1863ZZ	During open/close operation	During operation announcement

#### ANTI-PINCH FUNCTION

During auto operation, if an object is detected by encoder pulse in the door's path, a warning chime sounds and the back door operates in the reverse direction to prevent pinching.

During auto close operation, if an object is detected by the touch sensors in the door's path, a warning chime sounds and the back door operates in the open direction until it is fully open.

#### **Operation Condition**

Detection method  Applicable operation		Encoder pulse	Touch sensor		
		Open/close operation	Close operation		
Stop the vehicle  Operation when  Operation when  Operation when	<ul> <li>Buzzer sounds (pattern A) and the back door stops in the fully-open position after reverse operation</li> <li>During closure (close) operation (at main switch OFF): Closure [open (neutral position return)] operation</li> </ul>				
any trapped for- eign material is de- tected	Running the vehicle	No reverse operation (buzzer sounds, pattern C)	<ul> <li>The back door reverses a certain amount, and then it reverses automatically to perform the auto close operation</li> <li>During closure (close) operation (at main switch ON): Closure (open) operation</li> </ul>		

# < SYSTEM DESCRIPTION >

Detection method	Encoder pulse	Touch sensor				
Non-reverse area	<ul> <li>Just after starting the motor operation</li> <li>Full range of closure operation</li> <li>Driving</li> </ul>	<ul> <li>Back door open operation</li> <li>Closure [open (return the latch to the neutral position)]</li> </ul>				
Switch operation during reverse operation	Receive					
Number of allowable reverse operations	Perform the intermittent clutch function after 2 reverse operations regardless of the operation direction					

## INTERMITTENT CLUTCH FUNCTION

If the main switch is turned to OFF during auto operation, the back door may be closed suddenly because the operation is interrupted immediately when the operation cannot be continued because of the detection of a system malfunction. Therefore, operate the clutch intermittently to stabilize the back door behavior and ensure safety.

## AUTOMATIC BACK DOOR OPEN/CLOSE OPERATION CONDITION

	Automa	atic back doc	or switch	Intellig	ent Key	Automat- ic back door close switch		or opener itch	
Operating direction	Fully close	$\operatorname{ed}  o \operatorname{Open}$	Fully open →Closed	Fully closed → Open	Fully open → Closed	Fully open → Closed	Fully close	$\operatorname{ed}  o \operatorname{Open}$	
Main switch	_	_	_	_	_	ON	N ON		
Ignition position	ON	ACC/ LOCK	_	_		_	ON	ACC/ LOCK	
Shift selector lever	P position	_	_	_	_	_	P position	_	
Vehicle speed				0 k	m/h				
Back door lock condition	-	_	_	_	_	_	Unl	ock*	
Touch sensor			l .	No	rmal		1		
Power supply (Automatic power back door control unit)		Approx. 11 V or more							

<sup>\*:</sup> If the registered Intelligent Key is used, the operation can be performed even if the back door is in the LOCK position

## CONTROL IF NOT WITHIN THE OPERATION CONDITIONS DURING THE OPERATION

If the back door is not within the operation conditions during the operation, the automatic back door control unit performs the control as follows.

Item (Condition)	Back door condition
Main Switch (ON $\rightarrow$ OFF)	Motor: OFF     Clutch: OFF (Intermittent clutch function)
Vehicle stop condition (open operation)  IGN ON and shift P position→IGN ON and other than P position  IGN OFF and shift N position → IGN ON and N position	The operation is continued
Operation condition release during the operation start announcement condition	Automatic back door function does not operate

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Item (Condition)	Back door condition	
Vehicle speed (0 km/h $\rightarrow$ More than 0 km/h)	Open operation	Operation stop and intermittent clutch function [Back door fully closed or buzzer sounds until the vehicle stops (pattern C)]
	Close operation	The operation is continued [buzzer sounds (pattern C) until back door fully closed]
Touch sensor (Normal → Open)	Open operation	The operation is continued (If the pinch is detected after that, the system switches to the intermittent clutch function)
	Close operation	Intermittent clutch function
	Closure (close) operation	Closure (open) operation and buzzer sounds (pattern B)
	Closure [open (return the latch to the neutral position)]	The operation is continued
Operation time (More than approx. 30 sec.)	Intermittent clutch function	
Back door opener switch $(OFF \to ON)$	Open/close operation	The operation is continued
	Closure (close) operation	Closure (open) operation and back door open
	Closure [open (return the latch to the neutral position)]	Back door open
Malfunction detected (IGN circuit, half latch switch and back door state)	Intermittent clutch function	

# TIME CHART FOR AUTOMATIC POWER BACK DOOR SYSTEM

Fully Closed to Fully Open Operation

When operating the automatic back door switch, automatic back door opener switch and Intelligent Key in the fully closed position, the system operates as follows.

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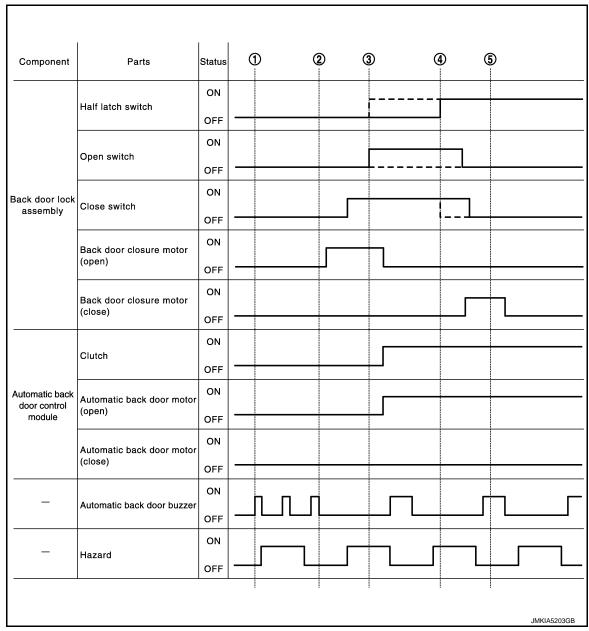
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## < SYSTEM DESCRIPTION >



- Operates the buzzer and hazard after the operation enable conditions are established
- 2. The back door closure motor performs the open operation after the buzzer (pattern A) stops sounding
- 3. Stops the back door closure motor open operation after turning the open switch to ON Then, operate the automatic back door motor and clutch to perform the back door open operation
- 4. The back door closure motor performs the close operation after turning the half latch switch to ON
- Stop the back door closure motor close operation and return the latch to the neutral position after turning the close switch to OFF

#### NOTE:

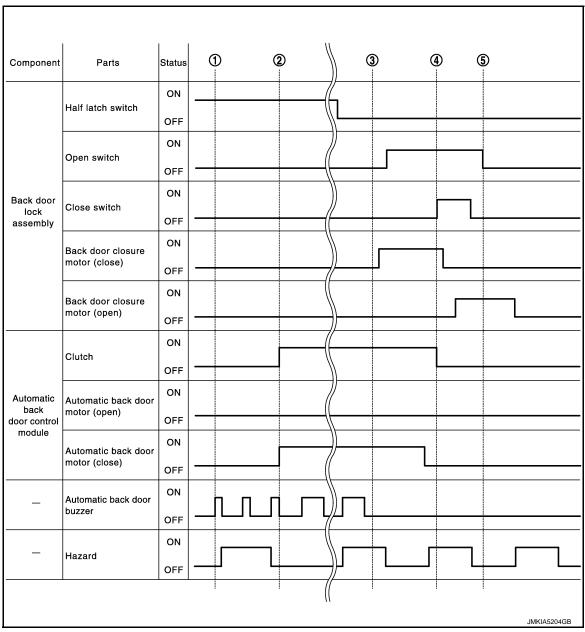
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In the operation of steps 3 and 4, the inputs of half latch switch, open switch, and close switch may be different according to the reaction force of the back door weather-strip. Refer to the area encircled by a broken line in the Time chart (Fully closed to fully open operation)

Fully Open to Fully Closed Operation

When operating the automatic back door switch, automatic back door close switch and Intelligent Key, the automatic back door system operates as follows.

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- Operates the buzzer and hazard after the operation enable conditions are established
- After the buzzer (pattern A) stops sounding, operates the automatic back door motor and clutch to perform the back door close operation
- 3. The back door closure motor performs the close operation after 300 msec. or more from turning the half latch switch to OFF
- 4. The back door closure motor performs the open operation after turning the close switch to ON
- 5. Stop the back door closure motor open operation and return the latch to the neutral position after turning the close switch to OFF

# **SYSTEM (INTEGRATED HOMELINK TRANSMITTER)**

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# SYSTEM (INTEGRATED HOMELINK TRANSMITTER)

# System Description

INFOID:0000000006256146

Item	Function
Integrated homelink transmitter	A maximum of 3 radio signals can be stored and transmitted to operate the garage door, etc.

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# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

INFOID:0000000006307583

#### APPLICATION ITEM

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

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

x: Applicable item

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

<sup>\*:</sup> This item is indicated, but not used.

### FREEZE FRAME DATA (FFD)

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

## < SYSTEM DESCRIPTION >

CONSULT screen item	Indication/Unit		Description
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odomete	r value) of the moment a particular DTC is detected
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"
	ACC>ON		While turning power supply position from "ACC" to "IGN"
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)
	ACC>OFF		While turning power supply position from "ACC" to "OFF"
	OFF>LOCK	<b>D</b>	While turning power supply position from "OFF" to "LOCK"
Vehicle Condition	OFF>ACC	Power position status of the moment a particular	While turning power supply position from "OFF" to "ACC"
	ON>CRANK	DTC is detected	While turning power supply position from "IGN" to "CRANKING"
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode
LOCK>	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is "ACC" (Ignition switch ACC)
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)
	CRANKING		Power supply position is "CRANKING" (At engine cranking)
IGN Counter	0 - 39	The number is 0 wher     The number increases     whenever ignition swit	at ignition switch is turned ON after DTC is detected in a malfunction is detected now. If $1 \rightarrow 2 \rightarrow 338 \rightarrow 39$ after returning to the normal condition to the OFF $\rightarrow$ ON. If $1 \rightarrow 39$ and $1 \rightarrow 39$ an
DOOR LOCK	1	1	
	CONSULT-	III Function (BCN	M - DOOR LOCK) INFOID:0000000006225855
		`	•
BCM CONSULT-III			
CONSULT-III perfor	ms the followin	g tunctions via CAN	communication with BCM.
<b>WORK SUPPORT</b>	•		

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## < SYSTEM DESCRIPTION >

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

### **DATA MONITOR**

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

## **ACTIVE TEST**

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

# **INTELLIGENT KEY**

### < SYSTEM DESCRIPTION >

# INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:000000000225856

### **WORK SUPPORT**

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode  On: Operate  Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode  On: Operate  Off: Non-operation
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by back door opener switch can be changed to operation with this mode  On: Operate  Off: Non-operation
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode  • MODE 1: 0.5 sec  • MODE 2: Non-operation  • MODE 3: 1.5 sec
TRUNK OPEN DELAY	Back door open button pressing to Intelligent Key button can be selected as per the following in this mode  • MODE 1: Press and hold  • MODE 2: Press twice  • MODE 3: Press and hold, or press twice
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode  On: Operate  Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode  On: Operate  Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode  Lock Only: Door lock operation only  Unlock Only: Door unlock operation only  Lock/Unlock: Lock and unlock operation  Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode  • Horn Chirp: Sound horn  • Buzzer: Sound Intelligent Key warning buzzer  • Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode  On: Operate  Off: Non-operation
SHORT CRANKING OUTPUT	Starter motor can operate during the times below
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode

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## < SYSTEM DESCRIPTION >

Monitor item	Description
AUTO LOCK SET	Auto door lock operation time can be changed in this mode  • MODE 1: OFF  • MODE 2: 30 sec  • MODE 3: 1 minute  • MODE 4: 2 minutes  • MODE 5: 3 minutes  • MODE 6: 4 minutes  • MODE 7: 5 minutes
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be selected from the following with this mode  On: Operate  Off: Non-operation
PW DOWN SET	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode  • MODE 1: 3 sec  • MODE 2: Non-operation  • MODE 3: 5 sec
WELCOME LIGHT SELECT	Welcome light function mode can be selected from the following with this mode  Puddle/Outside Handle  Room lamp  Head & Tail Lamps (this item is displayed, but cannot be used)  Heart Beat
WELCOME LIGHT OP SET	Welcome light function mode can be changed to operation with this mode  On: Operate  Off: Non-operation

## **SELF-DIAG RESULT**

Refer to BCS-57, "DTC Index".

### **DATA MONITOR**

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

## < SYSTEM DESCRIPTION >

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

<sup>\*:</sup> OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

# **ACTIVE TEST**

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

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## < SYSTEM DESCRIPTION >

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

# TRUNK

# TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000006225857

## DATA MONITOR

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

# **DIAGNOSIS SYSTEM (AUTOMATIC BACK DOOR CONTROL UNIT)**

< SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (AUTOMATIC BACK DOOR CONTROL UNIT)

# CONSULT-III Function (AUTOMATIC BACK DOOR CONTROL UNIT)

#### INFOID:0000000006225858

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### APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with automatic back door control unit.

Diagnosis mode	Function Description
Self Diagnostic Result	Displays the diagnosis results judged by automatic back door control unit
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from automatic back door control unit
Data Monitor	The automatic back door control unit input/output signals are displayed
Ecu Identification	The automatic back door control unit part number is displayed

### **DATA MONITOR**

Monitor Item	Unit	Description
VHCL SPEED MTR	[km/h]	Display the vehicle speed signal received from combination meter by numerical value
VHCL SPEED ABS	[km/h]	Display the vehicle speed signal received from ABS actuator and electrical unit by numerical value
VHCL SPEED SIG	[NORMAL/ER- ROR]	Indicates condition of vehicle speed from automatic back door control unit
MAIN SW	[ON/OFF]	Indicates condition of automatic back door main switch
AUTO BD SW	[ON/OFF]	Indicates condition of automatic back door switch
BK DOOR CL SW	[ON/OFF]	Indicates condition of automatic back door close switch
UNLOCK SEN DR	[ON/OFF]	Indicates condition of unlock sensor
OPEN SW	[ON/OFF]	Indicates condition of open switch
CLOSE SW	[ON/OFF]	Indicates condition of close switch
HALF LATCH SW	[ON/OFF]	Indicates condition of half latch switch
TOUCH SEN RH	[ON/OFF/OPEN]	Indicates condition of touch sensor RH
TOUCH SEN LH	[ON/OFF/OPEN]	Indicates condition of touch sensor LH
P RANGE IND	[ON/OFF]	Indicates condition of P range signal from combination meter
RKE REQ	[OFF/MOVE/ REV]	Indicates condition of remote keyless entry signal from BCM
IGN SW	[ON/OFF]	Indicates condition of IGN power supply
ENCODER A	[LO/HI]	Indicates condition of encoder signal from encoder A
ENCODER B	[LO/HI]	Indicates condition of encoder signal from encoder B
BD OPENER SW	[ON/OFF]	Indicates condition of back door opener switch
UNLOCK SEN BD	[LOCK/ UNLOCK]	NOTE: This item is displayed, but cannot be monitored
DESTINATION	[JPN/NAM]	Indicates specification of destination of the automatic back door system
HAZARD	[ON/OFF]	Indicates specification of hazard warning

### **SELF-DIAG RESULT**

Refer to DLK-50, "DTC Index".

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# **ECU DIAGNOSIS INFORMATION**

# **BCM**

# List of ECU Reference

INFOID:0000000006225859

ECU	Reference
	BCS-33, "Reference Value"
BCM	BCS-54, "Fail-safe"
BOW	BCS-56, "DTC Inspection Priority Chart"
	BCS-57, "DTC Index"

### < ECU DIAGNOSIS INFORMATION >

# **AUTOMATIC BACK DOOR CONTROL MODULE**

Α Reference Value INFOID:0000000006225860

### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	า	Value/Status
VHCL SPEED MTR	While driving	Equivalent to speedomete reading	
VHCL SPEED ABS	While driving	Equivalent to speedomete reading	
VHCL SPEED SIG	Vehicle speed from automatic back	Normal	NORMAL
VIICE SPEED SIG	door control unit	Error	ERROR
MAIN SW	Automatic back door main switch	OFF	OFF
MAIN SW	Automatic back door main switch	ON	ON
AUTO BD SW	Automatic back door switch	Release	OFF
NOTO BE OW	Automatic back door switch	Press	ON
BK DOOR CL SW	Automatic back door close switch	Release	OFF
DIC DOOK OF OA	Automatic back door close switch	Press	ON
UNLOCK SEN DR	Door lock (driver)	Unlock	OFF
ONLOCK SEN DIX	Door lock (driver)	Lock	ON
OPEN SW	Back door	Half latch/fully closed	OFF
OI LIVOW	Back door	Open	ON
CLOSE SW	Back door	Open/half latch	OFF
OLOGE SVV	Dack Gool	Fully closed	ON
HALF LATCH SW	Back door	Half latch/fully closed	OFF
HALF LATCH SW	Back door	Open	ON
TOUCH SEN RH	Touch sensor RH	Other than bellow	OFF
TOOCH SENTI	Touch sensor IVI	Detect obstruction	ON
TOUCH SEN LH	Touch sensor LH	Other than bellow	OFF
TOOOTT OLIV LIT	Todol School Ell	Detect obstruction	ON
P RANGE IND	Selector lever	Other than P position	OFF
1 TO THOSE THE	Colociol level	P position	ON
		Release	OFF
RKE REQ	Intelligent Key button (back door)	Press (more than 0.5 second)	MOVE
		Press (just after)	REV
IGN SW	Ignition switch	Other than ON position	OFF
ION OW	ignition switch	ON position	ON
ENCODER A	Automatic back door	Not operate	No change HI or LO
LNOODLIKA	Automatic Back door	Operate	Change HI or LO
ENCODER B	Automatic back door	Not operate	No change HI or LO
	, tatorialio baok door	Operate	Change HI or LO
BD OPENER SW	Back door opener switch	Release	OFF
DD OI LINLIN OVV	Dack door opener switch	Press	ON
UNLOCK SEN BD	Door lock (back door)	Unlock	OFF
UNLOCK SEN DU	DOOL TOCK (DACK GOOL)	Lock	ON

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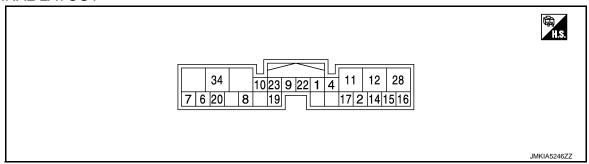
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### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Conditio	Value/Status	
DESTINATION	Circuit between automatic back	Normal	NAM
	door control module terminal 22 and ground	Open or short	JPN
HAZARD	Circuit between automatic back	Normal	ON
	door control module terminal 23 and ground	Open or short	OFF

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)
1	0	Automatic back door	0.1.1	Automatic back	Sounding	0 V
(L)	Ground	warning buzzer	Output	door warning buzzer	Not sounding	Battery voltage
2	Ground	Automatic back door	Input	Automatic back	Pressed	0 V
(Y/B)	Ground	switch	прис	door switch	Released	Battery voltage
4	Ground	Automatic back door	Input	Automatic back	Pressed	0 V
(GR)	Ground	close switch	iliput	door close switch	Released	Battery voltage
6 (P)	Ground	CAN - L	Input/ Output	-		_
7 (L)	Ground	CAN - H	Input/ Output	_		_
8	0				Open	0 V
(L/W)	Ground	Half latch switch signal	Input	Back door	Fully closed/half latch	Battery voltage
9 (GR/ L)	Ground	Power supply (IGN)	Input	Ignition switch ON		Battery voltage
10 (Y)	Ground	Power supply (BAT)	Input	_		Battery voltage
11	Ground	Back door closure mo-	Output	Back door	Open operation	Battery voltage
(R)	Ground	tor (open)	Output	Back door	Other than above	0 V
12	Ground Back door closure mo-		losure mo-	Back door	Close operation	Battery voltage
(V)	Siddild	tor (close)	Juiput	Daok door	Other than above	0 V
14 (GW)	Ground	Touch sensor LH sig-	Input	Touch sensor LH	Detect obstruc- tion	0 V
(344)	ivv)   IIai			Other than above		6 V
15 (L/R)	Ground	Touch sensor ground	Input	_		0 V

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Voltage	
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
16 (LG)	Ground	Touch sensor RH sig-	Input	Touch sensor RH	Detect obstruc- tion	0 V	
(LO)		Hai			Other than above	6 V	
17	Crawad	Automatic back door	laavit	Automatic back	ON	Battery voltage	
(O)	Ground	main switch	Input	door main switch	OFF	0 V	
19	Crownd	Close switch signal	Input	Back door	Fully closed	0 V	
(L/Y)	Ground				Open/half latch	Battery voltage	
		Open switch signal	Input	Back door	Open	0 V	
20 (G/Y)	Ground				Half latch/fully closed	Battery voltage	
22 (B)	Ground	Ground (destination)	_	_		0 V	
23 (B)	Ground	Ground (Hazard re- minder)	_	_		0 V	
28 (R/W)	Ground	Power supply (BAT)	Input	_		Battery voltage	
34 (B)	Ground	Ground	_	_		0 V	

Fail Safe

Display contents of CONSULT-III	Fail-safe	Cancellation
B2401 IGN OPEN	Intermittent clutch function	All following condition are satisfied     Power supply condition of automatic back door control unit: OFF     BCM receive ignition position signal (OFF) via CAN
B2403 PULSE ENCODER	Inhibit automatic back door operation	When receiving the pulse from encoders A and B normally (5 pulses)
B2409 HALF LATCH SW	Intermittent clutch function	Half latch switch is ON from OFF
B2416 TOUCH SEN R OPEN	During close operation: Intermittent clutch function	Normal return
B2417 TOUCH SEN L OPEN	During close operation: Intermittent clutch function	Normal return
B2419 OPEN SW	Inhibit automatic back door operation	Erase DTC, reconnect battery
B2420 CLOSE SW	Inhibit automatic back door operation	Erase DTC, reconnect battery
B2421 CLUTCH TIME OUT	Intermittent clutch function	Reception of next operation request
B2422 BACK DOOR STATE	Intermittent clutch function	Detect back door fully closed position
B2423 ABD MTR TIME OUT	Intermittent clutch function	Reception of next operation request
B2424 CLSR CONDITION	Inhibit automatic back door operation	Normal return or reconnect battery

# 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.

### < ECU DIAGNOSIS INFORMATION >

Priority	DTC					
1	B2425 AUTO BK DR CNT UNIT U1000: CAN COMM U1010: CONTROL UNIT (CAN) B2401 IGN OPEN					
2	B2403 PULSE ENCODER B2409 HALF LATCH SW B2416 TOUCH SEN R OPEN B2417 TOUCH SEN L OPEN B2419 OPEN SW B2420 CLOSE SW B2421 CLUTCH TIME OUT B2422 BACK DOOR STATE B2423 ABD MTR TIME OUT B2424 CLSR CONDITION					

DTC Index

### NOTE:

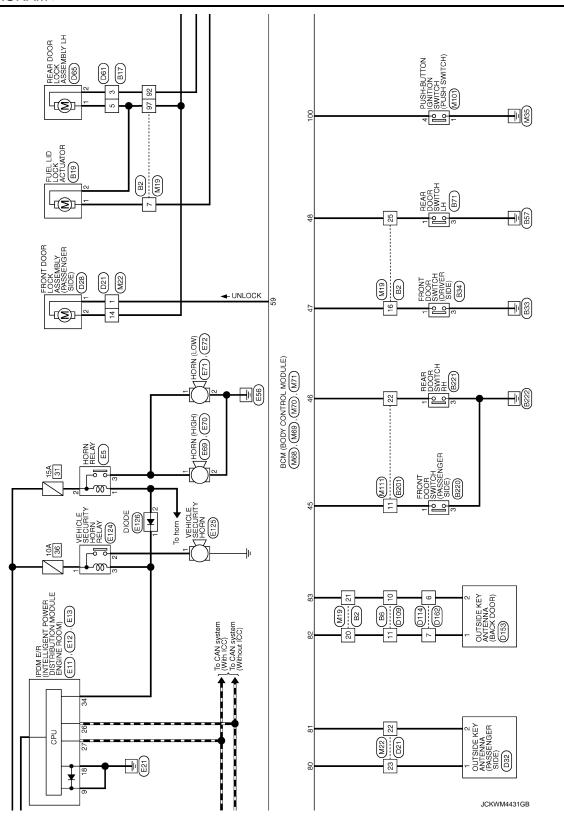
Details of time display

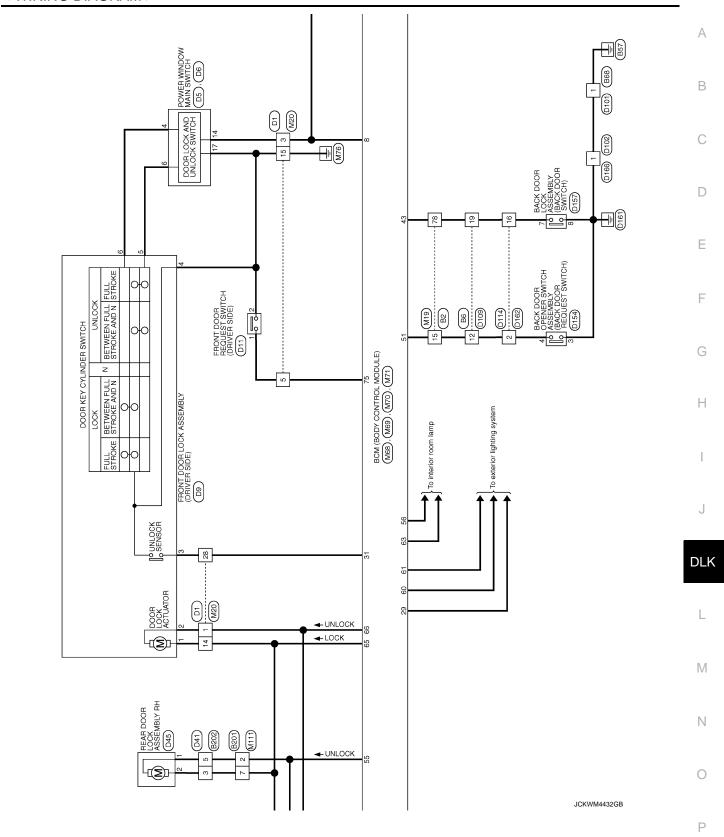
1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when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

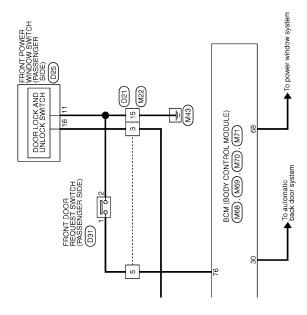
CONSULT-III display	Fail-safe	Item	Reference page
U1000: CAN COMM	_	CAN communication circuit	DLK-82
U1010: CONTROL UNIT(CAN)	_	Internal CAN communication circuit	DLK-83
B2401: IGN OPEN	×	IGN power supply circuit	DLK-84
B2403: PULSE ENCODER	×	Encoder signal	<u>DLK-85</u>
B2409: HALF LATCH SW	×	Half latch switch signal	DLK-86
B2416: TOUCH SEN R OPEN	×	Touch sensor RH	DLK-88
B2417: TOUCH SEN L OPEN	×	Touch sensor LH	DLK-90
B2419: OPEN SW	×	Open switch signal	DLK-92
B2420: CLOSE SW	×	Close switch signal	DLK-95
B2421: CLUTCH TIME OUT	×	Clutch operation time	DLK-97
B2422: BACK DOOR STATE	×	Back door state	DLK-98
B2423: ABD MTR TIME OUT	×	Automatic back door motor operation time	DLK-99
B2424: CLSR CONDITION	×	Closure condition	DLK-100
B2425: AUTO BCK DR CNT UNIT	_	Automatic back door control unit	DLK-103

# WIRING DIAGRAM Α **DOOR & LOCK SYSTEM** Wiring Diagram - DOOR & LOCK SYSTEM -INFOID:0000000006225864 В MZ0 10

C 'Harness Layout". 33 D TCM (TRANSMISSION CONTROL MODULE) A/T ASSEMBLY
(F51) JOINT Е W35 F G (M19) DATA LINK CONNECTOR (M4) Н 39 40
BCM (BODY CONTROL MODULE)
(M68) . (M69) . (M70) . (M71) COMBINATION METER (M34) FUSE BLOCK (J/B) (M1), (M2) J IGNITION SWITCH ON or START UNIFIED METER CONTROL UNIT DLK 10A L INSIDE KEY ANTENNA (INSTRUMENT CENTER) (M105) M Ν DOOR & LOCK SYSTEM (M77) 0 (M19) 10A 7 5 M77 K<sup>50</sup> 2010/05/13 Р 13 14 JCKWM4430GB







JCKWM4433GB

1	-			O WIRE	-CS			ŀ	7 6 5 4 3 2 1	4 13 12 11 10 9 8			Signal Name [Specification]		_	1			-	-	1 1				FUEL LID LOCK ACTUATOR	0				2	- 			Signal Name [Specification]															
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98	WIRE TO WIRE	TH24MW−NH				123456789101112	15 16 17 18 19 20			Signal Name [Specification]	-	_			-				1												513	INSIDE KEY ANTENNA (LUGGAGE ROOM)	RK02FL		<	«				Signal Name [Specification]									
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																																										JO	CKW	/M44	4340	GB			

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þ		Connector No.	tor No.	B71	30	R/L	Ţ	1	4		
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		n	2	,	QQ ;	ž	,	_	+		_
Connector No.	B34				9	P/L	1	_	+	-	_
Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)				62	B/SB	1	_	10		_
		Connector No.	tor No.	B201	63	R/Y	-	_	. 15		
Connector Type	A03FW	Connect	Connector Name	WIRE TO WIRE	64	BR	1		16		
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修	Ē	Connect	Connector Type	TH80MW-CS16-TM4	71	G/R	-				ı
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I GR/R	-	Terminal	⊢	[ N   N	94	7	-			<u>.</u>	
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Connector No.	B68	3	Μ	1	86	^	1	F	la	Color Signal Name [Specification]	
Connector Name	WIRE TO WIRE	5	M/B	-	66	L/W	-		No. of		
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Connector Type	M02MW-LC	7	٣	-					3		
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Signal Name [Spacification]  D12  Our Signal Name [Spacification]  Signal Name [Spacification]	В
Terminal   Color   No.	D
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Signal Name [Specification]  FROOT DOOR REQUEST SWITCH (DRIVER SIDE)  RKGZFL  The state of the	F
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Connector Na. 1.15  Terminal Connector Type III Con	Н
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	L
Name   REAR DOOR SWITCH RH     Type   AA03FW     Name   REAR DOOR SWITCH RH     Type   AA03FW     Name   WIRE TO WIRE     Type   TH40FW-CS15     Type   Type   Type   Type     Type   Type   Type   Type   Type     Type   Type   Type   Type   Type     Type   Type   Type   Type   Type   Type     Type   Type   Type   Type   Type   Type   Type     Type   Type   Type   Type   Type   Type   Type     Type   T	M
Connector Name   EAA DOOR SWITCH RING   Connector Name   EAA DOOR SWITCH RING   Connector Name   Connector	N
Connector   Conn	0
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DOOR	_ ``			
Connector No.	No. D21	Connector No. D25	Connector No. D31	- G
Connector	Connector Name WIRE TO WIRE	Connector Name FRONT POWER WANDOW SMITCH (PASSENGER SIDE)	Connector Name FRONT BOOR REQUEST SMITCH (PASSENGER SIDE)	
Connector '	Connector Type TH40FW-CS15	Connector Type NS16FW-CS	Connector Type RK02FL	- B
Œ		瞎	瞎	₩
S.	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	H.S.	AHS.	15 V -
<b>_</b>		8 9 10 11 12 15 16	(15)	Connector No. D45
Terminal	Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Terminal Color Signal Name [Specification]	Connector Name REAR DOOR LOCK ASSEMBLY RH
<u>-</u>		+	+	1
2 0	- M	4 G/R –	2 B -	唐
2 10		2 0		HS.
t		2 %	Connector No. D32	
H		Н	Connector Name OUTSIDE KEY ANTENNA (PASSENGER SIDE)	
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2 =	- 7	W.S. 61	7	
۲	- 7	┨		No. of Wire Signal Name [Specification]
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Ħ		Connector No. D28		2 R -
+	B/W -	Connector Name FRONT DOOR LOCK ASSEMBLY (PASSENGER SIDE)		
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t		Œ	Terminal Golor	Connector Name WIRE TO WIRE
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	А
Signal Name [Specification]  Dis7  BACK DOOR LOCK ASSEMBLY NSOBPW-CS  IT T 2 8  T 5 6 7 8  Signal Name [Specification]  Signal Name [Specification]	В
BACK DO IST	С
Colorector No.   Colo	D
ACK DOOR) ACK DOOR)	Е
D153 OUTSIDE KEY ANTENNA (BACK DOOR) RK02FL  Signal Name [Specification]	F
	G
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NHH  NH  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	I
NE	J
	DLK
Connector No.   Connector Name   Conne	
	L
OCK SYSTEM D06  REAR DOOR LOCK ASSEMBLY LH E06FGY-RS  Signal Name [Specification]	М
Signal  Signal  Signal  Signal  Signal  Signal  Signal	N
Connector Name   REAR DOOR LOCK ASSE   Connector Name   REAR DOOR LOCK ASSE   Connector Name   CS   CS   CONNector Name   CS   CS   CS   CS   CS   CS   CS   C	0
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DOOR & LOCK SYSTEM Connector No.   D162	Connector No. E5	18 B	,	Connector No. E69
e e	e.	Н	1	<u>و</u>
Connector Type TH24MW-NH	Connector Type -	20 W	I I	Connector Type P01FB-A
1 2 3 4 5 6 7 8 9 10 111 12 13 14 15 16 17 18 19 20 21 22 23 24	HS.	lector No.	E13 POUR S GREELEST FORES OSTRBUTION MODULE THUSTN-NH	HS.
Color   Signal Name [Specification]   Of Wire   Name   W.N.R	Terminal   Color   Signal Name [Specification]   Orlor   No. of Wire   P./B   -	S. H.	28 27 26 25 24 23 34 33 32 31 30 29	Vire
Grk	Connector No. E11 Connector Name prout or owner power	Terminal Color  No. of Wire 23 GR/R 24 W/G 25 L/Y	Signal Name [Specification]	Connector Name HORN (HIGH)  Connector Type POIFB-A
λ./ -	1	++++		H3.
9 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	의   출기	ctor Na	E25 INTELLIGENT REY WARNING BUZZER	Terminal   Color   Signal Name [Specification]   Color   Signal Name [Specification]   2   B   Colorada No.   Colorada No.
Connector No. D166 Connector Name WIRE TO WIRE Connector Type MOIMBR-PS-LC	Connector No. E12 Connector Name prue presentation protein operation in State Connector Type NS09FBR-CS	Connector Type	RKUSFBR	ne HORN (LOW) e POIFB-A
Color Signal Name [Specification]		Terminal   Color   No.   of Wire   Y   Y   3   GR/R	Signal Name [Specification]  BUZZER SIGNAL	Terminal Color Signal Name [Specification]
	Terminal   Color   Signal Name [Specification]   No. of Wire     Signal Name [Specification]   17   B     -			

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00R & LOO	Connector Name HOI	Connector Type P01			S. E.S					Terminal Color		2 B		Connector No. E10	Γ,	┑	Connector Type TH8	_		νį Έ		<u> </u>	_	1	Terminal Color	No. of Wire	]	2 C/W	+	7 >	- W/C	8 W 8	M/B	-	11	Н	13 P/B	+	+	╄	Н	Н	20 BR/Y	22										
DOOR & LOCK SYSTEM	HORN (LOW)	P01FB-A			[	0	7			Cinnel Name [Specification]	oignal Name [opeomoauon]	1		105	TOWN OF LOWN	NE LO WINE	TH80MW-CS16-TM4			2	3 S S S S S S S S S S S S S S S S S S S	1000	13 12 13 13 13 13 13 13 13 13 13 13 13 13 13		Signal Name [Specification]	,	ı	1 1	i i	1 1	1	1	1	i i	1	1	Ť	1	1 1	1	1	1	1 1	-									N	
	24	27	28	29	30	32	34	35	36	37	38	9	4	42	51	52	23	34	90	62	63	64	91	92	94	95	97	86		Τ	Coppe		Conne	Conne				<b>[</b>	Τ		   	Terminal	ġ –	2									Ĺ	_
,	- M	N/1	0	. W	2 >	GR/R	>	~	B/R	G/Y	5	SS :	W/K	r >	Т	П	┪	╅	+	2	Т	S	BR	M/T	Y/B	G/R	<u>د</u> (	9/S	Υ/Μ		Copportor No	Τ	Connector Name	tor Type			72	•					of Wire	۳									DI	LK
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	П																		Ī								T															-	Ţ											
Ę	1	Connector No. E125	9	Т	Connector Type PUL	<b>€</b>		έŞ					Terminal Color	0			Connector No. E126	Connector Name DIODE	Connector Type 9433	2016	4	<b>V</b> E	113,					No of Wire		5 8/0	1		Connector No. F51	Ι,		Connector Type RK10FG	þ	ATT.	H.S.	•			Terminal Golor	No. of Wire									-	3
			VEHICLE SECURITY HORN		PUIFB-A				<u></u>	]			Signal Name [Specification]	1				DE .	24335 (2000)	00000			<u> </u>	1 2				Signal Name [Specification]	1	1 1				× 10000 ±/ v	ASSEMBLI	JFG SFG		<		5 4 3 2 1	79 2 8 6 0 N			Signal Name [Specification]									F	
[.	-  <sub>2</sub>   <sub>2</sub>	- F	2	9	• 	0	01			Connector No.	Connector Name	<u></u>	Connecto				Т		T	Terminal	No.	-	2	8	4	2	ا ا ا	- 0		s ⊆	·		Γ	1									Г											)
-	> d -	SB	В	> 0	r	- BR	8			r No. F301		Т	r lype SP10FG			<i>)</i>			)	Color	of Wire	-	1	1	-	1	-																										(	5
		ı	1	1	1 1	1	1				(ELMON CONTROL MODULE)			•	<b>«</b>	1	n	7 8 9 10	)	1	Signal Name [Specification]	VIGN	BATT	CAN-H	K LINE	GND	VIGN	KEV LAMP KLY	CAN-L	GND	Quip.																						Е	3
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- 17/4 - 17/4						
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16 GR/R 18 G/W 19 V 20 W/G 21 B/W 22 V	<del> ^                                    </del>	28 Y/R 29 L 30 R 30 R 31 G/Y 31 G/Y 32 B/SB 33 LG/R 34 BR/W	336 SB 37 LG 38 L 40 W/G 42 G/R	444 LG/B 445 R/Y 446 B 50 R/B 51 W/R 52 BR/Y 53 O/B	55 R/B 56 LG/R 57 GR/R 58 Y/G 59 V/W 60 R	
M4 DATA LINK CONNECTOR BD16FW		Signal Name [Specification]		MIS WINE TO WINE THEOFW-CS16-TMA	Signal Name (Specification)	
ПП		Color of Wire LG B B LC C	£ 80		Color of Wire L	BR W/B W/B BR G/R G/R W/R W/R
Connector No. Connector Name Connector Type	H.S.	Terminal No. 3 4 5 5 5 7	11 12 11 19 11 19 11 19	Connector Name Connector Type	Terminal No.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Connector No. MI Connector Name FUSE BLOCK (J/B) Connector Type NSO6FW-M2	3A2A1A 8A 7A6A5A4A	Signal Name	M2 FUSE BLOCK (J/B)	NS.IOFW-CS 4B3B 2B1B (109 9B 8B7B 6B 5B	Signal Name [Specification]	1 1 1
9 9		Color of Wire Y Y X/G Y/G V/G	§ (7 ) 9		Color of Wire R R B B BR	× 5 0 √ W/B
Connector No. Connector Name Connector Type	ς. Σ	Terminal C No. of 14 2A 4 A A A 5 5 5 4	Sonnector No.	Connector Type	Terminal (No. of 18 38 48 58	

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ETER  TIPITION SIGNAL  TIPITION SIGNAL  TO SENDOR SIGNAL  TERNOR SIGNAL  TENDOR GROUND  CAN-H  GROUND  CAN-H  GROUND  CAN-H  GROUND  CAN-H  GROUND  CAN-H  TENDOR SIGNAL  TENDOR SIGNAL  EED SIGNAL (2-PULSE)  TENDOR SIGNAL  EED SIGNAL (2-PULSE)  TENDOR SIGNAL  TE	IIIT UP SIGNAL. DE SIGNAL.
0	MANUAL MODE SY MANUAL MOD
	9/ <sub>2</sub>
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	₩ Ħ
Color   MRE TO WIRE   MRE TO	J
No	
Connector No.   Connector No	
	⊥ □
Name   WIRE TO WIRE     Name   WIRE TO WIRE     TH40MW-CS15     TH40MW-CS15	M
Connector Name   WIRE TO WIRE	N
1795   174	GR.R.
Connector Name   Conn	<del>     </del>
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**DLK-63** Revision: 2010 May 2011 QX56

Н	G/Y	5 5	$^{+}$	^	42 R –	43 V =		52 BR/W -	t	t	3 3	: 0		77 00	SHIELD	t	H	H	H	H	F				Connector No. M101	Connector Name PLISH-BUTTON IGNITION SWITCH	Т	Connector Type TK08FBR	₫.	AHA	SE SE		4 5 6 7 8			Terminal Color	No. of Wire Signal Marile Especification		2 B -	3 \	4 SB –	2	- M/T 9		BT 8					
S/L CONDITION!	S/L CONDITION2	ACC IND			M77	TOWN OF TOWN	WIRE 10 WIRE	TH80FW-CS16-TM4			000	222	28	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 8 8	ŀ		Signal Name [Specification]	1	1	1	1	1	1	1	1	-	-	- [With ICC]	- [Without ICC]	ı	1 1	1	1	1	1	T	1	-	=	1	1	=	-	-	1	1	Table State	1	1
	۵.	L/W		ı				Connector Type	1								Color	_	*	Λ	R/B	7	>	M/G	P/B	W/B	٦	7	1	¥ 6	9/2	ž 2	97	۵	æ	5/,	BR/Y	^	7	٨	M/7	_	M/T	0	R/W	7/0	>	GR/R	>	œ
107	108	109			Connector No.	ď	Connect	Connect		Œ	ţ.	X H S					Termina	Š	-	2	e	4	2	7	89	6	9	= :	7.	2 5	2 3	4 7	9	17	81	19	70	21	22	23	24	26	27	28	59	30	31	32	34	35
PW PWR SPLY (BAT)	BAT (F/L)			M71	BCM (BODY CONTROL MODILIE)		TH40FW-NH				[	14 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90	95 96 97 98 99				Signal Name [Specification]	PUDDLE LAMP CONT	GNI NO	TRAILER TURN SIG RH CONT	DRIVER DOOR REQUEST SW	PASSENGER DOOR REQUEST SW	TRAILER TURN SIG LH CONT	DRIVER DOOR ANT+	DRIVER DOOR ANT-	PASSENGER DOOR ANT+	PASSENGER DOOR ANT-	BACK DOOR ANT+	BACK DOOK AN I =	ROOM ANII+	ROOM ANTE	ROOM ANT2+	I AGGAGE BOOM ANT+	LAGGAGE ROOM ANT-	PUSH-BTN IGN SW ILL PWR	LOCK IND	LOW SIDE PUSH LED	I-KEY WARN BUZZER	S/L UNIT COMM	S/L UNIT PWR SPLY	ACC RELAY CONT	STARTER RELAY CONT	IGN RELAY (IPDM E/R) CONT	IGN RELAY (F/B) CONT	PUSH SW	IGN PWR SPLY 2	SHIFT N/P	A/T SHIFT SELECT PWR SPLY	STOP LAMP SW 2	BLWR FAN MTR RELAY CONT
М	>-			or No.	Connector Name		or Type	<u>ا</u>				71 72 73 7	91 92 93 94			Color	_	۵	×	Y/B	LG/R	P/L	0/٦	B/B	>	LG/B	Y/R	9/M	B/W	ž,	- 1	s α	>	· o	>	0	٦	GR/R	J//	W	BR	R/W	0	٣	SB	W/B	BR	R/B	0/L	Y/G
69	70		٠	Connector No.	,	50	Connector Type				?					Termina	Š	72	73	74	75	9/	77	78	79	80	81	85	3	48	82	82	8	68	06	16	95	93	94	96	96	97	86	66	100	101	102	104	105	106
Sonnector No. M69	BCM (BODY CONTROL MODULE)		FEA09FB-FHA6-SA				41 42 43 44 45 46 47 48 49		50 51 52 53 54 55				Signal Name [Specification]	BK DOOB SW	REAR WIPER STOP POSITION	PASSENGER DOOR SW	REAR RH DOOR SW	DRIVER DOOR SW	REAR LH DOOR SW	LUGGAGE ROOM LAMP CONT	BACK DOOR REG SW	REAR WIPER OUTPUT	PASS, REAR DOOR UNLK OUTPUT			M70	BCM (BODY CONTROL MODULE)		FEAU9FW-FHA6-SA			56 57 50 50 60 64 60 69 64	20 20 10 00 00 00	65   66   67   68   69   70			Normal Normal State of the Stat	olgilai Naille [opecification]	INT ROOM LAMP PWR SPLY	BAT (FUSE)	PASSENGER DOOR UNLK OUTPUT	TURN SIGNAL LH OUTPUT	TURN SIGNAL RH OUTPUT	STEP LAMP CONT	ROOM LAMP TIMER CONT	CRANKING REQUEST	ALL DOOR LOCK OUTPUT	DR DOOR, FUEL LID UNLK OUTPUT	GND	PW PWR SPLY (IGN)
Connector No.	Connector Name		Connector Type	-		L	<u> </u>	1	<u>ဂ</u>			olog		<u> </u>	N/O	3	E	GR/R	٥	BR∕Y	W/R	٦	5		I	Connector No.	Connector Name	т	Connector Type			ב	31	٩			_	of Wire	W/R	57	5	5	₹/9	ч	BR	GR/R	~	>	В	<b>&gt;</b>
g	ecto	ŀ	necto		唐	E	2					Torminal	N S	43	4	45	46	47	48	49	51	54	55			ecto	ecto	1	ectc	<b>€</b>	•	H.S.					Terminal	No.	56	57	59	09	61	62	63	64	65	99		99

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- M/7 66 88 88	-																																															
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	6 7 R	Н	9 GR/R	╁	┝	16 L/O	17 GR/L	18 R/G	19	20 G/Y	H	H	27 1/0	H	$\vdash$	31 Y/L	32 W/R	33 W/G	H	39 P/B	H	┝	42 L/W	43 B/W	H	H	53 SB	54 V/W	29 F	Н	61 P/L	62 B/SB	63 R/	64 BR	0 0/	71 G/R	72 SHIELD	73 G/0	H	H	ł	+	G/W	+	λ .	+	7	96 5
DOOR & LOCK SYSTEM Connector No. MIOS Connector Name INSDE KEY ANTENA, INSTRUMENT CENTER)	Connector Type RK02FL			⊥ ≪			)			of Wire	1				Connector No. M107	CONTRACT LOSS AND LOS	INSIDE RET AN I EMINA (CONSOLE)	Connector Type RK02FL			<	<b>■</b>			)		[(+g)0](N)(3)		- M				Connector No. M111	Edwin CT Sdaw		Connector Type TH80FW-CS16-TM4				- 0 2100 80 FF	2 %	Ī	\$ 01 \$100 \$25 \$35 \$35 \$25 \$25 \$25 \$25 \$25 \$25 \$25 \$25 \$25 \$2			No of Wire Signal Name [Specification]		

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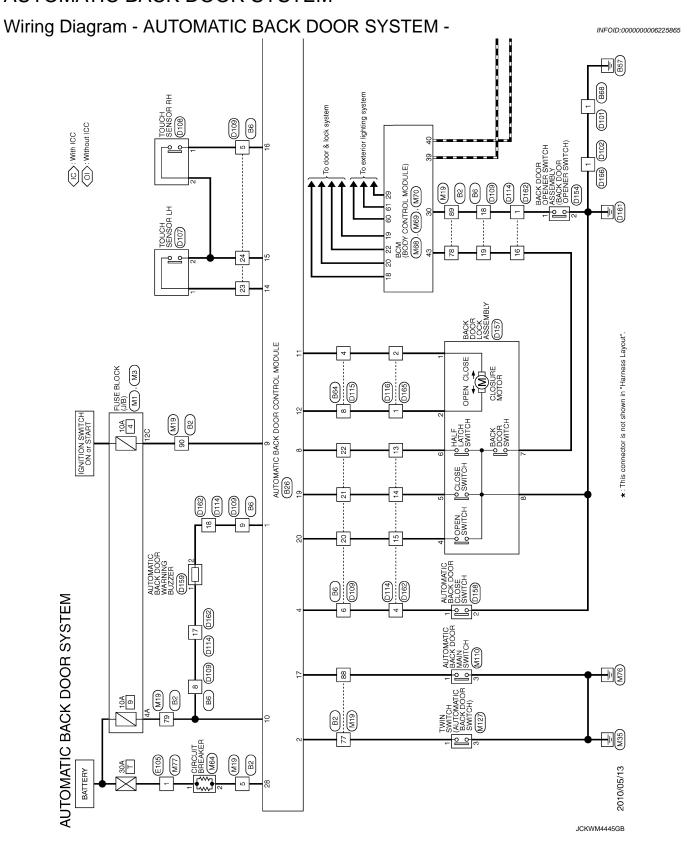
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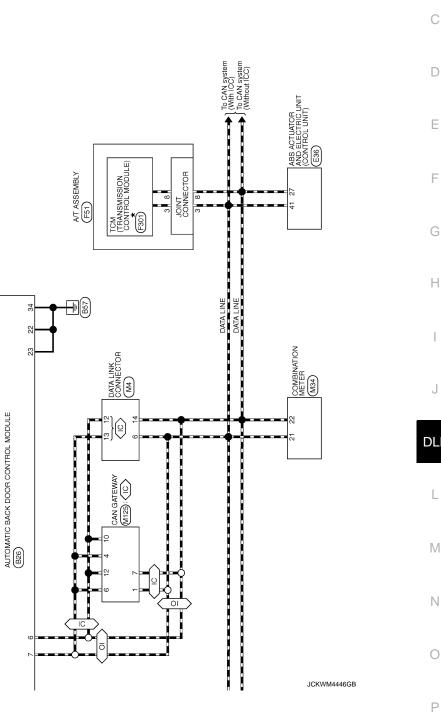
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The Mark To Ware To		B - Connector Name WIRE TO WIRE 2 Y/B	GR = -	W.R	BR/Y	- 8/0 GR/L	1 2 3 4 5 6 7 8 9 10 11 12 13 4 5 6 7 8 9 10 11 12 10 10 11 12 12 12 12 12 12 12 12 12 12 12 12	13 14 15 16 19 19 19 19 19 19 19 19 19 19 19 19 19	(SP) - 14 G/W	- 19	V/W = Terminal Color   Color	R	Y - 19 LY	R - 20 G/Y 0	3 Y = 22 B	23 23 23 23 23 23 23 23 23 23 23 23 23 2	- GR	SHELD	A		1	Y/8 - 12	Y/L 13	Y 14 G	W/R - 15 SHIELD	27. 17. 18. 17. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	1 2 <b>1</b> 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1	20 6/7	W/R – 21	22	W/L - 23 G/W - Terminal	CAN   CAN	M	W/R - Connector No.   B26 3		Connected Manne	$\dashv$		- Hyb		34 10 28	8 19 71 71 71 71 71 71 71 71 71 71 71 71 71	0 20 10 113		
WIRE TO THOUSE TO THE T	45	46	49	21	52	23	54	22	25	28	69	09	63	64	65	99	/9	88 8	60	2 1	62	LL	78	62	08	18	3 2	98	87	88	88	06	6	94	96	6	86	66	100						
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WIRE  CS  Signal Name [Specification]	АВ
Connector Name   Wife TO WIFE	C
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1	G
Signal Name [Specification]  Signal Name [Specification]  WIRE  NIH  Signal Name [Specification]  Signal Name [Specification]	ı
Commetter No.   DIO7	DLK
	L
Signal Name [Specification] Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	M
AUTOMATIC BACK DOOR SYSTEM Connector No.  Connector Name Wife TO WIFE  Connector Type MCEW-LC  Connector Name (Specification)  Connector Name (MCEW-LC  Connector Name (MCEW-CC  Connector Name (MCE	N O
AUCConnector Connector Con	Р

**DLK-69** Revision: 2010 May 2011 QX56

Corrector No. D166 Corrector Name WIRE TO WIRE Corrector Type MOIMBR-PS-LC		
MUTOMATIC BACK DOOR CLOSE SWITCH  2  TRUGFGY  5  1  1  1  1  1  1  1  1  1  1  1  1	1   1   1   1   1   1   1   1   1   1	Color Signal Name [Specification]
AUTOMATIC BACK DOOR SYSTEM Connector No.  Connector No.  Connector No.  Connector Name Connector Type IndiAW-NH  A.S.  T.2.3.4	Terminal   Color   No. of Wire   Signal Name [Specification]   No. of Wire   Of Wire   Connector Name   Co	l erminal No.

JCKWM4449GB

## < WIRING DIAGRAM >

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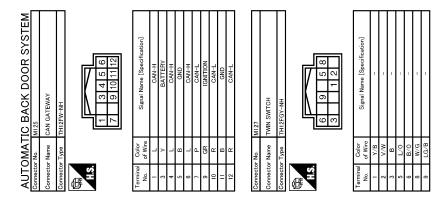
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JCKWM4451GB

# **AUTOMATIC BACK DOOR SYSTEM**

# < WIRING DIAGRAM >

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E TO WIRE  Signal Name [9]	F
Name	G
Oommetto Commet	Н
A (BODY CONTROL MODULE)	I
	J
Color   Name   Name   Color   Name   Name   Color	DLK
	L
Commerciar Name   BCM (BODY CONTROL MODULE)	М
TIC BAC    M68   BCM (BODY C    TH40FB-NH	N
AUTOMA  Commector Name  Connector Name  Connector Type  In I   I   I   I   I   I   I   I   I   I	0
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### INTEGRATED HOMELINK TRANSMITTER SYSTEM

< WIRING DIAGRAM >

# **INTEGRATED HOMELINK TRANSMITTER SYSTEM**

Wiring Diagram - INTEGRATED HOMELINK TRANSMITTER SYSTEM - INFOID:000000000256147

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2010/05/13

INTEGRATED HOMELINK TRANSMITTER

INTE	EGRA1	INTEGRATED HOMELINK TRANSMITTER	TER				
Connector No.	tor No.	M2	Connector No.	M23	Terminal		Signal Name [Specification]
Connect	Connector Name	FUSE BLOCK (J/B)	Connector Name	ne WIRE TO WIRE	o -	of Wire	,
Connect	Connector Type	NS10FW-CS	Connector Type	e TH32MW-NH	4	: >-	1
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		4838 2818	Ŀ	2 3 4 5 6 7 8 9 10 11 12 13 14 15 18	= 5	Υ >	1
		10B 9B 8B 7B 6B 5B	17	19 20 21 22 23 24 25 26 27 28 29 30 31	13	SHIELD	1 1
					41	B/Y	1
					15	W/R	1
Terminal	_	Signal Name [Specification]	le L	Color Signal Name [Specification]	16	0/1	1
No.	of Wire		No. of	of Wire	17	<b>&gt;</b>	1
9	۳	1	-		20	W	1
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5B	BB	1	8	Y/L -	24	SHIELD	ı
99	>	1	10		25	5//k	1
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8B	ν	1	. 12		27	M/G	1
10B	W/B	1	13 SHI	SHIELD -	28	Υ	1
			14		29	7	1
			15 W	W/R	30	B/SB	_
Connector No.	tor No.	M3	16 L	0/1	31	BR	1
Connect	Connector Name	FIISE BLOCK (1/B)	$\dashv$		32	B/R	1
			$\dashv$				
Connect	Connector Type	NS12FW-CS	22 S	SB –			
4			П	Y/R -	Connector No.	r No. R25	
医			24 SHI	SHIELD -	Omera Mamo		GOGGIN SCISNI DIN 1229 G-THA OTHE
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ę.	7	5C4C 3C2C1C	Н	0/7	Connector Type	r Type TH10FB-NH	H
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		2	. 58	/	厚		
			Н	-	¥.	Ц	7
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Terminal	_	Simpl Name [Specification]	Н	BR -			
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7C	В	_					
8C	Н	_	Connector No.	R1	Terminal		Signal Mamo [Specification]
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			32	31 30 29 28 27 26 25 24 23 22 21 20 19 18 17			
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JCKWM4455GB

# < BASIC INSPECTION > **BASIC INSPECTION** Α DIAGNOSIS AND REPAIR WORK FLOW Work Flow INFOID:0000000006225866 В **OVERALL SEQUENCE** Inspection start D 1. Get information for symptom Get the detailed information about symptom from the customer. Е 2. Check for DTC Symptom is described. Symptom is not described. Symptom is described. DTC is detected. DTC is detected. DTC is not detected. 3. Confirm the symptom 4. Confirm the symptom Confirm the symptom described by the Confirm the symptom described by the customer. customer.

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6. Detect malfunctioning system by SYMPTOM DIAGNOSIS

NG

(Symptom remains)

NG

(DTC is detected)

5. Perform DTC Confirmation Procedure

7. Detect malfunctioning part by Diagnostic

8. Repair or replace the malfunctioning part

Perform DTC Confirmation Procedure again, and then check that the malfunction can be repaired securely.

OK

**INSPECTION END** 

Check that the symptom is not detected.

**Procedure** 

9. Final check

#### DIAGNOSIS AND REPAIR WORK FLOW

#### < BASIC INSPECTION >

# 1.GET INFORMATION FOR SYMPTOM

- Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).
- 2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

# 2. CHECK FOR DTC

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

#### Are any symptoms described or 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 the "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 the "DATA MONITOR" mode and check real time diagnosis results. Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

# 5. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <a href="BCS-56">BCS-56</a>, "DTC Inspection Priority Chart" (BCM) determine trouble diagnosis order.

#### NOTE:

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

#### Is DTC detected?

YES >> GO TO 7.

NO >> Refer to GI-40, "Intermittent Incident".

### $oldsymbol{6}$ .DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> GO TO 7.

# 7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

### DIAGNOSIS AND REPAIR WORK FLOW

#### < BASIC INSPECTION >

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

#### Is malfunctioning part detected?

YES >> GO TO 8.

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

# 8.repair or replace the malfunctioning part

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

>> GO TO 9.

# 9. FINAL CHECK

When DTC is detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction is completely repaired.

When symptom is described by 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 7.

YES (Symptom remains)>>GO TO 6.

NO >> INSPECTION END

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Revision: 2010 May **DLK-79** 2011 QX56

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#### INSPECTION AND ADJUSTMENT

#### < BASIC INSPECTION >

### INSPECTION AND ADJUSTMENT

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

When the battery is disconnected from the negative terminal, it is necessary to perform initial setting to operate automatic back door control system normally.

#### NOTE:

The following specified operations are not performed under the non-initialized condition.

- Automatic back door open/close function
- Anti-pinch function

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Work Procedure

# 1.INITIALIZATION

- 1. Fully close the back door manually. (when back door is already fully closed, this operation is not necessary)
- 2. Perform automatic back door open/close operation of back door.
- 3. Check for noise or malfunctioning during operation.
- 4. Check that hazard lamp blinks and that warning buzzer operates.

#### NOTE:

Never touch back door, or allow foreign materials to be pinched in door, when performing automatic back door open/close operation of back door, until it is in the fully closed or fully open position.

#### >> WORK END

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Description

INFOID:0000000006225869

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

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

Refer to the CONSULT-III operation manual for the initialization procedure.

ADDITIONAL SERVICE WHEN REPLACING (AUTOMATIC BACK DOOR CONTROL MODULE)

# ADDITIONAL SERVICE WHEN REPLACING (AUTOMATIC BACK DOOR CONTROL MODULE): Description

When replacing control module, or removing connector terminal, it is necessary to perform initial setting to operate automatic back door system normally.

#### NOTE:

The following specified operations are not performed under the non-initialized condition.

- Automatic back door open/close function
- Anti-pinch function

# ADDITIONAL SERVICE WHEN REPLACING (AUTOMATIC BACK DOOR CONTROL MODULE): Work Procedure

# 1.INITIALIZATION

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### **INSPECTION AND ADJUSTMENT**

#### < BASIC INSPECTION >

- 1. Fully close the back door manually. (when back door is already fully closed, this operation is not necessary)
- 2. Perform automatic back door open/close operation of back door.
- 3. Check for noise or malfunctioning during operation.
- Check that hazard lamp blinks and that warning buzzer operates.

#### NOTE:

Never touch back door, or allow foreign materials to be pinched in door, when performing automatic back door open/close operation of back door, until it is in the fully closed or fully open position.

>> WORK END

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#### **U1000 CAN COMM CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS

# U1000 CAN COMM CIRCUIT

Description INFOID:0000000000225873

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

tion Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
U1000	CAN COMM	When automatic back door control unit cannot communicate CAN communication signal continuously for 2 seconds or more.	CAN communication system

# Diagnosis Procedure

INFOID:0000000006225875

### 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-18, "Trouble Diagnosis Flow Chart".

NO >> Refer to GI-40, "Intermittent Incident".

# **U1010 CONTROL UNIT (CAN)**

# < DTC/CIRCUIT DIAGNOSIS >

# U1010 CONTROL UNIT (CAN)

**DTC** Logic INFOID:0000000006225876

### DTC DETECTION LOGIC

DTC	CONSULT-III dis- play description	DTC detecting condition	Possible cause
U1010	CONTROL UNIT (CAN)	Automatic back door control unit detected internal CAN communication circuit malfunction	Automatic back door control module

# Diagnosis Procedure

INFOID:0000000006225877

# 1. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

When DTC [U1010] is detected, replace automatic back door control module.

>> Replace automatic back door control module. Refer to <u>DLK-262</u>, "Removal and Installation".

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**DLK-83** Revision: 2010 May 2011 QX56

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### **B2401 IGNITION POWER SUPPLY CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2401 IGNITION POWER SUPPLY CIRCUIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2401	IGN OPEN	When the automatic back door control unit detects the following condition for 0.3 second or more  Power supply condition (OFF) of automatic back door control unit and Ignition position signal (ON) from BCM via CAN	Fuse     Harness or connectors     (Ignition power supply condition circuit is open or shorted)

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON and wait for at least 1 second.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III

#### Is DTC detected?

YES >> Refer to <u>DLK-84, "Diagnosis Procedure"</u>.

NO >> INSPECTION END

### Diagnosis Procedure

INFOID:0000000006225879

# 1.CHECK FUSE

- 1. Turn ignition switch OFF.
- 2. Check 10A fuse, [No. 4, located in fuse block (J/B)].

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

# 2. CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect automatic back door control unit connector.
- 3. Check voltage between automatic back door control unit harness connector and ground.

(+) Automatic back door control unit		(–)	Condition		Voltage (Approx.)	
Connector	Terminal				, , ,	
B26	0	9 Ground Ignition s	Ignition switch	ON	Battery voltage	
520	9	Giouna	igilillori switch	OFF	0 V	

#### Is the measurement value normal?

YES >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

NO >> Repair or replace harness.

#### **B2403 ENCODER**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2403 ENCODER**

**DTC** Logic INFOID:0000000006225880

#### DTC DETECTION LOGIC

DTC	CONSULT-III dis- play description	DTC detecting condition	Possible cause
B2403	PULSE ENCODER	When the automatic back door control unit can not receive the signal from the encoder just after starting the open/close operation	Battery voltage (low battery)     Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-

#### Is DTC detected?

>> Refer to <u>DLK-85, "Diagnosis Procedure"</u>. YES

>> INSPECTION END NO

### Diagnosis Procedure

1. Check automatic back door control module power supply and ground circuit

- Turn ignition switch OFF.
- Check automatic back door control module power supply and ground circuit. Refer to DLK-116, "AUTOMATIC BACK DOOR CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

>> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation". YES

NO >> Repair or replace the malfunctioning parts.

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**DLK-85** Revision: 2010 May 2011 QX56

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### **B2409 HALF LATCH SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2409 HALF LATCH SWITCH**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2409	HALF LATCH SW	When the automatic back door control unit can not detects the half latch switch ON condition even when the back door is in the open position	Half latch switch     Harness or connectors     (Half latch switch circuit is open)     Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III

#### Is DTC detected?

YES >> Refer to <u>DLK-86</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

# Diagnosis Procedure

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# 1. CHECK HALF LATCH SWITCH SIGNAL

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "HALF LATCH SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condit	Status	
HALF LATCH SW	Rack door	Fully closed/Half latch	OFF
TIALI LATOTTOW	Back door	Open	ON

#### Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 2.

# 2.CHECK HALF LATCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect back door lock assembly connector.
- 3. Check voltage between back door lock assembly harness connector and ground.

(+) Back door lock assembly		(–)	Voltage (Approx.)	
Connector	Terminal		(11 - 7	
D157	6	Ground	Battery voltage	

#### Is the inspection result normal?

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

# 3.CHECK HALF LATCH SWITCH CIRCUIT

- 1. Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and back door lock assembly harness connector.

### **B2409 HALF LATCH SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back door control module		Back door lock assembly		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	8	D157	6	Existed

Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# 4. CHECK HALF LATCH SWITCH GROUND CIRCUIT

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

Back door lock	assembly		Continuity	
Connector Terminal		Ground	Continuity	
D157	8		Existed	

#### Is the inspection result normal?

YES >> GO TO 5.

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

### 5. CHECK HALF LATCH SWITCH

Refer to DLK-87, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace back door lock assembly.

### 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

### Component Inspection

COMPONENT INSPECTION

# 1. CHECK HALF LATCH SWITCH

- Turn ignition switch OFF.
- Disconnect back door lock assembly.
- 3. Check continuity between back door lock assembly terminals.

Back door lock assembly		Condition		Continuity
Terminal				Continuity
6	Q	Back door lock	Open	Existed
O	0	Dack GOOT TOCK	Fully closed/Half latch	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door lock assembly.

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### **B2416 TOUCH SENSOR RH**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2416 TOUCH SENSOR RH**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2416	TOUCH SEN R OPEN	When the automatic back door control unit detects the open circuit of the touch sensor RH	Touch sensor RH Harness or connectors (Touch sensor RH circuit is open) Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-88</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000006225886

# 1. CHECK HALF LATCH SWITCH SIGNAL

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "TOUCH SEN RH" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
TOUCH SEN RH	Touch sensor RH	Other than below OFF	
	TOUCH Sellsof KH	Detect obstruction	ON

#### Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 2.

# 2. CHECK TOUCH SENSOR INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect touch sensor RH connector.
- 3. Check voltage between touch sensor RH harness connector and ground.

(+) Touch sensor RH		(-)	Voltage (Approx.)	
Connector	Terminal		(11 - /	
D108	1	Ground	6 V	

#### Is the inspection result normal?

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

# 3.check touch sensor RH circuit

- Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and touch sensor RH harness connector.

### **B2416 TOUCH SENSOR RH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back do	Automatic back door control module		Touch sensor RH	
Connector	Terminal	Connector	Terminal	Continuity
B26	16	D108	1	Existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# 4. CHECK TOUCH SENSOR RH GROUND CIRCUIT

- Disconnect automatic back door control module and touch sensor LH connectors.
- Check continuity between automatic back door control module harness connector and touch sensor RH harness connector.

Automatic back d	Automatic back door control module		Touch sensor RH	
Connector	Terminal	Connector Terminal		Continuity
B26	15	D108	2	Existed

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK TOUCH SENSOR RH

Refer to DLK-89, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace touch sensor RH.

# 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

1. CHECK TOUCH SENSOR RH

- 1. Turn ignition switch OFF.
- 2. Disconnect touch sensor RH connector.
- 3. Check resistance between touch sensor RH terminals.

Touch sensor RH Terminal		Condition		Resistance (Approx.)
4 2		Touch concer DH	Detect obstruction	120 Ω or less
1 2	2	Touch sensor RH	Other than above	1 kΩ ± 10%

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace touch sensor RH.

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### **B2417 TOUCH SENSOR LH**

#### < DTC/CIRCUIT DIAGNOSIS >

## **B2417 TOUCH SENSOR LH**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2417	TOUCH SEN L OPEN	When the automatic back door control unit detects the open circuit of the touch sensor LH.	Touch sensor LH Harness or connectors (Touch sensor LH circuit is open) Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III

#### Is DTC detected?

YES >> Refer to <u>DLK-90</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

# Diagnosis Procedure

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# 1. CHECK HALF LATCH SWITCH SIGNAL

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "TOUCH SEN LH" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
TOUCH SEN LH	Touch sensor LH	Other than below	OFF
	TOUCH SENSOI LE	Detect obstruction	ON

#### Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 2.

# 2. CHECK TOUCH SENSOR INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect touch sensor LH connector.
- 3. Check voltage between touch sensor harness connector and ground.

(+) Touch sens	or LH	(-)	Voltage (Approx.)	
Connector	Terminal			
D107	1	Ground	6 V	

#### Is the inspection result normal?

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

# 3.check touch sensor LH circuit

- 1. Disconnect automatic back door control module.
- Check continuity between automatic back door control module harness connector and touch sensor LH harness connector.

#### **B2417 TOUCH SENSOR LH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back d	Automatic back door control module		Touch sensor LH	
Connector	Terminal	Connector	Terminal	Continuity
B26	14	D107	1	Existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

# 4. CHECK TOUCH SENSOR LH GROUND CIRCUIT

- 1. Disconnect automatic back door control module and touch sensor RH connectors.
- Check continuity between automatic back door control module harness connector and touch sensor LH harness connector.

Automatic back d	Automatic back door control module		Touch sensor LH	
Connector	Terminal	Connector Terminal		Continuity
B26	15	D107	2	Existed

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK TOUCH SENSOR LH

Refer to DLK-91, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace touch sensor LH.

### 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

1. CHECK TOUCH SENSOR LH

- Turn ignition switch OFF.
- 2. Disconnect touch sensor LH connector.
- Check resistance between touch sensor LH terminals.

Touch sensor LH		Condition		Resistance
Terr	ninal	Condition		(Approx.)
1	2	Touch sensor LH	Detect obstruction	120 Ω or less
ı	2	TOUCH SENSOI LIT	Other than above	1 kΩ ± 10%

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace touch sensor LH.

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## **B2419 OPEN SWITCH**

**DTC Logic** INFOID:0000000006225891

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2419	OPEN SW	When the automatic back door control unit detects any of the following conditions  • The change of open switch cannot be detected for 1 second or more after starting the closure open output for the 3rd time in a row  • The change of open switch cannot be detected for 0.5 second or more after starting the closure close output for the 3rd time in a row  • The condition that the open switch is in the ON position and the close switch is in the OFF position is detected when starting the closure open/close output for the 3rd time in a row	Open switch     Harness or connectors     (Open switch circuit is open or shorted)     Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-92</u>, "<u>Diagnosis Procedure</u>".

>> INSPECTION END NO

# Diagnosis Procedure

INFOID:0000000006225892

# 1. CHECK OPEN SWITCH SIGNAL

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- Select "OPEN SW" in "DATA MONITOR" mode.
- Check that the function operates normally according to the following conditions.

Monitor item	Condi	Status	
OPEN SW	Back door	Fully closed/Half latch	OFF
	Back door	Open	ON

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK AUTOMATIC BACK DOOR CONTROL MODULE OUTPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect back door lock assembly connector.
- Check voltage between back door lock assembly harness connector and ground.

(+) Back door lock a	(+) Back door lock assembly		Voltage (Approx.)
Connector	Terminal		()
D157	4	Ground	Battery voltage

#### Is the inspection result normal?

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

#### **B2419 OPEN SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

# $\overline{\mathbf{3}}$ .check open switch circuit

1. Disconnect automatic back door control module connector.

2. Check continuity between automatic back door control module harness connector and back door lock assembly harness connector.

Automatic back d	Automatic back door control module		Back door lock assembly	
Connector	Terminal	Connector Terminal		Continuity
B26	20	D157	4	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back d	Automatic back door control module		
Connector	Terminal	Ground	Continuity
B26	20		Not existed

#### Is the inspection result normal?

>> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

>> Repair or replace harness. NO

# 4. CHECK OPEN SWITCH GROUND CIRCUIT

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

Back door lock as	sembly		Continuity
Connector Terminal		Ground	Continuity
D157	8		Existed

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

# 5.CHECK OPEN SWITCH

Refer to DLK-93, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace back door lock assembly.

### 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

### Component Inspection

#### COMPONENT INSPECTION

# 1. CHECK OPEN SWITCH

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

Back door lock assembly Terminal		Condition		Continuity
4	8	Back door	Fully closed/Half latch	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

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# **B2419 OPEN SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

NO >> Replace back door lock assembly.

#### **B2420 CLOSE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2420 CLOSE SWITCH**

DTC Logic INFOID:0000000006225894

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2420	CLOSE SW	When the automatic back door control unit detects any of the following conditions  The change of close switch cannot be detected for 3 second or more after starting the closure close output for the 3rd time in a row	Close switch Harness or connectors (Close switch circuit is open or shorted) Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-95</u>, "<u>Diagnosis Procedure</u>".

>> INSPECTION END NO

# Diagnosis Procedure

# 1. CHECK CLOSE SWITCH SIGNAL

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- Select "CLOSE SW" in "DATA MONITOR" mode.
- Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
CLOSE SW Back door	Back door	Open/Half latch	OFF
	Back door	Fully closed	ON

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 2.

# 2.CHECK AUTOMATIC BACK DOOR CONTROL MODULE OUTPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect back door lock assembly connector.
- Check voltage between back door lock assembly harness connector and ground.

(+)			
Back door lock assembly		(–)	Voltage (Approx.)
Connector	Terminal		, , ,
D157	5	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.check close switch circuit

- Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and back door lock assembly harness connector.

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### **B2420 CLOSE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back doc	Automatic back door control module		Back door lock assembly	
Connector	Terminal	Connector Terminal		Continuity
B26	19	D157	5	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Ground	Continuity
B26	19		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".

NO >> Repair or replace harness.

### 4. CHECK CLOSE SWITCH GROUND CIRCUIT

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

Back door lock assembly			Continuity
Connector	Connector Terminal		Continuity
D157	8		Existed

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

# 5. CHECK CLOSE SWITCH

Refer to DLK-95, "Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace back door lock assembly.

### 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

# Component Inspection

# COMPONENT INSPECTION

# 1. CHECK CLOSE SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly.
- 3. Check continuity between back door lock assembly terminals.

Back door lock assembly		Condition		Continuity
Teri	Terminal		Condition	
	8	Back door	Fully closed	Existed
5			Open/Half latch	Not existed

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#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door lock assembly.

### **B2421 CLUTCH OPERATION TIME**

#### < DTC/CIRCUIT DIAGNOSIS >

# **B2421 CLUTCH OPERATION TIME**

**DTC** Logic INFOID:0000000006225897

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2421	CLUTCH TIME OUT	When the automatic back door control unit detects the power distribution to the clutch for 2 minutes or more	Automatic back door control mod- ule     Battery voltage (low voltage)

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-

#### Is DTC detected?

YES >> Refer to <u>DLK-97</u>, "<u>Diagnosis Procedure</u>".

>> INSPECTION END NO

# Diagnosis Procedure

1. Check automatic back door control module power supply and ground circuit

- Turn ignition switch OFF.
- Check automatic back door control module power supply and ground circuit. Refer to DLK-116, "AUTOMATIC BACK DOOR CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

>> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation". YES

NO >> Repair or replace the malfunctioning parts.

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### **B2422 BACK DOOR STATE**

#### < DTC/CIRCUIT DIAGNOSIS >

### **B2422 BACK DOOR STATE**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2422	BACK DOOR STATE	When the automatic back door control unit detects back door position malfunction according to the pulse signal	Back door mechanism     Automatic back door control module

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

### Is DTC detected?

YES >> Refer to <u>DLK-98</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000006225900

1. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

When DTC [B2422] is detected, replace automatic back door control module.

>> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".

### **B2423 AUTOMATIC BACK DOOR MOTOR OPERATION TIME**

< DTC/CIRCUIT DIAGNOSIS >

### B2423 AUTOMATIC BACK DOOR MOTOR OPERATION TIME

Α DTC Logic INFOID:0000000006225901

#### DTC DETECTION LOGIC

DTC	CONSULT-III display de- scription	DTC detecting condition	Possible cause
B2423	ABD MTR TIME OUT	When the automatic back door control unit and automatic back door motor operate in the same direction for 30 seconds or more continuously	Automatic hack door control

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-99</u>, "<u>Diagnosis Procedure</u>".

>> INSPECTION END NO

# Diagnosis Procedure

1. CHECK AUTOMATIC BACK DOOR CONTROL MODULE POWER SUPPLY AND GROUND CIRCUIT

- Turn ignition switch OFF.
- Check automatic back door control module power supply and ground circuit. Refer to DLK-116, "AUTOMATIC BACK DOOR CONTROL UNIT: Diagnosis Procedure".

#### Is the inspection result normal?

- YES >> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".
- NO >> Repair or replace the malfunctioning parts.

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### **B2424 CLOSURE CONDITION**

#### < DTC/CIRCUIT DIAGNOSIS >

# **B2424 CLOSURE CONDITION**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display de- scription	DTC detecting condition	Possible cause
B2424	CLSR CONDITION	When the following conditions are detected after OPEN/CLOSE operation of the back door closure motor  Open switch and close switch are ON	Harness or connector     (Open switch or close switch circuit is open or shorted)     Back door lock assembly

#### DTC CONFIRMATION PROCEDURE

# ${f 1}$ .PERFORM DTC CONFIRMATION PROCEDURE

- Turn ignition switch ON.
- Check "Self Diagnostic Result" mode of "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-100</u>, "<u>Diagnosis Procedure</u>".

NO >> INSPECTION END

# Diagnosis Procedure

INFOID:0000000006225904

# 1. CHECK OPEN/CLOSE SWITCH SIGNAL

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "CLOSE SW", "OPEN SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
OPEN SW		Half latch/fully closed	OFF
	Back door	Open	ON
CLOSE SW	Back door	Open/half latch	OFF
		Fully closed	ON

#### Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 2.

# 2.CHECK AUTOMATIC BACK DOOR CONTROL MODULE OUTPUT

- Turn ignition switch OFF.
- 2. Disconnect back door lock assembly connector.
- 3. Check voltage between back door lock assembly harness connector and ground.

(+)			Voltage (Approx.)
Back door lock assembly		(–)	
Connector	Terminal		(,
D157	4	Ground	Battery voltage
D137	5	Giouria	battery voltage

#### Is the inspection result normal?

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

# 3. CHECK OPEN/CLOSE SWITCH CIRCUIT

1. Disconnect automatic back door control module connector.

### **B2424 CLOSURE CONDITION**

#### < DTC/CIRCUIT DIAGNOSIS >

Check continuity between automatic back door control module harness connector and back door lock assembly harness connector.

Automatic back do	or control module	Back door lock assembly		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	B26 19 D157		5	Existed
B20	20	D137	4	LAISIGU

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Ground	Continuity
B26	19	Giodila	Not existed
	20		INOL GAISIGU

### Is the inspection result normal?

>> Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".

>> Repair or replace harness.

# 4. CHECK GROUND CIRCUIT

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

Back door lock assembly			Continuity
Connector Terminal		Ground	Continuity
D157	8		Existed

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK OPEN/CLOSE SWITCH

Refer to DLK-101, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace back door lock assembly.

### 6.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

### >> INSPECTION END

### Component Inspection

#### COMPONENT INSPECTION

# 1. CHECK OPEN/CLOSE SWITCH

- Turn ignition switch OFF.
- Disconnect back door lock assembly.
- Check continuity between back door lock assembly terminals.

Back door lock assembly Terminal		Condition		Continuity
				Continuity
<u> </u>			Fully closed	Existed
5	0	Back door lock	Open/half latch	Not existed
4	8		Open	Existed
4			Fully closed/half latch	Not existed

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### **B2424 CLOSURE CONDITION**

### < DTC/CIRCUIT DIAGNOSIS >

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door lock assembly.

### **B2425 AUTOMATIC BACK DOOR CONTROL UNIT**

< DTC/CIRCUIT DIAGNOSIS >

# **B2425 AUTOMATIC BACK DOOR CONTROL UNIT**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III dis- play description	DTC Detection Condition	Possible cause
B2425	AUTO BCK DR CNT UNIT	Automatic back door control unit detected CPU malfunction	Automatic back door control module

# Diagnosis Procedure

OSIS Procedure

# 1. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

When DTC [B2425] is detected, replace automatic back door control module.

>> Replace automatic back door control module. Refer to <a href="DLK-262">DLK-262</a>, "Removal and Installation".

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### **B2621 INSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2621	INSIDE ANTENNA	An excessive high or low voltage from inside antenna (instrument center) is sent to BCM	Inside key antenna (instrument center)     Between BCM ~ Inside key antenna (instrument center)

#### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "INSIDE ANT DIAGNOSIS" in "WORK SUPPORT" mode.
- Perform inside key antenna ("INSIDE ANT DIAGNOSIS") on "WORK SUPPORT" of "INTELLIGENT KEY".
- 4. Check BCM for DTC.

#### Is inside key antenna DTC detected?

YES >> Refer to <u>DLK-104</u>, "<u>Diagnosis Procedure</u>".

NO >> Inside key antenna (instrument center) is OK.

# Diagnosis Procedure

INFOID:0000000006225909

# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

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

(+) BCM		(–)	Condition	Signal (Reference value)	
Connect	or	Terminal		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0
Instrument center	M71	84, 85	Ground	When Intelligent Key is not in the antenna detection area	JMKIA3839GB  (V) 15 10 5 0 JMKIA3839GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

# 2. CHECK INSIDE KEY ANTENNA CIRCUIT

1. Disconnect BCM connector and inside key antenna (instrument center) connector.

#### **B2621 INSIDE ANTENNA**

#### < DTC/CIRCUIT DIAGNOSIS >

2. Check continuity between BCM harness connector and inside key antenna (instrument center) harness connector.

В	ВСМ		Inside key antenna (instrument center)		
Connector	Terminal	Connector	Terminal	Continuity	
M71	84	M105	1	Existed	
IVI7 I	85	WITOS	2	LXISIGU	

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M71	84		Not existed	
IVI / I	85		Not existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna (instrument center). (New antenna or other antenna)
- 2. Connect BCM connector and inside key antenna (instrument center) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM		(–)	Condition	Signal (Reference value)	
Connect	tor	Terminal			
Instrument center	M71	84, 85	Ground	When Intelligent Key is in the antenna detection area  When Intelligent Key is not in the antenna detection area	(V) 15 10 15 10 1
					JMKIA3838GB

#### Is the inspection result normal?

YES >> Replace inside key antenna (instrument center).

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

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## **B2622 INSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2622	INSIDE ANTENNA	An excessive high or low voltage from inside antenna (console) is sent to BCM	Inside key antenna (console)     Between BCM ~ Inside key antenna (console)

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "INSIDE ANT DIAGNOSIS" in "WORK SUPPORT" mode.
- Perform inside key antenna ("INSIDE ANT DIAGNOSIS") on "WORK SUPPORT" of "INTELLIGENT KEY".
- 4. Check BCM for DTC.

#### Is inside key antenna DTC detected?

YES >> Refer to <u>DLK-106</u>, "<u>Diagnosis Procedure</u>".

NO >> Inside key antenna (console) is OK.

# Diagnosis Procedure

INFOID:0000000006225911

# 1.check inside key antenna input signal 1

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

(+) BCM		(-)	Condition	Signal (Reference value)	
Coni	nector	Terminal		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0
Console	M71	86, 87	Ground	When Intelligent Key is not in the antenna detection area	JMKIA3839GB  (V) 15 10 50 0 JMKIA3838GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

# 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect BCM connector and inside key antenna (console) connector.
- 2. Check continuity between BCM harness connector and inside key antenna (console) harness connector.

#### **B2622 INSIDE ANTENNA**

#### < DTC/CIRCUIT DIAGNOSIS >

E	BCM	Inside key ant	enna (console)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	86	M107	1	Existed
IVI7 I	87	IVITO7	2	LXISIEU

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M71	86	Giodila	Not existed
1717 1	87		INOL GAISIEU

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna (console). (New antenna or other antenna)
- 2. Connect BCM connector and inside key antenna (console) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM		(–) Condition		Signal (Reference value)	
Con	nector	Terminal			,
Console	M71	86, 87	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
Consolic		66, 67	Glound	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms  JMKIA3838GB

#### Is the inspection result normal?

YES >> Replace inside key antenna (console).

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

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# **B2623 INSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2622	INSIDE ANTENNA	An excessive high or low voltage from inside antenna (luggage room) is sent to BCM	Inside key antenna (luggage room)     Between BCM ~ Inside key antenna (luggage room)

#### DTC CONFIRMATION PROCEDURE

# 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "INSIDE ANT DIAGNOSIS" in "WORK SUPPORT" mode.
- Perform inside key antenna ("INSIDE ANT DIAGNOSIS") on "WORK SUPPORT" of "INTELLIGENT KEY".
- 4. Check BCM for DTC.

#### Is inside key antenna DTC detected?

YES >> Refer to <u>DLK-108</u>, "<u>Diagnosis Procedure</u>".

NO >> Inside key antenna (luggage room) is OK.

# Diagnosis Procedure

INFOID:0000000006225913

# 1.check inside key antenna input signal 1

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

(+) BCM Connector Terminal			(–)	Condition	Signal (Reference value)
Luggage Room	M71	88, 89	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  JMKIA3836GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

# 2.CHECK INSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect BCM connector and inside key antenna (luggage room) connector.
- Check continuity between BCM harness connector and inside key antenna (luggage room) harness connector.

### **B2623 INSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

Е	3CM	Inside key anteni	na (luggage room)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	88	B13	1	Existed
IVI7 I	89	D13	2	LXISIGU

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M71	88	Ground	Not existed
IVI7 I	89		NOT EXISTED

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace inside key antenna (luggage room). (New antenna or other antenna)
- 2. Connect BCM connector and inside key antenna (luggage room) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM		(-)	Condition	Signal (Reference value)	
Conr	nector	Terminal			,
Luggage	M71	88, 89	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s
Room		55, 55	,89 Ground	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms

### Is the inspection result normal?

YES >> Replace inside key antenna (luggage room).

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

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### **B2626 OUTSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

### **B2626 OUTSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2626	OUTSIDE ANTENNA	An excessive high or low voltage from outside key antenna (driver side) is sent to BCM	Outside key antenna (driver side)     Between BCM ~ Outside key antenna (driver side)

### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" mode of "BCM" using CONSULT-III.

### Is DTC detected?

YES >> Refer to <u>DLK-108</u>, "<u>Diagnosis Procedure</u>".

NO >> Outside key antenna (driver side) is OK.

### Diagnosis Procedure

INFOID:0000000006225915

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

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

(+) BCM Connector Terminal		(–)	Condition	Signal (Reference value)	
Driver side	M71	Terminal 78, 79	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA3839GB
		. 5, . 6		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA3838GB

### Is the inspection result normal?

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

NO >> GO TO 2.

# 2.check outside key antenna circuit

- 1. Disconnect BCM connector and outside key antenna (driver side) connector.
- 2. Check continuity between BCM harness connector and outside key antenna (driver side) harness connector.

### **B2626 OUTSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

Е	BCM	Outside key ant	Outside key antenna (driver side)	
Connector	Terminal	Connector	Terminal	- Continuity
M71	78	D12	1	Existed
IVI / I	79	012	2	LXISIEU

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M71	78		Not existed
	79		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna (driver side). (New antenna or other antenna)
- 2. Connect BCM connector and outside key antenna (driver side) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM Connector Terminal		(-)	Condition	Signal (Reference value)	
Driver side	M71	78, 79	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
			Ground	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  JMKIA3838GB

### Is the inspection result normal?

YES >> Replace outside key antenna (driver side).

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

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### **B2627 OUTSIDE ANTENNA**

### **B2627 OUTSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2627	OUTSIDE ANTENNA	An excessive high or low voltage from outside key antenna (passenger side) is sent to BCM	Outside key antenna (passenger side)     Between BCM ~ Outside key antenna (passenger side)

#### DTC CONFIRMATION PROCEDURE

### 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" mode of "BCM" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-108</u>, "<u>Diagnosis Procedure</u>".

NO >> Outside key antenna (passenger side) is OK.

### Diagnosis Procedure

INFOID:0000000006225917

## 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

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

(+) BCM		(–)	Condition	Signal (Reference value)	
Conr	nector	Terminal			
Passenger	M71	80, 81	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
side		30, 01	Siduria	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

# 2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect BCM connector and outside key antenna (passenger side) connector.
- Check continuity between BCM harness connector and outside key antenna (passenger side) harness connector.

### **B2627 OUTSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

В	BCM Outside		na (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	80	D32	1	Existed
IVI/ I	81	D32	2	LXISTEG

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M71	80		Not existed	
IVI7 I	81		Not existed	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- Replace outside key antenna (passenger side). (New antenna or other antenna)
- Connect BCM connector and outside key antenna (passenger side) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM		(–)	Condition	Signal (Reference value)	
Conr	ector	Terminal			
Passenger	M71	80, 81	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA3839GB
side		50, 01	Glodila	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0  MKIA3838GB

### Is the inspection result normal?

YES

>> Replace outside key antenna (passenger side).
>> Replace BCM. Refer to <a href="BCS-81">BCS-81</a>, "Removal and Installation". NO

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### **B2628 OUTSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

# **B2628 OUTSIDE ANTENNA**

DTC Logic

#### DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC detecting condition	Possible cause
B2628	OUTSIDE ANTENNA	An excessive high or low voltage from outside key antenna (back door) is sent to BCM	<ul> <li>Outside key antenna (back door)</li> <li>Between BCM – Outside key antenna (back door)</li> </ul>

### DTC CONFIRMATION PROCEDURE

## 1. PERFORM DTC CONFIRMATION PROCEDURE

- 1. Turn ignition switch ON.
- 2. Check "Self Diagnostic Result" mode of "BCM" using CONSULT-III.

#### Is DTC detected?

YES >> Refer to <u>DLK-108</u>, "<u>Diagnosis Procedure</u>".

NO >> Outside key antenna (back door) is OK.

### Diagnosis Procedure

INFOID:0000000006225919

## 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1

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

(+) BCM		(–)	Condition	Signal (Reference value)	
Conr	nector	Terminal			
Back door	M71	82, 83	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 1 s JMKIA3839GB
Sack goo!		52, 55	Siduna	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 500 ms JMKIA3838GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

## 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

- 1. Disconnect BCM connector and outside key antenna (back door) connector.
- 2. Check continuity between BCM harness connector and outside key antenna (back door) harness connector.

### **B2628 OUTSIDE ANTENNA**

### < DTC/CIRCUIT DIAGNOSIS >

В	3CM	Outside key ant	Continuity		
Connector	Connector Terminal		Terminal	Continuity	
M71	82	D153	1	Existed	
IVI <i>T</i> I	83	D 100	2	LXISIEU	

3. Check continuity between BCM harness connector and ground.

В	CM		
Connector	Terminal	Ground	Continuity
M71	82	Ground	Not existed
1917-1	83		INOL GYISLEG

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

- 1. Replace outside key antenna (back door). (New antenna or other antenna)
- Connect BCM and outside key antenna (back door) connector.
- 3. Check signal between BCM harness connector and ground using oscilloscope.

(+) BCM Connector Terminal		(–)	Condition	Signal (Reference value)	
Back door	M71	82, 83	Ground	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 S JMKIA3839GB
240.1	door M71 82, 83 Ground	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0		

### Is the inspection result normal?

YES >> Replace outside key antenna (back door).

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

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### **POWER SUPPLY AND GROUND CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

# POWER SUPPLY AND GROUND CIRCUIT AUTOMATIC BACK DOOR CONTROL UNIT

## AUTOMATIC BACK DOOR CONTROL UNIT : Diagnosis Procedure

INFOID:0000000006225920

## 1. CHECK FUSE, FUSIBLE LINK AND CIRCUIT BREAKER

Check that the following fuse, fusible link and circuit breaker are not fusing.

Fuse and fusible link No.	Signal name	
T (30A)	Battery power supply	
9 (10A)	Battery power Suppry	
4 (10A)	Ignition power supply	

### 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.
- Disconnect automatic back door control module connector.
- 3. Check voltage between automatic back door control module harness connector and ground.

(+) Automatic back door control module		(-)	Condition		Voltage (Approx.)
Connector Terminal					(* .pp. 5)
	9			ON	
B26	10	Ground	Ignition switch		Battery voltage
	28			_	

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3. CHECK GROUND CIRCUIT

Check continuity between automatic back door control module harness connector and ground.

Automatic back d	oor control module		Continuity	
Connector	Terminal	Ground	Continuity	
B26	34		Existed	

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair or replace harness.

### **DOOR SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

### **DOOR SWITCH**

## Component Function Check

#### INFOID:0000000006225921

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## 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR", in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
DOOR SW-DR	Driver side door	Open	On
DOOK SW-DK	Driver side door	Closed	Off
DOOD CW AC	Passenger side door	Open	On
DOOR SW-AS		Closed	Off
DOOD OW DI	Danida and H	Open	On
DOOR SW-RL	Rear door LH	Closed	Off
DOOD CW DD	B	Open	On
DOOR SW-RR	Rear door RH	Closed	Off

#### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-117</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

#### INFOID:0000000006225922

## 1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect malfunctioning door switch connector.
- 3. Check signal between malfunctioning door switch harness connector and ground using oscilloscope.

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	(+)			000	
	Door switch		(-)	Signal (Reference value)	
Connector Tel		Terminal		,	
Driver side	B34			(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	
Passenger side	B220	1	Ground	(V) 15 10 5 0 + 10ms PKIB4960J 7.0 - 8.0 V	
Rear LH	B71		Ground	(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	
Rear RH	B221			(V) 15 10 5 0 ++10ms PKIB4960J 7.0 - 8.0 V	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2.CHECK DOOR SWITCH CIRCUIT

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

	Door switch		В	Continuity	
Connector		Terminal	Connector Terminal		Continuity
Driver side	B34			47	
Passenger side	B220	4	1 M69	45	Existed
Rear LH	B71	1	IVIOS	48	Existed
Rear RH	B221			46	

<sup>3.</sup> Check continuity between door switch harness connector and ground.

### **DOOR SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Door switch				Continuity
Connector Terminal			Continuity	
Driver side	B34		Ground	
Passenger side	B220	4	Ground	Not existed
Rear LH	B71	l		Not existed
Rear RH	B221			

#### Is the inspection result normal?

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

NO >> Repair or replace harness.

## 3.check door switch ground circuit

Check continuity between door switch harness connector and ground.

Door switch			Continuity
Connector	Terminal		Continuity
B34		Ground	
B220	2	Ground	Existed
B71	3		Existed
B221			

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK DOOR SWITCH

Refer to DLK-119, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace malfunctioning door switch.

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

## Component Inspection

## 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect malfunctioning door switch connector.
- 3. Check continuity between door switch terminals.

Door switch		Condition		Continuity
Terminal				Continuity
1	2	Door switch	Pressed	Not existed
ı	3	DOOL SMITCH	Released	Existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace malfunction door switch.

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### **BACK DOOR SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

### **BACK DOOR SWITCH**

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR SW-BK" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
DOOR SW-BK	Driver side door	Open	On
	Dilver side door	Closed	Off

### Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-120, "Diagnosis Procedure"</u>.

### Diagnosis Procedure

INFOID:0000000006225925

INFOID:0000000006225924

## 1. CHECK BACK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly connector.
- 3. Check signal between back door lock assembly harness connector and ground using oscilloscope.

	+) ock assembly	(-)	Signal (Reference value)	
Connector	Terminal		, , ,	
D157	7	Ground	(V) <sub>15</sub> 10 5 0 ++10ms JPMIA0593GB 9.0 - 10.0 V	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK BACK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- 2. Check continuity between back door lock assembly harness connector and BCM harness connector.

Back door lo	Back door lock assembly		BCM	
Connector	Terminal	Connector	Terminal	Continuity
D157	7	M69	43	Existed

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

Back door lo	ck assembly		Continuity
Connector	Terminal	Ground	Continuity
D157	7		Not existed

### Is the inspection result normal?

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

NO >> Repair or replace harness.

### **BACK DOOR SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

# 3.check back door switch ground circuit

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

Back door lock assembly			Continuity
Connector	Terminal	Ground	Continuity
D157	8		Existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR SWITCH

Refer to DLK-121, "Component Inspection".

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace back door lock assembly.

### 5.CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

### >> INSPECTION END

# Component Inspection

1. CHECK BACK DOOR SWITCH

- 1. Turn ignition switch OFF.
- Disconnect back door lock assembly connector. 2.
- Check continuity between back door lock assembly terminals.

Back door lock assembly		Condition		Continuity		
Terminal						
7	7 0		8 Door switch	Door switch	Pressed	Not existed
	0	Door switch	Released	Existed		

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door lock assembly. DLK

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### DOOR LOCK AND UNLOCK SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

### DOOR LOCK AND UNLOCK SWITCH

**DRIVER SIDE** 

DRIVER SIDE : Component Function Check

INFOID:0000000006225927

### 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "CDL LOCK SW", "CDL UNLOCK SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
CDL LOCK SW		Lock	ON
	Door lock and unlock switch	Unlock	OFF
CDL UNLOCK SW	Door lock and unlock switch	Lock	OFF
		Unlock	ON

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

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

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000006225928

### 1 . CHECK POWER WINDOW SWITCH

- 1. Turn ignition switch ON.
- 2. Check power window operation.

#### Does power window operate?

YES >> Replace power window main switch.

NO >> Refer to PWC-61, "Diagnosis Procedure".

### PASSENGER SIDE

## PASSENGER SIDE: Component Function Check

INFOID:0000000006225929

### 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "CDL LOCK SW", "CDL UNLOCK SW" in "DATA MONITOR" mode.
- Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
CDL LOCK SW		Lock	ON
	Door lock and unlock switch	Unlock	OFF
CDL UNLOCK SW	Door lock and unlock switch	Lock	OFF
		Unlock	ON

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

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

### PASSENGER SIDE: Diagnosis Procedure

## 1. CHECK POWER WINDOW SWITCH

- Turn ignition switch ON.
- Check power window operation.

#### Does power window operate?

YES >> Replace front power window switch (passenger side).

NO >> Refer to <u>PWC-61</u>, "<u>Diagnosis Procedure</u>".

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#### < DTC/CIRCUIT DIAGNOSIS >

### DOOR LOCK ACTUATOR

### **DRIVER SIDE**

## DRIVER SIDE: Component Function Check

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## 1. CHECK FUNCTION

- Select "DOOR LOCK" of "BCM" using CONSULT-III.
- Select "DOOR LOCK" in "ACTIVE TEST" mode.
- Touch "ALL LOCK" or "ALL UNLK" to check that it works normally.

### Is the inspection result normal?

YES >> Door lock actuator is OK.

>> Refer to DLK-123, "DRIVER SIDE : Diagnosis Procedure". NO

## DRIVER SIDE: Diagnosis Procedure

#### INFOID:0000000006225932 Е

## 1. CHECK DOOR LOCK ACTUATOR INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect front door lock assembly (driver side) connector.
- Check voltage between front door lock assembly (driver side) harness connector and ground.

(+) Front door lock assembly (driver side)		(–)	Condition		Voltage (Approx.)	
Connector	Terminal				(, <del>, , , , , , , , , , , , , , , , , , </del>	
D9	1	Ground	Deer look and unlook switch		12.1/	
סם	2	Giouna	Door lock and unlock switch Unlo	Unlock	12 V	

### Is the inspection result normal?

YES >> Replace front door lock assembly (driver side).

NO >> GO TO 2.

# 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- Disconnect BCM, all door lock actuators and fuel lid lock actuator connector.
- 2. Check continuity between BCM harness connector and front door lock assembly (driver side) harness connector.

ВСМ		Front door lock assembly (driver side)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M70	65	D9	1	Existed	
IVI7U	66	БЭ	2	Existed	

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M70	65	Giouna	Not existed	
IVI7U	66		Not existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK BCM OUTPUT SIGNAL

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

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#### < DTC/CIRCUIT DIAGNOSIS >

(+) BCM		(–)	Condition		Voltage (Approx.)
Connector	Terminal				( ipp. 5/)
M70	65	Ground	Door lock and unlock switch	Lock	12 V
IVI7U	66	Giouna	DOOF TOOK AND UNIOCK SWITCH	Unlock	12 V

#### Is the inspection result normal?

YES >> Check for internal short of each door lock actuator and fuel lid lock actuator.

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

### PASSENGER SIDE

### PASSENGER SIDE: Component Function Check

INFOID:0000000006225933

### 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR LOCK" in "ACTIVE TEST" mode.
- Touch "ALL LOCK" or "ALL UNLK" to check that it works normally.

### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-124</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000006225934

## 1. CHECK DOOR LOCK ACTUATOR INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (passenger side) connector.
- Check voltage between front door lock assembly (passenger side) harness connector and ground.

(	+)				
Front door lock assembly (passenger side)		(–)	Condition		Voltage (Approx.)
Connector	Terminal				
D28	1	Ground	Door lock and unlock switch	Unlock	12 V
D26	2	Giouna	Door lock and unlock Switch	Lock	12 V

#### Is the inspection result normal?

YES >> Replace front door lock assembly (passenger side).

NO >> GO TO 2.

## 2. CHECK DOOR LOCK ACTUATOR CIRCUIT

- Disconnect BCM, all door lock actuators and fuel lid lock actuator connector.
- Check continuity between BCM harness connector and front door lock assembly (passenger side) harness connector.

BCM		Front door lock assembly (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	59	D28	1	Existed
IVI7U	65	D20	2	

3. Check continuity between BCM harness connector and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

ļ	BCM		Continuity	
Connector	Terminal	Ground	Continuity	
M70	59	Giouna	Not existed	
IVI7U	65		NOI existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK BCM OUTPUT SIGNAL

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

(+) BCM		(-)	Condition		Voltage (Approx.)	
Connector	Terminal				(лрргод.)	
M70	59	Ground	Door lock and unlock switch	Unlock	12 V	
IVI7O	65	Ground	Door lock and unlock switch	Lock	12 V	

### Is the inspection result normal?

YES >> Check for internal short of each door lock actuator and fuel lid lock actuator.

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

#### REAR LH

### REAR LH: Component Function Check

# 1. CHECK FUNCTION

- Select "DOOR LOCK" of "BCM" using CONSULT-III.
- Select "DOOR LOCK" in "ACTIVE TEST" mode.
- Touch "ALL LOCK" or "ALL UNLK" to check that it works normally.

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

>> Refer to DLK-125, "REAR LH: Diagnosis Procedure". NO

## REAR LH: Diagnosis Procedure

# 1. CHECK DOOR LOCK ACTUATOR INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect rear door lock assembly LH connector.
- Check voltage between rear door lock assembly LH harness connector and ground.

(+)  Rear door lock assembly LH		(–)	Condition		Voltage (Approx.)
Connector	Terminal				(
	1	Ground	bund Door lock and unlock switch	Lock	- 12 V
D65	2	Giodila		Unlock	

#### Is the inspection result normal?

YES >> Replace rear door lock assembly LH.

NO >> GO TO 2.

## 2.CHECK DOOR LOCK ACTUATOR CIRCUIT

- Disconnect BCM, all door lock actuators and fuel lid lock actuator connector.
- Check continuity between BCM harness connector and rear door lock assembly LH harness connector.

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#### < DTC/CIRCUIT DIAGNOSIS >

ВСМ		Rear door lock assembly LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M69	55	Des	2	Existed
M70	65	D65	1	Existed

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M69	55	Giodila	Not existed	
M70	65		Not existed	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK BCM OUTPUT SIGNAL

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

(+)					Voltage
BCM		(–)	Condition		Voltage (Approx.)
Connector	Terminal				
M69	55	Ground	Door lock and unlock switch	Unlock	12 V
M70	65	Ground	Door lock and unlock switch	Lock	

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### Is the inspection result normal?

YES >> Check for internal short of each door lock actuator and fuel lid lock actuator.

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

REAR RH

## REAR RH: Component Function Check

1.CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR LOCK" in "ACTIVE TEST" mode.
- 3. Touch "ALL LOCK" or "ALL UNLK" to check that it works normally.

#### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-126, "REAR RH : Diagnosis Procedure"</u>.

### REAR RH: Diagnosis Procedure

# 1. CHECK DOOR LOCK ACTUATOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect rear door lock assembly RH connector.
- 3. Check voltage between rear door lock assembly RH harness connector and ground.

(+) Rear door lock assembly RH		(–)	Condition	Condition	
Connector	Terminal				Voltage (Approx.)
D45	1	Ground	Door lock and unlock switch	Unlock	12 V
D45 -	2	Giodila	Door lock and unlock switch	Lock	12 V

#### Is the inspection result normal?

### < DTC/CIRCUIT DIAGNOSIS >

YES >> Replace rear door lock assembly RH.

NO >> GO TO 2.

# 2.check door lock actuator circuit

Disconnect BCM, all door lock actuators and fuel lid lock actuator connector.

2. Check continuity between BCM harness connector and rear door lock assembly RH harness connector.

В	BCM Rear door lo		k assembly RH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M69	55	D45	1	Existed
M70	65	D43	2	LXISIGU

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M69	55	Ground	Not existed
M70	65		inoi existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3. CHECK BCM OUTPUT SIGNAL

Connect BCM connector.

Check voltage between BCM harness connector and ground. 2.

	+) CM	(–)	Condition		Voltage (Approx.)
Connector	Terminal				(· .FF1.0V.)
M69	55	Ground	Door lock and unlock switch	Unlock	12 V
M70	65	Ground	Door lock and unlock switch	Lock	12 V

#### Is the inspection result normal?

YES >> Check for internal short of each door lock actuator and fuel lid lock actuator.

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

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### **FUEL LID LOCK ACTUATOR**

#### < DTC/CIRCUIT DIAGNOSIS >

### **FUEL LID LOCK ACTUATOR**

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR LOCK" in "ACTIVE TEST" mode.
- 3. Touch "ALL LOCK" or "ALL UNLK" to check that it works normally.

#### Is the inspection result normal?

YES >> Fuel lid lock actuator is OK.

NO >> Refer to <u>DLK-128</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

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## 1. CHECK FUEL LID LOCK ACTUATOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect fuel lid lock actuator connector.
- 3. Check voltage between fuel lid lock actuator harness connector and ground.

(-	+)		Condition		
Fuel lid lo	ck actuator	(–)			Voltage (Approx.)
Connector	Terminal				
B19	1	Ground	Door lock and unlock	Unlock	12 V
D19	2	Ground	switch	Lock	12 V

### Is the inspection result normal?

YES >> Replace fuel lid lock actuator.

NO >> GO TO 2.

### 2. CHECK FUEL LID LOCK ACTUATOR CIRCUIT

- 1. Disconnect BCM, all door lock actuators connector.
- 2. Check continuity between BCM harness connector and fuel lid lock actuator harness connector.

В	СМ	Fuel lid lock actuator		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M70	65	B19	2	Existed
IVI7O	66	БТЭ	1	Existed

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M70	65	Ground	Not existed
IVI7 U	66		Not existed

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK BCM OUTPUT SIGNAL

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

### **FUEL LID LOCK ACTUATOR**

### < DTC/CIRCUIT DIAGNOSIS >

(+) BCM		(–)	Condition	Condition Voltage	Voltage (Approx.)
Connector	Terminal				( .pp. 3)
M70	65	Ground	Door lock and unlock switch	Lock	12 V
IVI / U	66	Giouna	Door lock and unlock Switch	Unlock	12 V

### Is the inspection result normal?

YES >> Check for internal short of each door lock actuator.

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

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#### < DTC/CIRCUIT DIAGNOSIS >

### **UNLOCK SENSOR**

## Component Function Check

#### INFOID:00000000006225941

## 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "UNLK SEN-DR" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
UNLK SEN -DR	Driver side door	Lock	OFF
	Driver side door	Unlock	ON

### Is the inspection result normal?

YES >> Unlock sensor is OK.

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

## Diagnosis Procedure

INFOID:0000000006225942

## 1. CHECK UNLOCK SENSOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) connector.
- 3. Check signal between front door lock assembly (driver side) harness connector and ground with oscilloscope.

Front door lock ass		(-)	Signal (Reference value)
D9	3	Ground	(V) 15 10 5 0 +10ms PKIB4960J

### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK UNLOCK SENSOR CIRCUIT

- Disconnect BCM connector.
- Check continuity between BCM harness connector and front door lock assembly (driver side) harness connector.

В	CM	Front door lock as:	sembly (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M68	31	D9	3	Existed

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M68	31		Not existed

#### Is the inspection result normal?

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

### **UNLOCK SENSOR**

### < DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

# 3.check unlock sensor ground circuit

Check continuity between front door lock assembly (driver side) harness connector and ground.

Front door lock assembly (driver side)			Continuity
Connector	Terminal	Ground	Continuity
D9	4		Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK UNLOCK SENSOR

Refer to DLK-131, "Component Inspection".

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace front door lock assembly (driver side).

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

## 1. CHECK UNLOCK SENSOR

- Turn ignition switch OFF.
- Disconnect front door lock assembly (driver side) connector. 2.
- Check continuity between front door lock assembly (driver side) terminals.

Front door lock assembly (driver side)		Condition		Continuity
Terr	minal	Con	dition	Continuity
2	4	Driver side door	Unlock	Existed
3	4	Driver side door	Lock	Not existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front door lock assembly (driver side). DLK

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### DOOR KEY CYLINDER SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

# DOOR KEY CYLINDER SWITCH

### Component Function Check

INFOID:0000000006225944

## 1. CHECK FUNCTION

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "KEY CYL LK-SW", "KEY CYL UN-SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
KEY CYL LK-SW		Lock	ON
RETUTE LN-SW	- Driver side door key cylinder	Neutral / Unlock	OFF
KEY CYL UN-SW		Unlock	ON
		Neutral / Lock	OFF

### Is the inspection result normal?

YES >> Door key cylinder switch is OK.

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

## Diagnosis Procedure

INFOID:0000000006225945

# 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) connector.
- 3. Check voltage between front door lock assembly (driver side) harness connector and ground.

(+)			V 11
Front door lock assembly (driver side)		(-)	Voltage (Approx.)
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	5	Ground	5 V
D9	6	Giouna	3 V

#### Is the inspection result normal?

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

# 2.check door key cylinder switch signal circuit

- 1. Disconnect power window main switch connector.
- Check continuity between power window main switch harness connector and front door lock assembly (driver side) harness connector.

Power windo	Power window main switch		Front door lock assembly (driver side)	
Connector	Terminal	Connector	Terminal	Continuity
D5	4	D9	6	Existed
	6	D9	5	LAISIEU

Check continuity between power window main switch harness connector and ground.

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
	4	Ground	Not existed
Do	6	-	Not existed

### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-74">PWC-74</a>, "Removal and Installation".

### DOOR KEY CYLINDER SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

# ${f 3.}$ check door key cylinder switch ground circuit

Check continuity between front door lock assembly (driver side) harness connector and ground.

Front door lock assembly (driver side)			Continuity
Connector	Terminal	Ground	Continuity
D9	4		Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

### 4. CHECK DOOR KEY CYLINDER SWITCH

Refer to DLK-133, "Component Inspection",

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace front door lock assembly (driver side).

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

1. CHECK DOOR KEY CYLINDER SWITCH

- Turn ignition switch OFF.
- Disconnect front door lock assembly (driver side) connector. 2.
- Check continuity between front door lock assembly (driver side) terminals.

Front door lock assembly (driver side)  Terminal		Condition		Continuity
6	4	Neutral / Lock	Not existed	
	4	Driver side door key cylinder	Lock	Existed
			Neutral / Unlock	Not existed

### Is the inspection result normal?

>> INSPECTION END YES

NO >> Replace front door lock assembly (driver side).

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### REMOTE KEYLESS ENTRY RECEIVER

#### < DTC/CIRCUIT DIAGNOSIS >

### REMOTE KEYLESS ENTRY RECEIVER

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "RKE OPE COUN1" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition
RKE OPE COUN1	Checks whether value changes when operating Intelligent Key

### Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

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

## Diagnosis Procedure

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INFOID:0000000006225947

## 1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between remote keyless entry receiver harness connector and ground using oscilloscope.

	(+) Remote keyless entry receiver		Condition	Signal (Reference value)
Connector	Terminal			
B21	2	Ground	Waiting	(V) 15 10 5 0  MKIA3838GB
		Ground	Signal receiving	(V) 15 10 5 0 WWWWWWWWWWWWWWWWWWWWWWWWWWWWW

### Is the inspection result normal?

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

## 2. CHECK REMOTE KEYLESS ENTRY RECEIVER CIRCUIT 1

- 1. Disconnect BCM and remote keyless entry receiver connector
- 2. Check continuity between BCM harness connector and remote keyless entry receiver harness connector.

Connector Terminal Connector Terminal	ВС	CM	Remote keyles	ss entry receiver	Continuity
M68 20 B21 2 Existed	Connector	Terminal	Connector	Terminal	Continuity
	M68	20	B21	2	Existed

### Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

### REMOTE KEYLESS ENTRY RECEIVER

#### < DTC/CIRCUIT DIAGNOSIS >

# ${\bf 3.}{\tt CHECK\ REMOTE\ KEYLESS\ ENTRY\ RECEIVER\ CIRCUIT\ 2}$

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

ВСМ			Continuity
Connector	Terminal	Ground	Continuity
M68	20		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY

- 1. Disconnect remote keyless entry receiver.
- 2. Check signal between remote keyless entry receiver harness connector and ground using oscilloscope.

	+) ss entry receiver	(–)	Signal (Reference value)
Connector	Terminal		(reference value)
B21	4	Ground	(V) 15 10 5 0 10 500 ms JMKIA3838GB

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

### 5. CHECK REMOTE KEYLESS ENTRY RECEIVER CIRCUIT 3

- 1. Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and remote keyless entry receiver harness connector.

В	BCM Remote keyless entry receiver		Continuity		
Connector	Terminal	Connector Terminal		Continuity	
M68	19	B21	4	Existed	

3. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M68	19		Not existed	

### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

NO >> Repair or replace harness.

### $\mathsf{6}.$ CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT 1

- Disconnect BCM connector.
- 2. Check continuity between BCM harness connector and remote keyless entry receiver harness connector.

В	BCM Remote keyless entry receiver		Continuity		
Connector	Terminal	Connector Terminal		Continuity	
M68	18	B21	1	Existed	

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### REMOTE KEYLESS ENTRY RECEIVER

#### < DTC/CIRCUIT DIAGNOSIS >

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Connector Terminal		Continuity	
M68	18		Not existed	

### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

## 7.CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT ${\scriptscriptstyle 2}$

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

В	CM		Continuity	
Connector	Connector Terminal		Continuity	
M68	18		Existed	

### Is the inspection result normal?

YES >> Replace remote keyless entry receiver.

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

## 8. CHECK REMOTE KEYLESS ENTRY RECEIVER RSSI OUTPUT SIGNAL

- 1. Connect BCM and remote keyless entry receiver connector.
- 2. Check signal between remote keyless entry receiver harness connector and ground using oscilloscope.

	(+) Remote keyless entry receiver		Condition	Signal (Reference value)	
Connector	Terminal			(Itoloronoo valao)	
			Waiting	0 V	
B21	3	Ground	Signal receiving	(V) 15 10 5 0 JMKIA3838GB	

#### Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace remote keyless entry receiver.

# 9. CHECK REMOTE KEYLESS ENTRY RECEIVER RSSI CIRCUIT

- Disconnect BCM and remote keyless entry receiver connector.
- 2. Check continuity between BCM harness connector and remote keyless entry receiver harness connector.

ВСМ		Remote keyless entry receiver		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M68	22	B21	3	Existed	

#### Is the inspection result normal?

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

NO >> Repair or replace harness.

### DOOR REQUEST SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

### DOOR REQUEST SWITCH

## Component Function Check

### INFOID:0000000006225949

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### 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "REQ SW-DR", "REQ SW-AS" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition	Status	
REQ SW -DR Driver side door request switch		Pressed	ON
REQ 3W -DR	Driver side door request switch	Released	OFF
REQ SW -AS Passenger side door request switch		Pressed	ON
REQ 3W -A3	Passenger side door request switch	Released	OFF

#### Is the inspection result normal?

YES >> Front door request switch is OK.

NO >> Refer to <u>DLK-137</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

#### INFOID:0000000006225950

## 1. CHECK DOOR REQUEST SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect malfunctioning front door request switch connector.
- 3. Check voltage between malfunctioning front door request switch harness connector and ground.

(+) Front door request switch			(-)	Voltage (Approx.)
Connector Terminal		-		
Driver side	D11	1	Ground	12 V
Passenger side	D31	<b>'</b>	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK DOOR REQUEST SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- Check continuity between malfunctioning front door request switch harness connector and BCM harness connector.

Front door request switch		В	Continuity			
Con	nector	Terminal	Connector	Terminal	Continuity	
Driver side	D11	1	M71	75	Existed	
Passenger side	D31	1	IVI7 I	76	LXISIEU	

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

Front door request switch				Continuity
Con	nector	Terminal		Continuity
Driver side	D11	4	Ground	Not existed
Passenger side	D31	-		Not existed

### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

NO >> Repair or replace harness.

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### DOOR REQUEST SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

# 3.check door request switch ground circuit

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

Front door request switch				Continuity	
Connector		Terminal	Cround	Continuity	
Driver side	D11	2	- Ground	Existed	
Passenger side	D31	2		LAISIEU	

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK DOOR REQUEST SWITCH

Refer to DLK-138, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace malfunctioning front door request switch.

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

# Component Inspection

INFOID:00000000006225951

## 1. CHECK DOOR REQUEST SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect malfunctioning front door request switch connector.
- 3. Check continuity between malfunctioning front door request switch terminals.

Front door request switch		Condition		Continuity
Terr	minal	0011	dition	Continuity
1	2	Door request switch	Pressed	Existed
ı	2	Door request switch	Released	Not existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace malfunctioning front door request switch.

### **BACK DOOR REQUEST SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## BACK DOOR REQUEST SWITCH

## Component Function Check

### INFOID:0000000006225952

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### 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "REQ SW-BD/TR" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
REQ SW-BD/TR Bac	Back door request switch	Pressed	On
	Back door request switch	Released	Off

#### Is the inspection result normal?

YES >> Back door request switch is OK.

NO >> Refer to <u>DLK-139</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

### INFOID:0000000006225953

# 1. CHECK BACK DOOR REQUEST SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect back door opener switch assembly connector.
- 3. Check voltage between back door opener switch assembly harness connector and ground.

Back door opene	(+) Back door opener switch assembly		Voltage (Approx.)
Connector	Terminal		,
D154	4	Ground	12 V

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK BACK DOOR REQUEST SWITCH CIRCUIT

1. Disconnect BCM connector.

Check continuity between BCM harness connector and back door opener switch assembly harness connector.

В	CM	Back door opener switch assembly		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M69	51	D154	4	Existed	

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M69	51		Not existed

### Is the inspection result normal?

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

NO >> Repair or replace harness.

### 3.CHECK BACK DOOR REQUEST SWITCH GROUND CIRCUIT

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

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### **BACK DOOR REQUEST SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Back door opener switch assembly			Continuity
Connector	Terminal	Ground	Continuity
D154	3		Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR REQUEST SWITCH

Refer to DLK-140, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace back door opener switch assembly.

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

## Component Inspection

INFOID:0000000006225954

## 1. CHECK BACK DOOR REQUEST SWITCH

- Turn ignition switch OFF.
- 2. Disconnect back door opener switch assembly connector.
- 3. Check continuity between back door opener switch assembly terminals.

Back door opener switch assembly		Condition		Continuity	
Terr	minal	Condition		Continuity	
2	4	Back door request switch	Pressed	Existed	
	4	Dack Gool Tequest Switch	Released	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door opener switch assembly.

### BACK DOOR OPENER SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

## BACK DOOR OPENER SWITCH

## Component Function Check

1. CHECK FUNCTION

- Select "TRUNK" of "BCM" using CONSULT-III.
- Select "TR/BD OPEN SW" in "DATA MONITOR" mode.
- Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
TR/BD OPEN SW Back door opener switch	Back door opener switch	Pressed	ON
TIVED OF LIN OW	Back door opener switch	Released	OFF

#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> Refer to <u>DLK-141</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

## 1. CHECK BACK DOOR OPEN INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect back door opener switch assembly connector.
- Check signal between back door opener switch assembly harness connector and ground.

	(+) Back door opener switch assembly		Signal (Reference value)	
Connector	Terminal		(1.010.01.00 1.01.00)	
D154	1	Ground	(V) 15 10 5 0 10 ms JPMIA0012GB	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.check back door opener switch circuit

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

В	CM	Back door opener switch assembly		n assembly Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M68	30	D154	1	Existed	

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M68	30		Not existed

#### Is the inspection result normal?

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

NO >> Repair or replace harness.

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### **BACK DOOR OPENER SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

# ${f 3.}$ CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

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

Back door opener switch assembly			Continuity
Connector	Terminal	Ground	Continuity
D154	2		Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK BACK DOOR OPENER SWITCH

Refer to DLK-142, "Component Inspection".

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace back door opener switch assembly.

### 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

INFOID:0000000006225957

## 1. CHECK BACK DOOR OPENER SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect back door opener switch assembly connector.
- 3. Check continuity between back door opener switch assembly terminals.

Back door opener switch assembly		- Condition		Continuity
Terr	minal	Condition Contin		Continuity
1	2	Back door opener	Pressed	Existed
1	2	switch	Released	Not existed

### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door opener switch assembly.

### INTELLIGENT KEY WARNING BUZZER

#### < DTC/CIRCUIT DIAGNOSIS >

### INTELLIGENT KEY WARNING BUZZER

## Component Function Check

## 1. CHECK FUNCTION

- Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "OUTSIDE BUZZER" in "ACTIVE TEST" mode.
- 3. Touch "On" or "Off" to check that it works normally.

### Is the inspection result normal?

YES >> Intelligent Key warning buzzer is OK.

NO >> Refer to <u>DLK-143</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

## 1. CHECK FUSE

1. Turn ignition switch OFF.

2. Check 10 A fuse, [No. 6, located in fuse block (J/B)].

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

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

1. Disconnect Intelligent Key warning buzzer connector.

2. Check voltage between Intelligent Key warning buzzer harness connector and ground.

(+)		(-)	Voltage (Approx.)
Intelligent Key warning buzzer			
Connector	Terminal		(11 /
E25	1	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK INTELLIGENT KEY WARNING BUZZER CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM harness connector and Intelligent Key warning buzzer harness connector.

В	CM	Intelligent Key warning buzzer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M71	93	E25	3	Existed

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M71	93		Not existed

### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK INTELLIGENT KEY WARNING BUZZER

### Refer to DLK-144, "Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace Intelligent Key warning buzzer.

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### INTELLIGENT KEY WARNING BUZZER

## < DTC/CIRCUIT DIAGNOSIS >

## Component Inspection

INFOID:0000000006225960

# 1.check intelligent key warning buzzer

- 1. Turn ignition switch OFF.
- 2. Disconnect Intelligent Key warning buzzer connector.
- Connect battery power supply directly to Intelligent Key warning buzzer terminals and check the operation.

Intelligent Key warning buzzer			
Terminal		Operation	
(+)	(–)		
1	3	Buzzer sounds	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace Intelligent Key warning buzzer.

## **INTELLIGENT KEY**

#### < DTC/CIRCUIT DIAGNOSIS >

## INTELLIGENT KEY

## Component Function Check

#### INFOID:0000000006225961

## 1. CHECK FUNCTION

- Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- Select "RKE OPE COUN1" in "DATA MONITOR" mode.
- Check that the function operates normally according to the following conditions.

Monitor item	Condition
RKE OPE COUN1	Check that the numerical value is changing while operating on the Intelligent Key.

#### Is the inspection result normal?

YES >> Intelligent Key is OK.

>> Refer to <u>DLK-145</u>, "<u>Diagnosis Procedure</u>". NO

## Diagnosis Procedure

#### INFOID:0000000006225962

## 1. CHECK INTELLIGENT KEY BATTERY

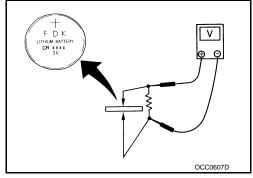
Check by connecting a resistance (approximately  $300\Omega$ ) so that the current value becomes about 10 mA. Refer to DLK-260, "Removal and Installation".

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

Is the measurement value within the specification?

YES >> Replace Intelligent Key.

NO >> Replace Intelligent Key battery.



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## **COMBINATION METER BUZZER**

#### < DTC/CIRCUIT DIAGNOSIS >

## COMBINATION METER BUZZER

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "INSIDE BUZZER" in "ACTIVE TEST" mode.
- 3. Touch "Key", "Knob" or "Take Out" to check that it works normally.

#### Is the inspection result normal?

Yes >> Combination meter buzzer is OK.

No >> Refer to <u>DLK-146, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

INFOID:0000000006225964

INFOID:0000000006225963

## 1. CHECK COMBINATION METER BUZZER CIRCUIT

Refer to WCS-40, "Component Function Check".

#### Is the inspection result normal?

Yes >> GO TO 2.

No >> Repair or replace the malfunctioning parts.

## 2. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## INFORMATION DISPLAY

#### < DTC/CIRCUIT DIAGNOSIS >

## INFORMATION DISPLAY Α Component Function Check INFOID:0000000006225965 1. CHECK FUNCTION В Select "INTELLIGENT KEY" of "BCM" using CONSULT-III. 2. Select "LCD" in "ACTIVE TEST" mode. 3. Check each warning display on meter display. Is the inspection result normal? YES >> Information display is OK. NO >> Refer to <u>DLK-147</u>, "<u>Diagnosis Procedure</u>". D Diagnosis Procedure INFOID:0000000006225966 Е 1. CHECK COMBINATION METER Refer to MWI-29, "On Board Diagnosis Function". Is the inspection result normal? F YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2. CHECK INTERMITTENT INCIDENT Refer to GI-40, "Intermittent Incident". Н >> INSPECTION END

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**DLK-147** Revision: 2010 May 2011 QX56

#### **KEY WARNING LAMP**

#### < DTC/CIRCUIT DIAGNOSIS >

## **KEY WARNING LAMP**

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "INDICATOR" in "ACTIVE TEST" mode.
- 3. Touch "KEY IND" or "KEY ON" to check that it works normally.

#### Is the inspection result normal?

YES >> Key warning lamp is OK.

NO >> Refer to <u>DLK-148</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000006225968

INFOID:0000000006225967

## 1. CHECK KEY WARNING LAMP

Refer to MWI-29, "On Board Diagnosis Function".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

## 2. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## **HAZARD FUNCTION**

## < DTC/CIRCUIT DIAGNOSIS > HAZARD FUNCTION Α Component Function Check INFOID:0000000006225969 1. CHECK FUNCTION В Select "INTELLIGENT KEY" of "BCM" using CONSULT-III. 2. Select "FLASHER" in "ACTIVE TEST" mode. 3. Touch "LH" or "RH" to check that it works normally. Is the inspection result normal? YES >> Hazard warning lamp circuit is OK. NO >> Refer to DLK-149, "Diagnosis Procedure". D Diagnosis Procedure INFOID:0000000006225970 Е 1. CHECK HAZARD SWITCH CIRCUIT Refer to EXL-105, "Component Function Check". Is the inspection result normal? F YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2. CHECK INTERMITTENT INCIDENT Refer to GI-40, "Intermittent Incident". Н >> INSPECTION END M

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**DLK-149** Revision: 2010 May 2011 QX56

## **AUTOMATIC BACK DOOR CLOSE SWITCH**

## < DTC/CIRCUIT DIAGNOSIS >

## AUTOMATIC BACK DOOR CLOSE SWITCH

## Component Function Check

## 1.CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "BK DOOR CL SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
BK DOOR CL SW	Automatic back door close switch	Pressed	ON
BR BOOK CE SW	Automatic back door close switch	Released	OFF

#### Is the inspection result normal?

YES >> Automatic back door close switch is OK.

NO >> Refer to <u>DLK-150</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000006225972

INFOID:0000000006225971

## 1. CHECK AUTOMATIC BACK DOOR CLOSE SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect automatic back door close switch connector.
- 3. Check voltage between automatic back door close switch harness connector and ground.

(+) Automatic back door close switch		(–)	Voltage (Approx.)	
Connector	Terminal			
D158	1	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK AUTOMATIC BACK DOOR CLOSE SWITCH CIRCUIT

- Disconnect automatic back door control module connector.
- 2. Check continuity between automatic back door control module harness connector and automatic back door close switch harness connector.

Automatic back door control module		Automatic back door close switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	4	D158	1	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back do	Automatic back door control module		Continuity	
Connector	Terminal	Ground	Continuity	
B26	4		Not existed	

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

## 3.CHECK AUTOMATIC BACK DOOR CLOSE SWITCH GROUND CIRCUIT

Check continuity between automatic back door close switch harness connector and ground.

## **AUTOMATIC BACK DOOR CLOSE SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back door close switch			Continuity
Connector	Terminal	Ground	Continuity
D158	2		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK AUTOMATIC BACK DOOR CLOSE SWITCH

Refer to DLK-151, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic back door close switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

1. CHECK AUTOMATIC BACK DOOR CLOSE SWITCH

- Turn ignition switch OFF.
- Disconnect automatic back door close switch connector.
- 3. Check continuity between automatic back door close switch terminals.

Automatic back	door close switch	Cone	dition	Continuity	
Terr	minal	Condition		Continuity	
	2	Automatic back door	Pressed	Existed	
ı	2	close switch	Released	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace automatic back door close switch. DLK

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## **AUTOMATIC BACK DOOR MAIN SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## AUTOMATIC BACK DOOR MAIN SWITCH

## Component Function Check

#### INFOID:0000000006225974

## 1. CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "MAIN SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
MAIN SW	Automatic back door main switch	ON	ON
MAIN OW	Automatic back door main switch	OFF	OFF

#### Is the inspection result normal?

YES >> Automatic back door main switch is OK.

NO >> Refer to <u>DLK-152</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:00000000006225975

## 1. CHECK AUTOMATIC BACK DOOR MAIN SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect automatic back door main switch connector.
- 3. Check voltage between automatic back door main switch harness connector and ground.

(+)	(+) Automatic back door main switch		Voltage
Connector	r main switch  Terminal	(-)	(Approx.)
M110	1	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK AUTOMATIC BACK DOOR MAIN SWITCH CIRCUIT

- Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and automatic back door main switch harness connector.

Automatic back door control module		Automatic back door main switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	17	M110	1	Existed

Check continuity between automatic back door control module connector and ground.

Automatic back d	oor control module		Continuity
Connector Terminal		Ground	Continuity
B26	17		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262</u>, "Removal and Installation".

NO >> Repair or replace harness.

## 3.CHECK AUTOMATIC BACK DOOR MAIN SWITCH GROUND CIRCUIT

Check continuity between automatic back door main switch connector and ground.

#### **AUTOMATIC BACK DOOR MAIN SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back d	Automatic back door main switch		Continuity	
Connector	Terminal	Ground	Continuity	
M110	3		Existed	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK AUTOMATIC BACK DOOR MAIN SWITCH

Refer to DLK-153, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic back door main switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

1. CHECK AUTOMATIC BACK DOOR MAIN SWITCH

- Turn ignition switch OFF.
- Disconnect automatic back door switch connector.
- 3. Check continuity between automatic back door main switch terminals.

Automatic back door main switch		Condition		Continuity
Terminal				Continuity
1	2	Automatic back door	ON	Existed
ı	3	main switch	OFF	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace automatic back door main switch.

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Revision: 2010 May **DLK-153** 2011 QX56

## **AUTOMATIC BACK DOOR SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

## AUTOMATIC BACK DOOR SWITCH

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "AUTO BD SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
AUTO BD SW	Automatic back door switch	Pressed	ON
7.010 DD 0W	Automatic back door switch	Released	OFF

#### Is the inspection result normal?

YES >> Automatic back door switch is OK.

NO >> Refer to <u>DLK-154</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000006225978

INFOID:0000000006225977

## 1. CHECK AUTOMATIC BACK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect automatic back door switch connector.
- 3. Check voltage between automatic back door switch harness connector and ground.

(+)				
Automatic back door switch		(–)	Voltage (Approx.)	
Connector	Terminal		(11 - /	
M127	1	Ground	Battery voltage	

## Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK AUTOMATIC BACK DOOR SWITCH CIRCUIT

- Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and automatic back door switch harness connector.

Automatic back d	oor control module	Automatic back door switch		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	2	M127	1	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back d	oor control module		Continuity
Connector Terminal		Ground	Continuity
B26	2		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

## 3.CHECK AUTOMATIC BACK DOOR SWITCH GROUND CIRCUIT

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

## **AUTOMATIC BACK DOOR SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back door switch			Continuity
Connector	Terminal	Ground	Continuity
M127	3		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK AUTOMATIC BACK DOOR SWITCH

Refer to DLK-155, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace automatic back door switch.

5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

## Component Inspection

1. CHECK AUTOMATIC BACK DOOR SWITCH

- Turn ignition switch OFF.
- Disconnect automatic back door switch connector.
- 3. Check continuity between automatic back door switch terminals.

Automatic back door switch Terminal		Condition		Continuity
				Continuity
1	2	Automatic back door switch	Pressed	Existed
'	3	Automatic back door switch	Released	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace automatic back door switch. DLK

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**DLK-155** Revision: 2010 May 2011 QX56

## HALF LATCH SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

## HALF LATCH SWITCH

## Component Function Check

## 1. CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- Select "HALF LATCH SW" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condit	Status	
HALF LATCH SW E	Back door	Fully closed/Half latch	OFF
	Dack Gool	Open	ON

#### Is the inspection result normal?

YES >> Half latch switch is OK.

NO >> Refer to <u>DLK-156</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000006225981

INFOID:0000000006225980

## 1. CHECK HALF LATCH SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly connector.
- 3. Check voltage between back door lock assembly harness connector and ground.

(–) Back door lock assembly		(–)	Voltage (Approx.)	
Connector	Terminal		(11 - 7	
D157	6	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK HALF LATCH SWITCH CIRCUIT

- Disconnect automatic back door control module connector.
- 2. Check continuity between automatic back door control module harness connector.

Automatic back d	oor control module	Back door lock assembly		ack door lock assembly Continuity	
Connector	Terminal	Connector Terminal		Continuity	
B26	8	D157	6	Existed	

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back d	oor control module		Continuity
Connector Terminal		Ground	Continuity
B26	8		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

## 3.check half latch switch ground circuit

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

Back door lock assembly			Continuity	
Connector	Connector Terminal		Continuity	
D157	8		Existed	

#### HALF LATCH SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK HALF LATCH SWITCH

Refer to DLK-157, "Component Inspection".

## Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace back door lock assembly.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

## Component Inspection

## **COMPONENT INSPECTION**

## 1. CHECK HALF LATCH SWITCH

- Turn ignition switch OFF.
- Disconnect back door lock assembly connector.
- 3. Check continuity between back door lock assembly terminals.

Back door lock assembly		Condition		Continuity	
Terminal					
			Open	Existed	
6	8	Back door	Fully closed/Half latch	Not existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace back door lock assembly.

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#### < DTC/CIRCUIT DIAGNOSIS >

## **TOUCH SENSOR**

RH

## RH: Component Function Check

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## 1. CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "TOUCH SEN RH" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
TOUCH SEN RH Tou	Touch sensor RH	Other than below	OFF
	TOUCH SENSOL KIT	Detect obstruction	ON

#### Is the inspection result normal?

YES >> Touch sensor RH is OK.

NO >> Refer to <u>DLK-158</u>, "RH: <u>Diagnosis Procedure"</u>.

## RH: Diagnosis Procedure

INFOID:0000000006225984

## 1. CHECK TOUCH SENSOR RH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect touch sensor RH connector.
- 3. Check voltage between touch sensor RH harness connector and ground.

(+) Touch sensor RH		(–)	Voltage (Approx.)
Connector	Terminal		(* FP.5///)
D108	1	Ground	6 V

#### Is the inspection result normal?

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

## 2. CHECK TOUCH SENSOR RH CIRCUIT

- 1. Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and touch sensor RH harness connector.

Automatic back do	Automatic back door control module		Touch sensor RH	
Connector	Terminal	Connector	Terminal	Continuity
B26	16	D108	1	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Ground	Continuity
B26	16		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

## 3.check touch sensor RH ground circuit

Check continuity between automatic back door control module harness connector and touch sensor RH harness connector.

#### < DTC/CIRCUIT DIAGNOSIS >

Automatic back d	Automatic back door control module		Touch sensor RH	
Connector	Terminal	Connector	Terminal	Continuity
B26	15	D108	2	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK TOUCH SENSOR RH

Refer to DLK-159, "RH: Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace touch sensor RH.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

## RH: Component Inspection

## 1. CHECK TOUCH SENSOR RH

- 1. Turn ignition switch OFF.
- Disconnect touch sensor RH connector.
- Check continuity between touch sensor RH terminals.

	ensor RH minal	Condition		Condition		Resistance (Approx.)
1	2	Touch sensor RH	Detect obstruction	120 Ω or less		
	2	TOUCH SENSOR KH	Other than above	1 kΩ ± 10%		

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace touch sensor RH.

LH

## LH: Component Function Check

## 1.CHECK FUNCTION

- Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "TOUCH SEN LH" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
TOUCH SEN LH T	Touch sensor LH	Other than below	OFF
	Touch sensor Lit	Detect obstruction	ON

#### Is the inspection result normal?

YES >> Touch sensor LH is OK.

NO >> Refer to <u>DLK-159</u>, "LH: <u>Diagnosis Procedure"</u>.

## LH: Diagnosis Procedure

## 1. CHECK TOUCH SENSOR LH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect touch sensor LH connector.

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#### < DTC/CIRCUIT DIAGNOSIS >

Check voltage between touch sensor harness connector and ground.

(+) Touch sensor LH		(-)	Voltage (Approx.)	
Connector	Terminal		<b>\ 11</b>	
D107	1	Ground	6 V	

#### Is the inspection result normal?

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

## 2.check touch sensor LH circuit

- 1. Disconnect automatic back door control module connector.
- Check continuity between automatic back door control module harness connector and touch sensor LH harness connector.

Automatic back d	Automatic back door control module		Touch sensor LH	
Connector	Terminal	Connector	Terminal	Continuity
B26	14	D107	1	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Ground	Continuity
B26	14		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

## 3.check touch sensor LH ground circuit

Check continuity between automatic back door control module harness connector and touch sensor LH harness connector.

Automatic back d	Automatic back door control module		Touch sensor LH	
Connector	Terminal	Connector	Terminal	Continuity
B26	15	D107	2	Existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4.CHECK TOUCH SENSOR LH

Refer to DLK-160, "LH: Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace touch sensor LH.

## 5. CHECK INTERMITTENT INCIDENT

Refer to GI-40, "Intermittent Incident".

#### >> INSPECTION END

## LH: Component Inspection

## 1. CHECK TOUCH SENSOR LH

- Turn ignition switch OFF.
- Disconnect touch sensor LH connector.

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## < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between touch sensor LH terminals.

Touch sensor LH		Condition		Resistance	
Terr	ninal	0011	altion	(Approx.)	
1	2 Touch	Touch sensor LH	Detect obstruction	120 $\Omega$ or less	
ı	2	Touch sensor LH	Other than above	1 kΩ ± 10%	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace touch sensor LH.

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## **BACK DOOR CLOSURE MOTOR**

#### < DTC/CIRCUIT DIAGNOSIS >

## BACK DOOR CLOSURE MOTOR

## Diagnosis Procedure

INFOID:0000000006225989

## 1. CHECK BACK DOOR CLOSURE MOTOR INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect back door lock assembly connector.
- 3. Check voltage between back door lock assembly harness connector and ground.

(+) Back door lock assembly			Condition		Voltage (Approx.)
		(–)			
Connector	Terminal				
D157	1	Ground Back door opener		Pressed	Battery voltage
	2	Giouria	switch	Released	0 V

#### Is the inspection result normal?

YES >> Replace back door lock assembly.

NO >> GO TO 2.

## 2.check back door closure motor circuit

- 1. Disconnect automatic back door control module connector.
- 2. Check continuity between automatic back door control module harness connector and back door lock assembly harness connector.

Automatic back dod	or control module	Back door lock assembly		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	11	D157	1	Existed
D20	12	D137	2	LXISIGU

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Ground	Continuity
B26	11	Ground	Not existed
D20	12		Not existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

#### **AUTOMATIC BACK DOOR WARNING BUZZER**

#### < DTC/CIRCUIT DIAGNOSIS >

## AUTOMATIC BACK DOOR WARNING BUZZER

## Diagnosis Procedure

## 1.CHECK FUSE

- Turn ignition switch OFF.
- 2. Check 10 A fuse, [No.9, located in fuse block (J/B)].

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace the blown fuse after repairing the affected circuit if a fuse is blown.

## 2.CHECK AUTOMATIC BACK DOOR WARNING BUZZER POWER SUPPLY CIRCUIT

- 1. Disconnect automatic back door warning buzzer connector.
- 2. Check voltage between automatic back door warning buzzer harness connector and ground.

(+) Automatic back door v	varning buzzer	(-)	Voltage (Approx.)
Connector	Connector Terminal		( 44)
D159	1	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## ${f 3.}$ CHECK AUTOMATIC BACK DOOR WARNING BUZZER OUTPUT SIGNAL CIRCUIT

- 1. Disconnect automatic back door control module connector.
- 2. Check continuity between automatic back door control module harness connector and automatic back door warning buzzer harness connector.

Automatic back door control module		Automatic back door warning buzzer		Continuity
Connector	Terminal	Connector	Terminal	Continuity
B26	1	D159	2	Existed

3. Check continuity between automatic back door control module harness connector and ground.

Automatic back dod	or control module		Continuity
Connector Terminal		Ground	Continuity
B26	1		Not existed

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

## 4. CHECK AUTOMATIC BACK DOOR WARNING BUZZER

#### Refer to DLK-163, "Component Inspection"

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Replace automatic back door warning buzzer.

## Component Inspection

## 1. CHECK AUTOMATIC BACK DOOR WARNING BUZZER

- Turn ignition switch OFF.
- 2. Disconnect automatic back door warning buzzer connector.
- Check battery power supply directly to automatic back door warning buzzer terminals and check the operation.

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## **AUTOMATIC BACK DOOR WARNING BUZZER**

## < DTC/CIRCUIT DIAGNOSIS >

Automatic back door warning buzzer			
Terminal		Operation	
(+)	(-)		
1	2	Buzzer sounds	

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace automatic back door warning buzzer.

## **GROUND CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## **GROUND CIRCUIT**

## Component Function Check

#### INFOID:000000006225992

## 1. CHECK FUNCTION

- 1. Select "AUTOMATIC BACK DOOR CONTROL UNIT" using CONSULT-III.
- 2. Select "DESTINATION" and "HAZARD" in "DATA MONITOR" mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Condition		Status
	Circuit between automatic	Normal	NAM
	back door control module terminal 22 and ground	Open or short	JPN
HAZARD	Circuit between automatic back door control module terminal 23 and ground	Normal	ON
		Open or short	OFF

#### Is the inspection result normal?

YES >> Automatic back door ground circuit is OK.

NO >> Refer to <u>DLK-165</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

## 1. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect automatic back door control module connector.
- 3. Check continuity between automatic back door control module harness connector and ground.

Automatic back door control module			Continuity
Connector	Terminal	Crownd	Continuity
Pae	22	- Ground	Eviated
B26	23	Existed	Existed

#### Is the inspection result normal?

YES >> Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.

NO >> Repair or replace harness.

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INFOID:0000000006225993

## INTEGRATED HOMELINK TRANSMITTER

#### < DTC/CIRCUIT DIAGNOSIS >

## INTEGRATED HOMELINK TRANSMITTER

## Component Function Check

#### INFOID:0000000006256149

## 1. CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Receiver or hand-held transmitter is malfunctioning.

## 2. CHECK ILLUMINATE

- Turn ignition switch OFF.
- 2. Does red light of transmitter illuminate when any transmitter button is pressed?

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to <u>DLK-166</u>, "<u>Diagnosis Procedure</u>".

## 3. CHECK TRANSMITTER

Check transmitter with Tool\*.

\*: For details, refer to Technical Service Bulletin.

#### Is the inspection result normal?

YES >> Receiver or hand-held transmitter malfunction, not vehicle related.

NO >> Replace auto anti-dazzling inside mirror (integrated homelink transmitter).

## Diagnosis Procedure

INFOID:0000000006256150

## 1. CHECK POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect auto anti-dazzling inside mirror (integrated homelink transmitter) connector.
- Check voltage between auto anti-dazzling inside mirror (integrated homelink transmitter) harness connector and ground.

(	+)		
Auto anti-dazzling inside mirror (Integrated homelink transmitter)		(-)	Voltage (Approx.)
Connector	Terminal		
R25	6	- Ground	Pottory voltage
1/25	10	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 2.

NO-1 >> Check 10 A fuse [No. 6 located in the fuse block (J/B)].

NO-2 >> Harness for open or short between fuse and auto anti-dazzling inside mirror (integrated homelink transmitter).

## 2. CHECK GROUND CIRCUIT

Check continuity between auto anti-dazzling inside mirror (integrated homelink transmitter) harness connector and ground.

	ing inside mirror elink transmitter)		Continuity
Connector	Terminal	Ground	
R25	8		Existed

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## INTEGRATED HOMELINK TRANSMITTER

## < DTC/CIRCUIT DIAGNOSIS >

# 3.CHECK INTERMITTENT INCIDENT Refer to GI-40, "Intermittent Incident".

>> INSPECTION END

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Revision: 2010 May **DLK-167** 2011 QX56

## DOOR DOES NOT LOCK/UNLOCK WITH DOOR LOCK AND UNLOCK SWITCH

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

# DOOR DOES NOT LOCK/UNLOCK WITH DOOR LOCK AND UNLOCK SWITCH

**ALL DOOR** 

ALL DOOR : Description

INFOID:0000000006225994

All doors do not lock/unlock using door lock and unlock switch.

**ALL DOOR: Diagnosis Procedure** 

INFOID:0000000006225995

## ${f 1}$ .CHECK DOOR LOCK AND UNLOCK SWITCH

Check door lock and unlock switch.

- Driver side: Refer to DLK-122, "DRIVER SIDE: Component Function Check".
- Passenger side: Refer to DLK-122, "PASSENGER SIDE: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

## 2.CHECK DOOR LOCK ACTUATOR

Check front door lock assembly (driver side).

Refer to DLK-123, "DRIVER SIDE: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- · Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

#### DRIVER SIDE

## **DRIVER SIDE: Description**

INFOID:0000000006225996

Driver side door does not lock/unlock using door lock and unlock switch.

## DRIVER SIDE: Diagnosis Procedure

INFOID:0000000006225997

## 1. CHECK DOOR LOCK ACTUATOR

Check front door lock assembly (driver side).

Refer to DLK-123, "DRIVER SIDE: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

## 2.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

#### PASSENGER SIDE

## DOOR DOES NOT LOCK/UNLOCK WITH DOOR LOCK AND UNLOCK SWITCH

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS >	
PASSENGER SIDE : Description	INFOID:0000000006225998
Passenger side door does not lock/unlock using door lock and unlock switch.	
PASSENGER SIDE : Diagnosis Procedure	INFOID:0000000006225999
1. CHECK DOOR LOCK ACTUATOR	
Check front door lock assembly (passenger side). Refer to DLK-124, "PASSENGER SIDE: Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.REPLACE BCM	
<ul> <li>Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ul>	
ls the result normal?	
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
REAR LH	
REAR LH : Description	INFOID:0000000006226000
Rear LH side door does not lock/unlock using door lock and unlock switch.	
REAR LH : Diagnosis Procedure	INFOID:000000006226001
1. CHECK DOOR LOCK ACTUATOR	
Check rear door lock assembly LH. Refer to DLK-125, "REAR LH: Component Function Check".	_
Is the inspection result normal?	
YES >> GO TO 2.	ı
NO >> Repair or replace the malfunctioning parts.  2. REPLACE BCM	
Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u> .	
• Confirm the operation after replacement.	
Is the result normal?	
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
REAR RH	
REAR RH : Description	INFOID:0000000006226002
Rear RH side door does not lock/unlock using door lock and unlock switch.	
REAR RH : Diagnosis Procedure	INFOID:000000006226003
1. CHECK DOOR LOCK ACTUATOR	
Check rear door lock assembly RH.	
Refer to DLK-126, "REAR RH: Component Function Check".	
Is the inspection result normal?	
·	

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## DOOR DOES NOT LOCK/UNLOCK WITH DOOR LOCK AND UNLOCK SWITCH

## < SYMPTOM DIAGNOSIS >

## Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

<sup>•</sup> Confirm the operation after replacement.

## DOOR DOES NOT LOCK/UNLOCK WITH DOOR KEY CYLINDER OPERATION

< SYMPTOM DIAGNOSIS >

# DOOR DOES NOT LOCK/UNLOCK WITH DOOR KEY CYLINDER OPERATION

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## Diagnosis Procedure

## 1. CHECK POWER DOOR LOCK OPERATION

Check power door lock operation.

Does door lock/unlock with door lock and unlock switch?

YES >> GO TO 2.

NO >> Refer to <u>DLK-168</u>, "ALL <u>DOOR</u> : <u>Diagnosis Procedure"</u>.

2. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to DLK-132, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.replace  $_{
m BCM}$ 

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- Confirm the operation after replacement.

Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

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#### DOOR DOES NOT LOCK/UNLOCK WITH DOOR REQUEST SWITCH

#### < SYMPTOM DIAGNOSIS >

# DOOR DOES NOT LOCK/UNLOCK WITH DOOR REQUEST SWITCH ALL DOOR REQUEST SWITCHES

## ALL DOOR REQUEST SWITCHES: Description

INFOID:0000000006226005

All doors do not lock/unlock using all door request switches.

## ALL DOOR REQUEST SWITCHES: Diagnosis Procedure

INFOID:0000000006226006

## 1. CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent Key button?

YES >> GO TO 2.

NO >> Refer to <u>DLK-134</u>, "Component Function Check".

## 2.CHECK "LOCK/UNLOCK BY I-KEY" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "LOCK/UNLOCK BY I-KEY" in "WORK SUPPORT" mode.
- Check "LOCK/UNLOCK BY I-KEY" setting in "WORK SUPPORT".
   Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Set "ON" in "LOCK/UNLOCK BY I-KEY".

## 3.check door switch

Check door switch.

Refer to <u>DLK-117</u>, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## CHECK INSIDE KEY ANTENNA

#### Check inside key antenna.

- Instrument center: Refer to <u>DLK-104, "DTC Logic"</u>.
- Console: Refer to DLK-106, "DTC Logic".
- Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## ${f 5.}$ CHECK OUTSIDE KEY ANTENNA

#### Check outside key antenna.

- Driver side: Refer to <u>DLK-110</u>, "DTC Logic".
- Passenger side: Refer to DLK-112, "DTC Logic".
- Back door: Refer to <u>DLK-114, "DTC Logic"</u>.

## Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

## 6. CHECK BACK DOOR SWITCH

#### Check back door switch.

Refer to DLK-120, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace the malfunctioning parts.

## 7. REPLACE BCM

## DOOR DOES NOT LOCK/UNLOCK WITH DOOR REQUEST SWITCH

< SYMPTOM DIAGNOSIS >	
<ul> <li>Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ul>	A
Is the result normal?	
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". DRIVER SIDE DOOR REQUEST SWITCH	В
DRIVER SIDE DOOR REQUEST SWITCH : Description	6226007
All doors do not lock/unlock using driver side door request switch.	
DRIVER SIDE DOOR REQUEST SWITCH : Diagnosis Procedure	6226008
1.CHECK DOOR REQUEST SWITCH	
Check front door request switch (driver side).  Refer to DLK-137, "Component Function Check".	Е
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	F
2.REPLACE BCM	
<ul> <li>Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ul>	G
Is the result normal?	Н
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
PASSENGER SIDE DOOR REQUEST SWITCH	ı
PASSENGER SIDE DOOR REQUEST SWITCH : Description	6226009
All doors do not lock/unlock using passenger side door request switch.	J
PASSENGER SIDE DOOR REQUEST SWITCH : Diagnosis Procedure	6226010
1. CHECK DOOR REQUEST SWITCH	DLK
Check front door request switch (passenger side).  Refer to DLK-137, "Component Function Check".	
Is the inspection result normal?	L
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.REPLACE BCM	M
Replace BCM. Refer to BCS-81, "Removal and Installation".	
Confirm the operation after replacement.  Is the result normal?	N
YES >> INSPECTION END	
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".  BACK DOOR REQUEST SWITCH	0
BACK DOOR REQUEST SWITCH : Description	6226011 P
All doors do not lock/unlock using back door request switch.	
BACK DOOR REQUEST SWITCH : Diagnosis Procedure	6226012
1. CHECK BACK DOOR REQUEST SWITCH	
Check back door request switch.	

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## DOOR DOES NOT LOCK/UNLOCK WITH DOOR REQUEST SWITCH

#### < SYMPTOM DIAGNOSIS >

Refer to DLK-139, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

## 2.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## DOOR DOES NOT LOCK/UNLOCK WITH INTELLIGENT KEY

## < SYMPTOM DIAGNOSIS >

DOOR DOES NOT LOCK/UNLOCK WITH INTELLIGENT KEY	А
Diagnosis Procedure	A
1. CHECK POWER DOOR LOCK OPERATION	В
Check power door lock operation.	
Does door lock/unlock with door lock and unlock switch?	
YES >> GO TO 2. NO >> Refer to <u>DLK-168, "ALL DOOR: Diagnosis Procedure"</u> .	C
2.CHECK REMOTE KEYLESS ENTRY RECEIVER	D
Check remote keyless entry receiver.	D
Refer to DLK-134, "Component Function Check".	
Is the inspection result normal?	Е
YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	
3.CHECK INTELLIGENT KEY	F
Check Intelligent Key.	
Refer to DLK-145, "Component Function Check".	G
Is the inspection result normal?  YES >> GO TO 4.	
NO >> Repair or replace the malfunctioning parts.	
4.REPLACE BCM	Н
<ul> <li>Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ul>	
Is the result normal?	I
YES >> INSPECTION END	
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	J

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## **FUEL LID LOCK ACTUATOR DOES NOT OPERATE**

#### < SYMPTOM DIAGNOSIS >

## FUEL LID LOCK ACTUATOR DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226014

## 1. CHECK POWER DOOR LOCK OPERATION

Check power door lock operation.

Does door lock/unlock with door lock and unlock switch?

YES >> GO TO 2.

NO >> Refer to <u>DLK-168</u>, "ALL <u>DOOR</u>: <u>Diagnosis Procedure"</u>.

## 2. CHECK FUEL LID LOCK ACTUATOR

Check fuel lid lock actuator.

Refer to DLK-128, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- · Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## **IGNITION POSITION WARNING FUNCTION DOES NOT OPERATE**

< SYMPTOM DIAGNOSIS >

IGNITION POSITION WARNING FUNCTION DOES NOT OPERATE		
Diagnosis Procedure	Α	
1. CHECK POWER DOOR LOCK OPERATION	В	
Check power door lock operation.		
Does door lock/unlock with door lock and unlock switch?		
YES >> GO TO 2. NO >> Refer to DLK-168, "ALL DOOR : Diagnosis Procedure".	C	
2.check door switch	D	
Check door switch	D	
Refer to DLK-117, "Component Function Check".		
Is the inspection result normal?	Е	
YES >> GO TO 3.		
NO >> Repair or replace the malfunctioning parts.	_	
3.CHECK BACK DOOR SWITCH	F	
Check door switch Refer to DLK-120, "Component Function Check".		
Is the inspection result normal?	G	
YES >> GO TO 4.		
NO >> Repair or replace the malfunctioning parts.		
4.REPLACE BCM	Н	
Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u> .		
Confirm the operation after replacement.  In the property of the property		
Is the result normal?  YES >> INSPECTION END		
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	J	

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#### SELECTIVE UNLOCK FUNCTION DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

## SELECTIVE UNLOCK FUNCTION DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226016

## 1. CHECK "DOOR LOCK-UNLOCK SET" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "DOOR LOCK-UNLOCK SET" in "WORK SUPPORT" mode.
- Check "DOOR LOCK-UNLOCK SET" setting in "WORK SUPPORT".
   Refer to <u>DLK-39</u>, "<u>DOOR LOCK</u>: <u>CONSULT-III Function</u> (<u>BCM DOOR LOCK</u>)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set "On" in "DOOR LOCK-UNLOCK SET".

## 2.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## **AUTO DOOR LOCK OPERATION DOES NOT OPERATE**

#### < SYMPTOM DIAGNOSIS >

## AUTO DOOR LOCK OPERATION DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226017

## 1. CHECK "AUTO LOCK SET" SETTING IN "WORK SUPPORT"

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- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "AUTO LOCK SET" in "WORK SUPPORT" mode.
- Check "AUTO LOCK SET" setting in "WORK SUPPORT".
   Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set "MODE 2", "MODE 3", "MODE 4", "MODE 5", "MODE 6" or "MODE 7" in "AUTO LOCK SET".

## 2.REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- · Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

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#### VEHICLE SPEED SENSING AUTO LOCK OPERATION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## VEHICLE SPEED SENSING AUTO LOCK OPERATION DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226018

## 1. CHECK "AUTOMATIC LOCK/UNLOCK SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "AUTOMATIC LOCK/UNLOCK SELECT" in "WORK SUPPORT" mode.
- 3. Check "AUTOMATIC LOCK/UNLOCK SELECT" setting in "WORK SUPPORT". Refer to <a href="DLK-39">DLK-39</a>, "DOOR LOCK: CONSULT-III Function (BCM DOOR LOCK)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set "Lock Only" or "Lock/Unlock" in "WORK SUPPORT".

## 2. CHECK "AUTOMATIC DOOR LOCK SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- Select "AUTOMATIC DOOR LOCK SELECT" in "WORK SUPPORT" mode.
- 3. Check "AUTOMATIC DOOR LOCK SELECT" setting in "WORK SUPPORT".

  Refer to <u>DLK-39</u>, "DOOR LOCK: CONSULT-III Function (BCM DOOR LOCK)".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Set "VH SPD" in "AUTOMATIC DOOR LOCK SELECT".

## 3. REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## IGN OFF INTERLOCK DOOR UNLOCK FUNCTION DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS > IGN OFF INTERLOCK DOOR UNLOCK FUNCTION DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000006226019 1. CHECK "AUTOMATIC LOCK/UNLOCK SELECT" SETTING IN "WORK SUPPORT" В Select "DOOR LOCK" of "BCM" using CONSULT-III. Select "AUTOMATIC LOCK/UNLOCK SELECT" in "WORK SUPPORT" mode. Check "AUTOMATIC LOCK/UNLOCK SELECT" setting in "WORK SUPPORT". Refer to DLK-39, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)". Is the inspection result normal? YES >> GO TO 2. D NO >> Set "Unlock Only" or "Lock/Unlock" in "AUTOMATIC LOCK/UNLOCK SELECT". 2.check "automatic door unlock select" setting in "work support" Е Select "DOOR LOCK" of "BCM" using CONSULT-III. Select "AUTOMATIC DOOR UNLOCK SELECT" in "WORK SUPPORT" mode. Check "AUTOMATIC DOOR UNLOCK SELECT" setting in "WORK SUPPORT". Refer to DLK-39, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)". F Is the inspection result normal? YES >> GO TO 3. NO >> Set "MODE 1" or "MODE 3" in "AUTOMATIC DOOR UNLOCK SELECT". 3. REPLACE BCM • Replace BCM. Refer to BCS-81, "Removal and Installation". Н Confirm the operation after replacement. Is the result normal? YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident". DLK

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**DLK-181** Revision: 2010 May 2011 QX56

# P RANGE INTERLOCK DOOR LOCK/UNLOCK FUNCTION DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS >

# P RANGE INTERLOCK DOOR LOCK/UNLOCK FUNCTION DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226020

# 1. CHECK "AUTOMATIC LOCK/UNLOCK SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "AUTOMATIC LOCK/UNLOCK SELECT" in "WORK SUPPORT" mode.
- Check "AUTOMATIC LOCK/UNLOCK SELECT" setting in "WORK SUPPORT". Refer to <u>DLK-39</u>, "<u>DOOR LOCK</u>: <u>CONSULT-III Function</u> (<u>BCM - DOOR LOCK</u>)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set "Unlock Only", "Lock Only" or "Lock/Unlock" in "AUTOMATIC LOCK/UNLOCK SELECT".

# 2. CHECK "AUTOMATIC DOOR LOCK SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- 2. Select "AUTOMATIC DOOR LOCK SELECT" in "WORK SUPPORT" mode.
- Check "AUTOMATIC DOOR LOCK SELECT" setting in "WORK SUPPORT". Refer to <u>DLK-39</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Set "P RANGE" in "AUTOMATIC DOOR LOCK SELECT".

# ${f 3.}$ CHECK "AUTOMATIC DOOR UNLOCK SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "DOOR LOCK" of "BCM" using CONSULT-III.
- Select "AUTOMATIC DOOR UNLOCK SELECT" in "WORK SUPPORT" mode.
- Check "AUTOMATIC DOOR UNLOCK SELECT" setting in "WORK SUPPORT". Refer to <u>DLK-39</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Set "MODE 2" or "MODE 4" in "AUTOMATIC DOOR UNLOCK SELECT".

## 4.REPLACE BCM

- Replace BCM. Refer to <u>BCS-81</u>, "Removal and Installation".
- Confirm the operation after replacement.

## Is the result normal?

YES >> INSPECTION END

# HAZARD AND HORN REMINDER DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS >

HAZARD AND HORN REMINDER DOES NOT OPERATE	
Diagnosis Procedure	Α
1. CHECK "HAZARD ANSWER BACK" SETTING IN "WORK SUPPORT"	В
<ol> <li>Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.</li> <li>Select "HAZARD ANSWER BACK" in "WORK SUPPORT" mode.</li> <li>Check the "HAZARD ANSWER BACK" setting in "WORK SUPPORT". Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".</li> </ol>	С
Is the inspection result normal?  YES >> GO TO 2.  NO >> Set the "Lock Only", "Unlock Only" or "Lock/Unlock" in "HAZARD ANSWER BACK".	D
2.CHECK "HORN WITH KEYLESS LOCK" SETTING IN "WORK SUPPORT"	Е
<ol> <li>Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.</li> <li>Select "HORN WITH KEYLESS LOCK" in "WORK SUPPORT" mode.</li> <li>Check the "HORN WITH KEYLESS LOCK" in "WORK SUPPORT". Refer to <u>DLK-41</u>. "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".</li> </ol>	F
Is the inspection result normal?  YES >> GO TO 3.	
NO >> Set the "On" in "HORN WITH KEYLESS LOCK".  3. CHECK HAZARD FUNCTION	G
Check hazard function.  Refer to <u>DLK-149</u> , "Component Function Check".	Н
Is the inspection result normal?  YES >> GO TO 4.  NO >> Repair or replace the malfunctioning parts.  4. CHECK HORN FUNCTION	I
Check horn function. Refer to SEC-143, "Component Function Check".	J
Is the inspection result normal?  YES >> GO TO 5.  NO >> Repair or replace the malfunctioning parts.	DLK
5.REPLACE BCM	ı
<ul> <li>Replace BCM. Refer to <u>BCS-81</u>, "<u>Removal and Installation</u>".</li> <li>Confirm the operation after replacement.</li> <li>Is the result normal?</li> </ul>	M
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	IVI
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## HAZARD AND BUZZER REMINDER DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

## HAZARD AND BUZZER REMINDER DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226022

# 1. CHECK "HAZARD ANSWER BACK" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- Select "HAZARD ANSWER BACK" in "WORK SUPPORT" mode.
- Check the "HAZARD ANSWER BACK" setting in "WORK SUPPORT".
   Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set the "Lock Only", "Unlock Only" or "Lock/Unlock" in "HAZARD ANSWER BACK".

# 2. CHECK "ANS BACK I-KEY LOCK" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "ANS BACK I-KEY LOCK" in "WORK SUPPORT" mode.
- Check the "ANS BACK I-KEY LOCK" setting in "WORK SUPPORT".
   Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Set the "Horn Chirp" or "Buzzer" in "ANS BACK I-KEY LOCK".

# ${f 3.}$ CHECK "ANS BACK I-KEY UNLOCK" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "ANS BACK I-KEY UNLOCK" in "WORK SUPPORT" mode.
- 3. Check the "ANS BACK I-KEY UNLOCK" setting in "WORK SUPPORT".

  Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Set the "On" in "ANS BACK I-KEY UNLOCK".

## 4.CHECK HAZARD FUNCTION

#### Check hazard function.

Refer to DLK-149, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## ${f 5}.$ CHECK INTELLIGENT KEY WARNING BUZZER

#### Check Intelligent Key warning buzzer.

Refer to DLK-143, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

#### **6.**REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- · Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

# **KEY REMINDER FUNCTION DOES NOT OPERATE**

#### < SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS > KEY REMINDER FUNCTION DOES NOT OPERATE	_
Diagnosis Procedure	A 23
1. CHECK "ANTI KEY LOCK IN FUNCTI" SETTING IN "WORK SUPPORT"	В
<ol> <li>Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.</li> <li>Select "ANTI KEY LOCK IN FUNCTI" in "WORK SUPPORT" mode.</li> <li>Check "ANTI KEY LOCK IN FUNCTI" setting in "WORK SUPPORT". Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".</li> </ol>	С
Is the inspection result normal? YES >> GO TO 2.	D
NO >> Set "On" in "ANTI KEY LOCK IN FUNCTI".	D
2.CHECK INSIDE KEY ANTENNA	- E
<ul> <li>Check inside key antenna.</li> <li>Instrument center: Refer to <u>DLK-104, "DTC Logic"</u>.</li> <li>Console: Refer to <u>DLK-106, "DTC Logic"</u>.</li> <li>Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.</li> </ul>	F
Is the inspection result normal?	'
YES >> GO TO 3.  NO >> Repair or replace the malfunctioning parts.  3.CHECK UNLOCK SENSOR	G
Check unlock sensor.	- Н
Refer to DLK-130, "Component Function Check".	- 11
Is the inspection result normal?  YES >> GO TO 4.	1
NO >> Repair or replace the malfunctioning parts.	
Replace BCM. Refer to BCS-81, "Removal and Installation".	<b>-</b> J
Confirm the operation after replacement.	
<u>Is the result normal?</u> YES >> INSPECTION END	DLK
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
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Revision: 2010 May **DLK-185** 2011 QX56

## WELCOME LIGHT FUNCTION DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

## WELCOME LIGHT FUNCTION DOES NOT OPERATE

## Diagnosis Procedure

INFOID:0000000006226024

# 1. CHECK "WELCOME LIGHT OP SET" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- Select "WELCOME LIGHT OP SET" in "WORK SUPPORT" mode.
- Check "WELCOME LIGHT OP SET" setting in "WORK SUPPORT".
   Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Set "On" and "WELCOME LIGHT SELECT" in "WORK SUPPORT".

# 2.CHECK "WELCOME LIGHT SELECT" SETTING IN "WORK SUPPORT"

- 1. Select "INTELLIGENT KEY" of "BCM" using CONSULT-III.
- 2. Select "WELCOME LIGHT SELECT" in "WORK SUPPORT" mode.
- Check "WELCOME LIGHT SELECT" setting in "WORK SUPPORT".
   Refer to <u>DLK-41</u>, "INTELLIGENT KEY: CONSULT-III Function (BCM INTELLIGENT KEY)".

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Set "WELCOME LIGHT SELECT" setting in "WORK SUPPORT".

# 3.check inside key antenna

#### Check inside key antenna.

- Instrument center: Refer to <u>DLK-104, "DTC Logic"</u>.
- Console: Refer to <u>DLK-106, "DTC Logic"</u>.
- Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## 4.CHECK OUTSIDE KEY ANTENNA

## Check outside key antenna.

- Driver side: Refer to DLK-110, "DTC Logic".
- Passenger side: Refer to DLK-112, "DTC Logic".
- Back door: Refer to DLK-114, "DTC Logic".

### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

# 5.CHECK REMOTE KEYLESS ENTRY FUNCTION

#### Check remote keyless entry function

## Does door lock/unlock with Intelligent Key button?

YES >> GO TO 6.

NO >> Refer to DLK-175, "Diagnosis Procedure".

## O.CHECK INTERIOR ROOM LAMP CONTROL SYSTEM

Check interior room lamp control system. Refer to <a href="INL-6">INL-6</a>, "INTERIOR ROOM LAMP CONTROL SYSTEM: System Description".

## Does the room lamp and puddle lamp turn ON?

YES >> GO TO 7.

NO >> Refer to INL-67, "Symptom Table".

# 7. REPLACE BCM

- Replace BCM. Refer to BCS-81, "Removal and Installation".
- · Confirm the operation after replacement.

#### Is the result normal?

## **WELCOME LIGHT FUNCTION DOES NOT OPERATE**

## < SYMPTOM DIAGNOSIS >

YES	>> INSPECTION END
NO	>> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

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## **OFF POSITION WARNING DOES NOT OPERATE**

## < SYMPTOM DIAGNOSIS >

## OFF POSITION WARNING DOES NOT OPERATE

# Diagnosis Procedure

INFOID:0000000006226025

## 1. CHECK DTC WITH BCM

Check that DTC is not detected with BCM

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 2.CHECK DTC WITH COMBINATION METER

Check that DTC is not detected with combination meter

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 3. CHECK DOOR SWITCH

Check front door switch (driver side).

Refer to DLK-117, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## 4. CHECK COMBINATION METER BUZZER

Check combination meter buzzer.

Refer to DLK-146, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## 5.CHECK INTELLIGENT KEY WARNING BUZZER

Check Intelligent Key warning buzzer.

Refer to DLK-143, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

## 6.REPLACE BCM

- Replace BCM. Refer to <u>BCS-81</u>, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

#### P POSITION WARNING DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

Is the result normal?

>> INSPECTION END

#### P POSITION WARNING DOES NOT OPERATE Α Description INFOID:0000000006226026 P position warning function does not operate for vehicle with information display models В Warning functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to DLK-27, "WARNING FUNCTION: System Description". Diagnosis Procedure INFOID:0000000006226027 D 1. CHECK DTC WITH BCM Check that DTC is not detected with BCM Is the inspection result normal? Е YES >> GO TO 2. NO >> Perform trouble diagnosis relevant to DTC indicated. 2.CHECK DTC WITH COMBINATION METER F Check that DTC is not detected with combination meter Is the inspection result normal? YES >> GO TO 3. NO >> Perform trouble diagnosis relevant to DTC indicated. 3.CHECK DOOR SWITCH Н Check front door switch (driver side). Refer to DLK-117, "Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. f 4.CHECK COMBINATION METER BUZZER Check combination meter buzzer. Refer to DLK-146, "Component Function Check". DLK Is the inspection result normal? YES >> GO TO 5. NO >> Repair or replace the malfunctioning parts. ${f 5.}$ CHECK INFORMATION DISPLAY Check information display. Refer to DLK-147, "Component Function Check". Is the inspection result normal? YES >> GO TO 6. N NO >> Repair or replace the malfunctioning parts. O.CHECK INTELLIGENT KEY WARNING BUZZER Check Intelligent Key warning buzzer. Refer to DLK-143, "Component Function Check". Is the inspection result normal? YES >> GO TO 7. Р NO >> Repair or replace the malfunctioning parts. 7.REPLACE BCM Replace BCM. Refer to BCS-81, "Removal and Installation". Confirm the operation after replacement.

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## P POSITION WARNING DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS >

# **ACC WARNING DOES NOT OPERATE**

## < SYMPTOM DIAGNOSIS >

ACC WARNING DOES NOT OPERATE	
Description INFOID:000000000226028	Α
ACC warning function does not operate for vehicle with information display models	В
<b>NOTE:</b> Warning functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <a href="DLK-27">DLK-27</a> , "WARNING FUNCTION: System <a href="Description">Description</a> .	С
Diagnosis Procedure	
1. CHECK DTC WITH BCM	D
Check that DTC is not detected with BCM	
Is the inspection result normal?	Е
YES >> GO TO 2.  NO >> Perform trouble diagnosis relevant to DTC indicated.	
2.CHECK DTC WITH COMBINATION METER	F
Check that DTC is not detected with combination meter	
Is the inspection result normal?	G
YES >> GO TO 3. NO >> Perform trouble diagnosis relevant to DTC indicated.	
3. CHECK COMBINATION METER BUZZER	Н
Check combination meter buzzer.	11
Refer to DLK-146, "Component Function Check".	
Is the inspection result normal?	I
YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts.	
4. CHECK INFORMATION DISPLAY	J
Check information display.	
Refer to DLK-147, "Component Function Check".	DLK
Is the inspection result normal?  YES >> GO TO 5.	
NO >> Repair or replace the malfunctioning parts.	L
5.REPLACE BCM	
Replace BCM. Refer to BCS-81, "Removal and Installation".      Confirm the energial and an analysis of the replacement.	M
<ul> <li>Confirm the operation after replacement.</li> <li>Is the result normal?</li> </ul>	IVI
YES >> INSPECTION END	
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	Ν
	0
	Р

## TAKE AWAY WARNING DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

## TAKE AWAY WARNING DOES NOT OPERATE

**Description** 

Take away warning function does not operate for vehicle with information display models.

#### NOTE:

Warning functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-27</u>, "WARNING FUNCTION: System <u>Description</u>".

## Diagnosis Procedure

INFOID:0000000006226031

# 1. CHECK DTC WITH BCM

Check that DTC is not detected with BCM

Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## 2.CHECK DTC WITH COMBINATION METER

Check that DTC is not detected with combination meter

Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## 3. CHECK INSIDE KEY ANTENNA

Check inside key antenna.

- Instrument center: Refer to <u>DLK-104</u>, "<u>DTC Logic</u>".
- Console: Refer to DLK-106, "DTC Logic".
- Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## CHECK DOOR SWITCH

Check front door switch (driver side).

Refer to DLK-117, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## ${f 5.}$ CHECK COMBINATION METER BUZZER

Check combination meter buzzer.

Refer to DLK-146, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

#### 6.CHECK INFORMATION DISPLAY

Check information display.

Refer to DLK-147, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace the malfunctioning parts.

## 7. CHECK INTELLIGENT KEY WARNING BUZZER

Check Intelligent Key warning buzzer.

Refer to DLK-143, "Component Function Check".

## TAKE AWAY WARNING DOES NOT OPERATE

TAKE AWAY WARNING DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS >	
Is the inspection result normal?  YES >> GO TO 8.	А
NO >> Repair or replace the malfunctioning parts.	
8. REPLACE BCM	В
<ul> <li>Replace BCM. Refer to <u>BCS-81</u>, "<u>Removal and Installation</u>".</li> <li>Confirm the operation after replacement.</li> </ul>	Б
Is the result normal?	С
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	
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## **KEY ID WARNING DOES NOT OPERATE**

#### < SYMPTOM DIAGNOSIS >

## KEY ID WARNING DOES NOT OPERATE

Description

Key ID warning function does not operate for vehicle with information display models.

#### NOTE:

Warning functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-27</u>, "WARNING FUNCTION: System <u>Description</u>".

## Diagnosis Procedure

INFOID:0000000006226033

# 1. CHECK DTC WITH BCM

Check that DTC is not detected with BCM

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## 2. CHECK DTC WITH COMBINATION METER

Check that DTC is not detected with combination meter

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## 3. CHECK INTELLIGENT KEY

#### Check Intelligent Key.

Refer to DLK-145, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## CHECK INSIDE KEY ANTENNA

#### Check inside key antenna.

- Instrument center: Refer to DLK-104, "DTC Logic".
- Console: Refer to DLK-106, "DTC Logic".
- Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## ${f 5}$ .CHECK INFORMATION DISPLAY

## Check information display.

Refer to DLK-147, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

#### 6.REPLACE BCM

- Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.
- · Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

## INTELLIGENT KEY LOW BATTERY WARNING DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

INTELLIGENT KEY LOW BATTERY WARNING DOES NOT OPERATE	
Description INFOID:00000000000226034	А
Intelligent Key low battery warning does not operate for vehicle with information display models.  NOTE:	В
Warning functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <a href="https://documents.com/DLK-27">DLK-27</a> , "WARNING FUNCTION: System <a href="https://documents.com/Description">Description</a> .	С
Diagnosis Procedure	
1. CHECK DTC WITH BCM	D
Check that DTC is not detected with BCM	
Is the inspection result normal?  YES >> GO TO 2.  NO >> Perform trouble diagnosis relevant to DTC indicated.	Е
2.CHECK DTC WITH COMBINATION METER	F
Check that DTC is not detected with combination meter	
Is the inspection result normal?	G
YES >> GO TO 3.  NO >> Perform trouble diagnosis relevant to DTC indicated.	
3.CHECK "LO- BATT OF KEY FOB WARN" SETTING IN "WORK SUPPORT"	Н
<ol> <li>Select "INTELLIGENT KEY" of "BCM".</li> <li>Select "LO- BATT OF KEY FOB WARN" in "WORK SUPPORT" mode.</li> <li>Check "LO- BATT OF KEY FOB WARN" setting in "WORK SUPPORT".         Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".     </li> </ol>	I
Is the inspection result normal?	,
YES >> GO TO 4. NO >> Set "ON" in "LO- BATT OF KEY FOB WARN".	J
4.check intelligent key	DLK
Check Intelligent Key. Refer to DLK-145, "Component Function Check".	DLK
Is the inspection result normal? YES >> GO TO 5.	L
NO >> Repair or replace the malfunctioning parts.	
5. CHECK INSIDE KEY ANTENNA	M
<ul> <li>Check inside key antenna.</li> <li>Instrument center: Refer to <u>DLK-104, "DTC Logic"</u>.</li> <li>Console: Refer to <u>DLK-106, "DTC Logic"</u>.</li> <li>Luggage room: Refer to <u>DLK-108, "DTC Logic"</u>.</li> </ul>	Ν
Is the inspection result normal? YES >> GO TO 6.	
NO >> Repair or replace the malfunctioning parts.	0
6.CHECK INFORMATION DISPLAY	_
Check information display. Refer to DLK-147, "Component Function Check".	Р
Is the inspection result normal? YES >> GO TO 7.	
NO >> Repair or replace the malfunctioning parts.  7.REPLACE BCM	
Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u> .	

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## INTELLIGENT KEY LOW BATTERY WARNING DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS >

## Is the result normal?

YES >> INSPECTION END

<sup>•</sup> Confirm the operation after replacement.

# DOOR LOCK OPERATION WARNING DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >		
DOOR LOCK OPERATION WARNING DOES NOT OPERATE		А
Diagnosis Procedure	INFOID:00000000006226036	
1. CHECK DOOR LOCK FUNCTION		В
Check door lock function.		
Does door lock/unlock using door request switch? YES >> GO TO 2.		С
NO >> Refer to <u>DLK-172</u> , " <u>ALL DOOR REQUEST SWITCHES</u> : <u>Diagnosis Procedure</u> ".		
2. CHECK INTELLIGENT KEY WARNING BUZZER		D
Check Intelligent Key warning buzzer.		
Refer to <u>DLK-143</u> , "Component Function Check". <u>Is the inspection result normal?</u>		Е
YES >> GO TO 3.		_
NO >> Repair or replace the malfunctioning parts.		_
3.REPLACE BCM		F
<ul> <li>Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ul>		
Is the result normal?		G
YES >> INSPECTION END NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".		
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#### < SYMPTOM DIAGNOSIS >

# AUTOMATIC BACK DOOR OPERATION DOES NOT OPERATE ALL SWITCHES

## ALL SWITCHES: Description

INFOID:0000000006226037

Automatic back door open/close function does not operate using all switches.

#### NOTE:

Automatic back door open/close operation condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-31</u>, "System <u>Description"</u>.

## **ALL SWITCHES: Diagnosis Procedure**

INFOID:0000000006226038

# 1. CHECK DTC WITH AUTOMATIC BACK DOOR CONTROL MODULE

Check that DTC is not detected with automatic back door control module.

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 2.CHECK BACK DOOR AUTO CLOSURE FUNCTION

Check back door auto closure function.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to <u>DLK-201</u>, "<u>OPEN/CLOSURE FUNCTION</u>: <u>Diagnosis Procedure</u>".

# 3.CHECK POWER SUPPLY AND GROUND CIRCUIT

Check automatic back door control module power supply and ground circuit.

Refer to DLK-116, "AUTOMATIC BACK DOOR CONTROL UNIT: Diagnosis Procedure".

## Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

## 4. CHECK GROUND CIRCUIT

Check automatic back door control module ground circuit.

Refer to DLK-165, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

## 5. CHECK TOUCH SENSOR LH

Check touch sensor LH.

Refer to DLK-159, "LH: Component Function Check".

## Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

## 6.CHECK TOUCH SENSOR RH

Check touch sensor RH.

Refer to DLK-158, "RH: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace the malfunctioning parts.

# 7. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

- Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.
- 2. Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

< SYMPTOM DIAGNOSIS >	
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".  AUTOMATIC BACK DOOR SWITCH	Α
AUTOMATIC BACK DOOR SWITCH : Description	
Automatic back door open/close function does not operate using automatic back door switch. <b>NOTE:</b> Automatic back door open/close operation condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <a href="DLK-31">DLK-31</a> , "System Description".	В
AUTOMATIC BACK DOOR SWITCH : Diagnosis Procedure	
1. CHECK AUTOMATIC BACK DOOR SWITCH	D
Check automatic back door switch.  Refer to DLK-154, "Component Function Check".	Е
Is the inspection result normal?  YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.  2.REPLACE AUTOMATIC BACK DOOR CONTROL MODULE	F
<ol> <li>Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ol>	G
Is the result normal?  YES >> INSPECTION END  NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".  AUTOMATIC BACK DOOR CLOSE SWITCH	Н
AUTOMATIC BACK DOOR CLOSE SWITCH : Description	I
Automatic back door open/close function does not operate using automatic back door close switch. <b>NOTE:</b> Automatic back door open/close operation condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <a href="DLK-31">DLK-31</a> . "System Description".	J
AUTOMATIC BACK DOOR CLOSE SWITCH : Diagnosis Procedure	DLK
1.CONFIRM THE OPERATION	
<ol> <li>Turn ON automatic back door main switch.</li> <li>Confirm the operation.</li> </ol>	L
Is the result normal?  YES >> Automatic back door system is normal.  NO >> GO TO 2.	M
2.CHECK AUTOMATIC BACK DOOR CLOSE SWITCH	Ν
Check automatic back door close switch.  Refer to <a href="https://doi.org/l/DLK-150">DLK-150</a> , "Component Function Check".	IN
Is the inspection result normal?  YES >> GO TO 3.  NO >> Repair or replace the malfunctioning parts.	0
3. CHECK AUTOMATIC BACK DOOR MAIN SWITCH	Р
Check automatic back door main switch. Refer to DLK-152, "Component Function Check".  Is the inspection result normal?	
YES >> GO TO 4.  NO >> Repair or replace the malfunctioning parts.	
4. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE	

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#### < SYMPTOM DIAGNOSIS >

- 1. Replace automatic back door control module. Refer to <u>DLK-262</u>, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## INTELLIGENT KEY

## INTELLIGENT KEY: Description

INFOID:0000000006226043

Automatic back door open/close function does not operate using Intelligent Key.

#### NOTE:

Automatic back door open/close operation condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-31</u>, "System <u>Description"</u>.

## INTELLIGENT KEY: Diagnosis Procedure

INFOID:0000000006226044

# ${f 1}$ .CHECK DTC WITH AUTOMATIC BACK DOOR CONTROL MODULE

Check that DTC is not detected with automatic back door control module.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 2.CHECK DTC WITH BCM

Check that DTC is not detected with BCM

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 3.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

#### Does door lock/unlock with Intelligent Key button?

YES >> GO TO 4.

NO >> Refer to DLK-175, "Diagnosis Procedure".

## 4. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

- 1. Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".
- Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

#### BACK DOOR OPENER SWITCH

## **BACK DOOR OPENER SWITCH: Description**

INFOID:0000000006226045

Automatic back door open/close function does not operate using back door opener switch.

#### NOTE:

Automatic back door open/close operation condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation. Refer to <u>DLK-31</u>, "System Description".

# BACK DOOR OPENER SWITCH: Diagnosis Procedure

INFOID:0000000006226046

# 1.CONFIRM THE OPERATION

- 1. Turn ON automatic back door main switch.
- 2. Confirm the operation.

#### Is the result normal?

YES >> Automatic back door system is normal.

NO >> GO TO 2.

## < SYMPTOM DIAGNOSIS >

NO

STWITOW DIAGNOSIS
CHECK AUTOMATIC BACK DOOR MAIN SWITCH
Check automatic back door main switch. Refer to DLK-152, "Component Function Check".
s the inspection result normal?
YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.
CHECK BACK DOOR OPENER SWITCH
Check back door opener switch.
Refer to DLK-141, "Component Function Check".
s the inspection result normal?
YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts.
1. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE
. Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u> . Confirm the operation after replacement.
s the result normal?
YES >> INSPECTION END
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".
OPEN/CLOSURE FUNCTION
DPEN/CLOSURE FUNCTION: Description INFOID:000000006226047
Back door auto closure function does not operate when back door opening and closing operations are per- ormed.
DENICLOSURE EUNICTION : Diagnosis Procedure
DPEN/CLOSURE FUNCTION: Diagnosis Procedure
.CONFIRM THE OPERATION
. Turn ON automatic back door main switch.
2. Confirm the operation.
s the result normal?
YES >> Automatic back door system is normal. NO >> GO TO 2.
NO >> GO TO 2.  CHECK DTC WITH AUTOMATIC BACK DOOR CONTROL MODULE
Check that DTC is not detected with automatic back door control module.
s the inspection result normal?
YES >> GO TO 3. NO >> Perform trouble diagnosis relevant to DTC indicated.
3. CHECK AUTOMATIC BACK DOOR MAIN SWITCH
Check automatic back door main switch.
check automatic back door main switch. Refer to <u>DLK-152, "Component Function Check"</u> .
s the inspection result normal?
YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.
CHECK BACK DOOR OPENER SWITCH
Check back door opener switch.
Refer to DLK-141, "Component Function Check".
s the inspection result normal?
YES >> GO TO 5.

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>> Repair or replace the malfunctioning parts.

#### < SYMPTOM DIAGNOSIS >

# 5. CHECK BACK DOOR CLOSURE MOTOR

Check back door closure motor.

Refer to DLK-162, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the malfunctioning parts.

## 6. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

- Replace automatic back door control module. Refer to <u>DLK-261, "Removal and Installation"</u>.
- 2. Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

## OPEN FUNCTION

## **OPEN FUNCTION: Description**

INFOID:0000000006226049

Back door auto closure function does not operate when back door opening operations are performed.

## **OPEN FUNCTION: Diagnosis Procedure**

INFOID:0000000006226050

## 1. CONFIRM THE OPERATION

- 1. Turn ON automatic back door main switch.
- 2. Confirm the operation.

#### Is the result normal?

YES >> Automatic back door system is normal.

NO >> GO TO 2.

## 2. CHECK AUTOMATIC BACK DOOR MAIN SWITCH

Check automatic back door main switch.

Refer to DLK-152, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.CHECK BACK DOOR OPENER SWITCH

Check back door opener switch.

Refer to DLK-141, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

# 4.replace automatic back door control module

- 1. Replace automatic back door control module. Refer to <a href="DLK-262">DLK-262</a>, "Removal and Installation".
- 2. Confirm the operation after replacement.

## Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

#### CLOSURE FUNCTION

## **CLOSURE FUNCTION: Description**

INFOID:0000000006226051

Back door auto closure function does not operate when back door closing operations are performed.

CLOSURE FUNCTION : Diagnosis Procedure	INFOID:0000000006226052
.CHECK HALF LATCH SWITCH	
Check half latch switch.	
Refer to DLK-156, "Component Function Check".	
s the inspection result normal? YES >> GO TO 2.	
NO >> Repair or replace the malfunctioning parts.	
CHECK BACK DOOR CLOSURE MOTOR	
Check back door closure motor. Lefer to <u>DLK-162, "Diagnosis Procedure"</u> .	
s the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.  REPLACE AUTOMATIC BACK DOOR CONTROL MODULE	
. Replace automatic back door control module. Refer to <u>DLK-262</u> , "Removal and Installation	n".
. Confirm the operation after replacement.	_
s the result normal? YES >> INSPECTION END	
NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	

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## AUTOMATIC BACK DOOR WARNING DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

# AUTOMATIC BACK DOOR WARNING DOES NOT OPERATE BUZZER

**BUZZER**: Description

INFOID:0000000006226053

Automatic back door warning buzzer does not operate when automatic back door warning function are performed.

## **BUZZER**: Diagnosis Procedure

INFOID:0000000006226054

# 1. CHECK DTC WITCH AUTOMATIC BACK DOOR CONTROL MODULE

Check that DTC is not detected with automatic back door control module.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

# 2.check automatic back door warning buzzer

Check automatic back door warning buzzer.

Refer to DLK-163, "Diagnosis Procedure".

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

- 1. Replace automatic back door control module. Refer to <a href="DLK-262">DLK-262</a>, "Removal and Installation".
- 2. Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

#### HAZARD WARNING LAMP

# HAZARD WARNING LAMP: Description

INFOID:0000000006226055

Hazard warning lamp does not operate when automatic back door warning function are performed.

# HAZARD WARNING LAMP: Diagnosis Procedure

INFOID:0000000006226056

# 1. CHECK DTC WITCH AUTOMATIC BACK DOOR CONTROL MODULE

Check that DTC is not detected with automatic back door control module.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## $\mathbf{2}.$ CHECK DTC WITCH BCM

Check that DTC is not detected with BCM.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Perform trouble diagnosis relevant to DTC indicated.

## 3.CHECK GROUND CIRCUIT

Check automatic back door control module ground circuit.

Refer to DLK-165, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts

# 4.CHECK HAZARD AND HORN REMINDER FUNCTION

## **AUTOMATIC BACK DOOR WARNING DOES NOT OPERATE**

>> INSPECTION END

YES NO

< SYMPTOM DIAGNOSIS > Check hazard and horn reminder function. Α Is the inspection result normal? YES >> GO TO 5. NO >> Refer to <u>DLK-183</u>, "<u>Diagnosis Procedure</u>". 5. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE В Replace automatic back door control module. Refer to <u>DLK-262</u>, "Removal and Installation". 2. Confirm the operation after replacement. C Is the result normal?

>> Check intermittent incident. Refer to GI-40, "Intermittent Incident".

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## **AUTOMATIC BACK DOOR FUNCTIONS DO NOT CANCEL**

## < SYMPTOM DIAGNOSIS >

## AUTOMATIC BACK DOOR FUNCTIONS DO NOT CANCEL

# Diagnosis Procedure

#### INFOID:0000000006226057

## 1. CHECK THE OPERATION

Check automatic back door main switch function.

#### NOTE:

When the main switch is OFF, the automatic back door operation is not available by back door opener switch and automatic back door close switch.

#### Is the inspection result normal?

YES >> Automatic back door system is normal.

NO >> GO TO 2.

# 2. CHECK AUTOMATIC BACK DOOR MAIN SWITCH

Check automatic back door main switch.

Refer to DLK-152, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE

- 1. Replace automatic back door control module. Refer to DLK-262, "Removal and Installation".
- 2. Confirm the operation after replacement.

#### Is the result normal?

YES >> INSPECTION END

## **AUTOMATIC BACK DOOR ANTI-PINCH FUNCTION DOES NOT OPERATE**

< SYMPTOM DIAGNOSIS >

AUTOMATIC BACK DOOR ANTI-PINCH FUNCTION DOES NOT OPERATE	٨
Diagnosis Procedure	А
1. CHECK POWER SUPPLY AND GROUND CIRCUIT	В
Check automatic back door control module power supply and ground circuit.  Refer to <a href="https://docs.pythological.com/DLK-116">DLK-116</a> , "AUTOMATIC BACK DOOR CONTROL UNIT: Diagnosis Procedure".	
Is the inspection result normal?	С
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.CHECK TOUCH SENSOR LH	D
Check touch sensor LH.  Refer to DLK-159, "LH: Component Function Check".	Е
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	F
3. CHECK TOUCH SENSOR RH	
Check touch sensor RH.  Refer to DLK-158, "RH: Component Function Check".	G
Is the inspection result normal?	
YES >> GO TO 4.  NO >> Repair or replace the malfunctioning parts.	Н
4. REPLACE AUTOMATIC BACK DOOR CONTROL MODULE	
<ol> <li>Replace automatic back door control module. Refer to <u>DLK-262, "Removal and Installation"</u>.</li> <li>Confirm the operation after replacement.</li> </ol>	I
Is the result normal?  YES >> INSPECTION END  NO >> Check intermittent incident. Refer to GI-40, "Intermittent Incident".	J
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## INTEGRATED HOMELINK TRANSMITTER DOES NOT OPERATE

## < SYMPTOM DIAGNOSIS >

# INTEGRATED HOMELINK TRANSMITTER DOES NOT OPERATE

# Diagnosis Procedure

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# 1. CHECK INTEGRATED HOMELINK TRANSMITTER

Check integrated homelink transmitter.

Refer to DLK-166, "Component Function Check".

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2. REPLACE AUTO ANTI-DAZZLING INSIDE MIRROR

Replace auto anti-dazzling inside mirror.

Refer to MIR-30, "Removal and Installation".

#### Is the result normal?

YES >> INSPECTION END

< SYMPTOM DIAGNOSIS >

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

Customer Interview

Duplicate the Noise and Test Drive.

Check Related Service Bulletins.

Locate the Noise and Identify the Root Cause.

Repair the Cause.

NG Confirm Repair.

#### **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 customer's comments; refer to <a href="DLK-213">DLK-213</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, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a cruise test on the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics
  are provided so the customer, service adviser and technician are all speaking the same language when
  defining the noise.
- Squeak (Like tennis shoes on a clean floor)
   Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces
   higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping
- Creak (Like walking on an old wooden floor)
   Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity
- 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 bumblebee)
   Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending up on the person. A noise that a technician
  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 the repair is reconfirmed.

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#### < SYMPTOM DIAGNOSIS >

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

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

#### CHECK RELATED SERVICE BULLETINS

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

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

#### LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis ear: J-39570, Engine ear and 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 is are suspected to be the cause of the noise.
   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 is are suspected to be the cause of 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 by hand by touching the component(s) that is are suspected to be the cause of the noise.
- Placing a piece of paper between components that are suspected to be the cause of the noise.
- Looking for loose components and contact marks.
   Refer to <u>DLK-211</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. A Nissan Squeak and Rattle Kit (J-43980) is available through the authorized Nissan Parts Department.

#### **CAUTION:**

# Never use excessive force as many components are constructed of plastic and may be damaged.

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005:  $100 \times 135$  mm  $(3.94 \times 5.31$  in)/76884-71L01:  $60 \times 85$  mm  $(2.36 \times 3.35$  in)/76884-

71L02:15  $\times$  25 mm (0.59  $\times$  0.98 in)

INSULATOR (Foam blocks)

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

73982-9E000: 45 mm (1.77 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30  $\times$  50 mm (1.18  $\times$  1.97in)

FELT CLOTHTAPE

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

 $68370-4B000: 15 \times 25 \text{ mm} (0.59 \times 0.98 \text{ in}) \text{ pad}/68239-13E00: 5 \text{ mm} (0.20 \text{ in}) \text{ wide tape roll}$ 

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

**UHMW (TEFLON) TAPE** 

#### < SYMPTOM DIAGNOSIS >

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

SILICONE GREASE

Used in place of UHMW tape that is be visible or does not fit. Will only last a few months.

SILICONE SPRAY

Used when grease cannot be applied.

**DUCT TAPE** 

Used 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.

## Inspection Procedure

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
- Instrument panel to front pillar garnish
- Instrument panel to windshield
- Instrument panel mounting pins
- 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:

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

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

#### DOORS

Pay attention to the:

- 1. Finisher and inner panel making a slapping noise
- Inside handle escutcheon to door finisher
- Wiring harnesses tapping
- 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.

**DLK-211** 

#### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

- Trunk lid dumpers out of adjustment
- Trunk lid striker out of adjustment
- Trunk lid torsion bars knocking together
- A loose license plate or bracket

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#### < SYMPTOM DIAGNOSIS >

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

#### SUNROOF/HEADLINING

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

- 1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. 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.

#### 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
- 4. Loose radiator mounting pins
- 5. Hood bumpers out of adjustment
- 6. Hood striker out of adjustment

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

< SYMPTOM DIAGNOSIS >

## Diagnostic Worksheet

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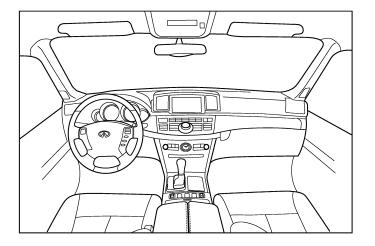
# SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

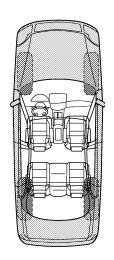
#### Dear Infiniti Customer:

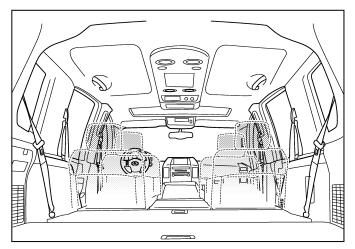
We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may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

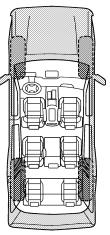
## I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

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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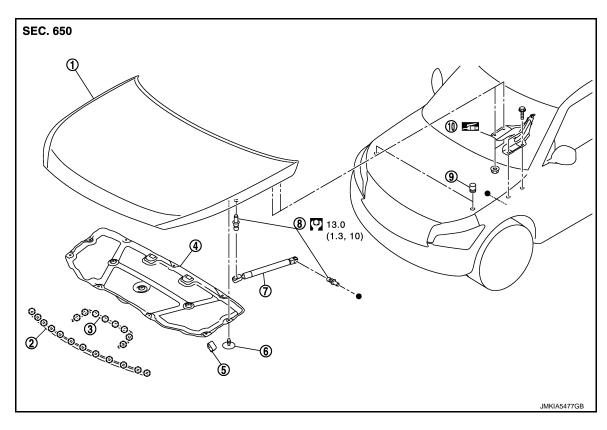
Briefly describe the location where the nois	se occurs:				
II. WHEN DOES IT OCCUR? (please chec	ck the box	es that ap	ply)		
<ul><li>□ anytime</li><li>□ 1st time in the morning</li><li>□ only when it is cold outside</li><li>□ only when it is hot outside</li></ul>	☐ after sitting out in the rain ☐ when it is raining or wet ☐ dry or dusty conditions ☐ other:				
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE				
<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 minumer</li> </ul>	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 F	PERSONN	IEL			
Test Drive Notes:					
		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	repair				
VIN:		omer Nar	me:		
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# REMOVAL AND INSTALLATION

**HOOD** 

Exploded View



- 1. Hood assembly
- 4. Hood insulator
- 7. Hood stay
- 10. Hood hinge
- ( ) : Clip
- Refer to GI-4, "Components" for symbols in the figure.
- 2. Hood front seal
- 5. Hood side bumper
- 3. Stud ball

- 3. Radiator core seal
- 6. Clip
- 9. Hood bumper rubber

## **HOOD ASSEMBLY**

**HOOD ASSEMBLY: Removal and Installation** 

## **CAUTION:**

- Operate with two workers, because of its heavy weight.
- Use protective tape or shop cloth to protect from damage during removal and installation.

#### **REMOVAL**

1. Support hood assembly with the proper material to prevent it from falling.

#### **WARNING:**

Bodily injury may occur if no proper material is holding hood open when removing hood stay.

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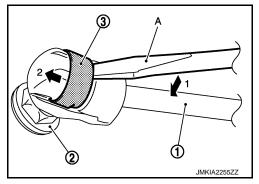
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- 2. Remove the metal clip (3) located on the connection between the hood stay (1) and the stud ball (2) (hood side), by using a flatted-blade screwdriver (A).
- Disengage the stud ball from the hood stay (hood side).



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4. Remove hood hinge mounting nuts on the hood to remove the hood assembly.

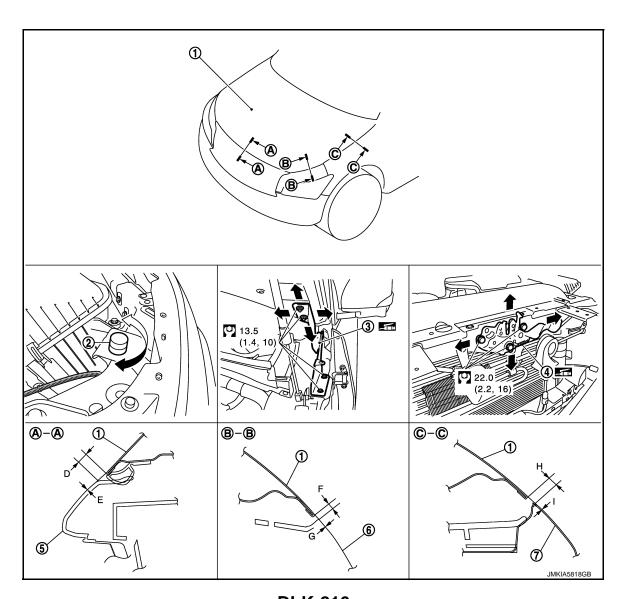
## **INSTALLATION**

Note the following items, and then install in the reverse order of removal.

#### **CAUTION:**

- 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-216</u>, "HOOD ASSEMBLY: Adjustment".

**HOOD ASSEMBLY : Adjustment** 



1. Hood assembly

- 2. Hood bumper rubber
- 3. Hood hinge

- 4. Hood lock assembly
- 5. Front grille

6. Bumper molding

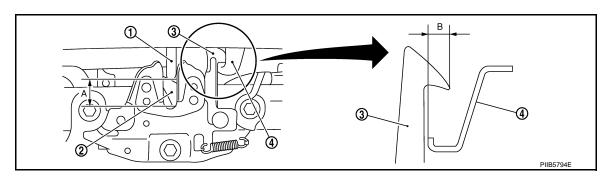
7. Front fender

Refer to GI-4, "Components" for symbols in the figure.

Check the clearance and the surface height between hood and each part by visually and touching. If the clearance and the surface height are out of specification, adjust them according to the procedures shown below.

					Unit: mm (in)
Portion	n			Standard	Difference (RH/LH, MAX)
	<b>A</b> – <b>A</b>	D	Clearance	3.7 - 8.3 (0.146 - 0.327)	_
Hood – Front grille		E	Surface height	(-0.9) - (+3.9) [(-0.035) - (+0.154)]	_
Hood – Bumper molding	B – B	F	Clearance	1.2 – 5.8 (0.047 – 0.228)	2.2 (0.087)
Hood – Bumper molaling	B-B	G	Surface height	(-2.4) — (+0.094)]	2.2 (0.087)
	C - C H Clearance 2.5 - 4.5 (0.098 - 0.177) 1.0 (  Surface height (-1.0) - (+1.0) [(-0.039 - (+0.039)]	1.0 (0.039)			
Hood – Front fender		I	Surface height		_

- 1. Remove hood lock and adjust the surface height of hood, bumper molding and front fender according to the fitting standard dimension, by rotating hood bumper rubber.
- Loosen hood hinge mounting nuts on the hood.
- 3. Adjust the clearance of hood, bumper molding and front fender according to the fitting standard dimension, for the hood.
- Temporarily tighten hood lock.
- 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 hood lightly [approximately 29 N (3.0 kg, 6.5lb)].



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. Install as static closing force of hood is 680N (69.0 kg, 502lb) or less.
- After adjustment, tighten hood hinge mounting nuts to the specified torque.
   CAUTION:
  - Before installing hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
  - Check hood hinge rotating part for poor lubrication. If necessary, apply body grease.

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 After installation, apply touch-up paint (the body color) onto the head of hood hinge mounting bolts and nuts.

## **HOOD HINGE**

## **HOOD HINGE**: Removal and Installation

#### INFOID:0000000006226065

### **REMOVAL**

- Remove hood assembly. Refer to <u>DLK-215</u>, "HOOD ASSEMBLY: Removal and Installation".
- 2. Remove front fender cover. Refer to EXT-21, "Exploded View".
- Remove front fender mounting bolt. <u>DLK-222, "Exploded View"</u>.
- 4. Remove hood hinge mounting bolts, and then remove hood hinge.

### INSTALLATION

Note the following items, and install in the reverse order of removal.

#### **CAUTION:**

- Before installation of hood hinge, apply anticorrosive agent onto the mounting surface of the vehicle body.
- After installation, apply touch-up paint (the body color) onto the head of the hinge mounting bolts and nuts.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-216, "HOOD ASSEMBLY: Adjustment".</u>

**HOOD STAY** 

## **HOOD STAY**: Removal and Installation

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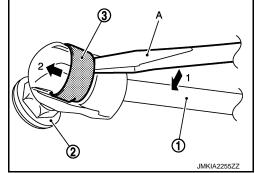
### **REMOVAL**

1. Support hood assembly with a proper material to prevent it from falling.

#### WARNING

Bodily injury may occur if no proper material is holding the hood open when removing the hood stay.

- 2. Remove the metal clip (3) located on the connection between the hood stay (1) and the stud ball (2) (hood side), by using a flat-bladed screwdriver (A).
- 3. Disengage the stud ball from the hood stay (hood side).
- 4. Repeat the same operation to disengage the stud ball from the hood stay (body side), then remove the hood stay.



### INSTALLATION

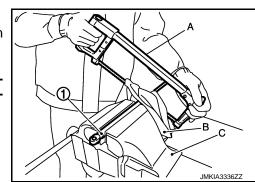
Install in the reverse order of removal.

## **HOOD STAY**: Disposal

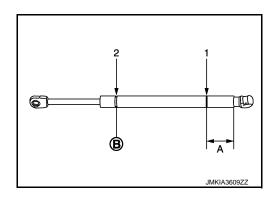
- 1. Fix hood stay (1) using a vise (C).
- 2. Using hacksaw (A) slowly make 2 holes in the hood stay, in numerical order as shown in the figure.

### **CAUTION:**

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



A: 20 mm (0.787 in)
B: Cut at the groove.



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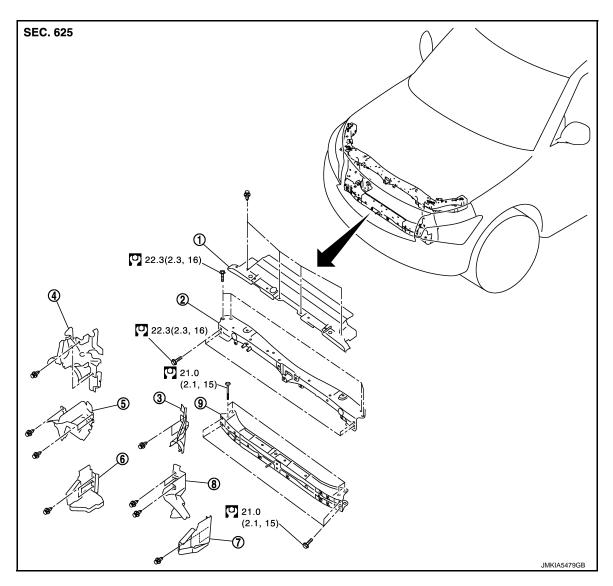
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## RADIATOR CORE SUPPORT

Exploded View



- 1. Radiator upper seal
- 4. Air guide seal RH
- 7. Radiator lower seal LH
- 2. Radiator core support upper
- 5. Radiator side seal RH
- 8. Radiator side seal LH
- Refer to for symbols in the figure. GI-4, "Components"

- Air guide seal LH
- 6. Radiator lower seal RH
- 9. Radiator core support main

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## Removal and Installation

## RADIATOR CORE SUPPORT UPPER

## Removal

## **CAUTION:**

## When removing radiator core support upper, be careful not to damage the painted surface.

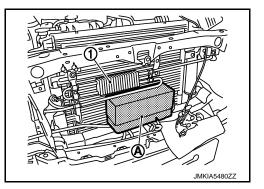
- Remove bumper molding, bumper molding stay LH and RH. Refer to <u>EXT-13, "Removal and Installation"</u>.
- 2. Remove fixing clips, and then radiator upper seal.
- 3. Remove horn (LOW and HIGH). Refer to <a href="HRN-6">HRN-6</a>, "Removal and Installation".
- 4. Remove exhaust gas / outside oder sensor. Refer to HAC-151, "Removal and Installation".
- 5. Disconnect refrigerant pressure sensor harness connector.

## RADIATOR CORE SUPPORT

### < REMOVAL AND INSTALLATION >

- 6. Disconnect all harness clips.
- Remove hood lock assembly. Refer to <u>DLK-238</u>, "Removal and Installation".
- Remove fixing clips of air guide seal.
- Remove mounting bolts, and then remove power steering oil cooler. Refer to <u>ST-54, "Exploded View"</u>. CAUTION:

Put a wooden block (A) under the oil cooler (1) to prevent the oil cooler from falling.



- 10. Remove radiator mounting bolts. Refer to CO-13, "Removal and Installation".
- 11. Remove mounting bolts, and then radiator core support upper.

Installation

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- If aluminum plate remains to the body side when removing radiator core support upper, be sure to pinch aluminum plate between radiator core support upper and hoodledge upper when installing radiator core support upper, for preventing electric corrosion.
- When installing radiator core support upper, be careful not to damage the painted surface.

## RADIATOR CORE SUPPORT LOWER

Removal

- Remove front bumper fascia, bumper retainer and Bumper retainer bracket CTR. Refer to <u>EXT-13</u>, <u>"Removal and Installation"</u>.
- 2. Remove fixing clips, and then air guide seal and radiator side seal.
- Remove ambient sensor. Refer to HAC-147, "Removal and Installation".
- Remove crash zone sensor. Refer to <u>SR-22, "Removal and Installation"</u>.
- Remove all harness clips.
- 6. Remove mounting bolts, and then remove radiator core support main.

Installation

Install in the reverse order of removal.

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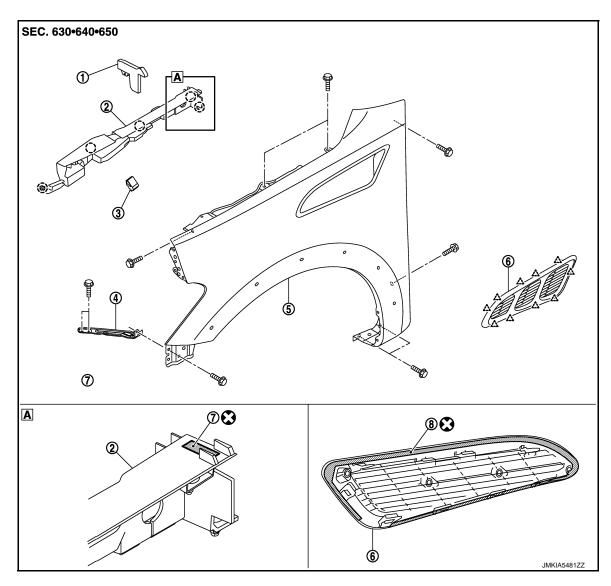
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## FRONT FENDER

**Exploded View** INFOID:0000000006226070



- 1. Cowl top seal
- Front fender stay
- Double-sided tape [t: 0.8 mm (0.031 in)]
- Front fender drip cover
- Front fender assembly
- Double-sided tape [t: 1.2 mm (0.047 in)]
- Hood side bumper
- Front fender duct

( ]) : Clip 六: Pawl

Refer to for symbols in the figure. GI-4, "Components"

## FRONT FENDER

## FRONT FENDER: Removal and Installation

#### INFOID:0000000006226071

Use a shop cloth to protect the body from being damaged during removal and installation.

## **REMOVAL**

- Remove side step. Refer to EXT-45, "Removal and Installation".
- Remove front over fender. Refer to EXT-26, "Removal and Installation".

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## FRONT FENDER

### < REMOVAL AND INSTALLATION >

- Remove front combination lamp. Refer to EXL-125, "Removal and Installation".
- 4. Remove front fender drip cover. Refer to DLK-223, "FRONT FENDER DRIP COVER: Removal and Installation"
- Remove front fender cover, Refer to EXT-21, "Exploded View".
- Remove front fender protector. Refer to EXT-23, "FENDER PROTECTOR: Removal and Installation".
- 7. Remove mounting bolts and remove front fender.

#### CAUTION:

An viscous urethane foam is installed on the back surface of front fender. When removing the front fender, be careful to not deform the front fender while performing the procedure and removing the viscous urethane foam a little at a time.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

#### **CAUTION:**

- After installation, apply the touch-up paint (the body color) onto the head of front fender mounting bolts.
- After installation, adjust the following part.
- Hood assembly: Refer to <u>DLK-216</u>, "<u>HOOD ASSEMBLY</u>: <u>Adjustment</u>".
   Front door: Refer to <u>DLK-225</u>, "<u>DOOR ASSEMBLY</u>: <u>Adjustment</u>".

## FRONT FENDER DRIP COVER

## FRONT FENDER DRIP COVER: Removal and Installation

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#### REMOVAL

- Remove fixing clips, and then front fender drip cover.
- Remove cowl top seal from front fender drip cover.

### INSTALLATION

Install in the reverse order of removal.

## FRONT FENDER DUCT

## FRONT FENDER DUCT: Removal and Installation

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#### REMOVAL

- Remove front fender protector. Refer to EXT-23, "FENDER PROTECTOR: Removal and Installation".
- Remove washer tank. Refer to <u>WW-58</u>, "Removal and Installation".
- 3. Disengage pawls of front fender duct, from front fender to remove.

## **CAUTION:**

- When removing front fender duct, peel off the double-sided tape at a time, and carefully to remove it.
- Use protective tape or cloth to protect from damage during remove and installation.

## INSTALLATION

Install in the reverse order of removal.

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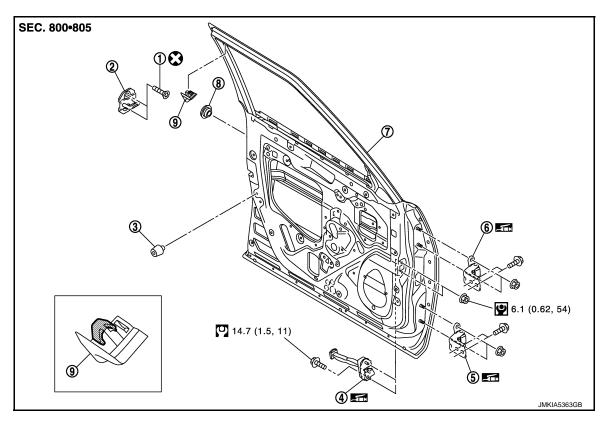
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## FRONT DOOR

Exploded View



- 1. TORX bolt
- 4. Door check link
- 7. Front door panel
- 2. Door striker
- 5. Door hinge (lower)
- 8. Grommet

- 3. Bumper rubber
- 6. Door hinge (upper)
- 9. Front door sash inner cover

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Refer to  $\underline{\mbox{GI-4. "Components"}}$  for symbols in the figure.

## DOOR ASSEMBLY

## DOOR ASSEMBLY: Removal and Installation

**CAUTION:** 

- Perform work with 2 workers, because of its heavy weight.
- When removing and installing front door assembly, support door with a jack and shop cloth to protect door and body.

## **REMOVAL**

- 1. Remove mounting bolt of door check link on the vehicle.
- 2. Disconnect front door harness connector.
- 3. Remove door hinge mounting nuts (door side), and then remove door assembly.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

## **CAUTION:**

- Apply anticorrosive agent onto the mounting surface.
- Check front door open/close, lock/unlock operation after installation.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installation, perform the fitting adjustment. Refer to <u>DLK-225, "DOOR ASSEMBLY: Adjust-ment"</u>.
- After installation, apply touch-up paint (the body color) onto the head of door hinge mounting nuts.

## DOOR ASSEMBLY: Adjustment

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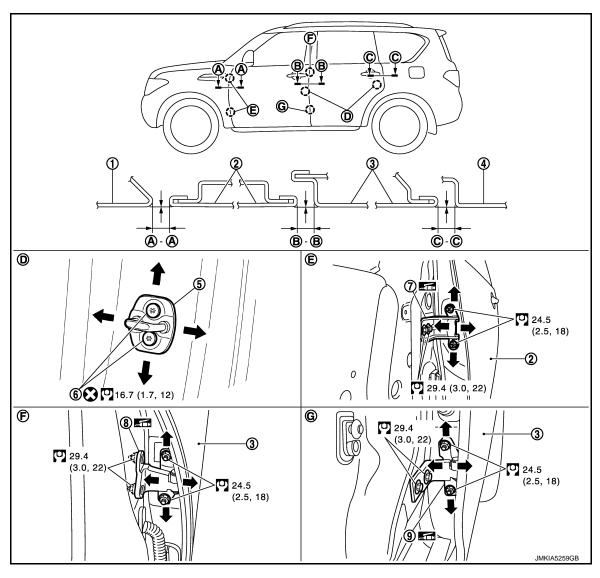
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1. Front fender

2. Front door

Rear door

Body side outer

5. Door striker

TORX bolt

- 7. Front door hinge (upper/lower)
- Rear door hinge (upper)
- 9. Rear door hinge (lower)

Refer to GI-4, "Components" for symbols in the figure.

Check the clearance and surface height between front door and each part by visually and touching. If the clearance and the surface height are out of specification, adjust them according to the procedures shown below.

Unit: mm (in)

Portion		Clearance	Surface height	
Front fender – Front door	<b>A</b> – <b>A</b>	3.2 – 5.2 (0.126 – 0.205)	(-1.0) - (+1.0) [(-0.039) - (+0.039)]	
Front door – Rear door	B – B	3.2 – 5.2 (0.126 – 0.205)	(-1.0) - (+1.0) [(-0.039) - (+0.039)]	

- Remove front fender. Refer to <u>DLK-222, "FRONT FENDER: Removal and Installation"</u>.
- 2. Loosen door hinge mounting nuts on door side.
- 3. Adjust the surface height of front door according to the fitting standard dimension.

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## FRONT DOOR

#### < REMOVAL AND INSTALLATION >

- 4. Temporarily tighten door hinge mounting nuts on door side.
- 5. Loosen door hinge mounting bolts on body side.
- Raise front door at rear end to adjust clearance of the front door according to the fitting standard dimension.
- 7. After adjustment tighten bolts and nuts to the specified torque.

#### **CAUTION:**

- After installation, apply touch-up paint (the body color) onto the head of hinge mounting bolts and nuts.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.
- 8. Install front fender. Refer to refer to DLK-222, "FRONT FENDER: Removal and Installation".

### DOOR STRIKER ADJUSTMENT

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

DOOR STRIKER

DOOR STRIKER: Removal and Installation

INFOID:0000000006226077

### **REMOVAL**

Remove TORX bolts, and then remove door striker.

## INSTALLATION

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- Check front door open/close, operation after installation.
- After installation, be sure to perform the fitting adjustment. Refer to <u>DLK-225, "DOOR ASSEMBLY:</u>
   Adjustment".

DOOR HINGE

DOOR HINGE: Removal and Installation

INFOID:0000000006226078

## **REMOVAL**

### **CAUTION:**

- Perform work with 2 workers, because of its heavy weight.
- When removing and installing front door assembly, support door with a jack and shop cloth to protect door and body.
- 1. Remove front fender. Refer to <u>DLK-222, "FRONT FENDER: Removal and Installation"</u>.
- 2. Remove front door assembly. Refer to DLK-224, "DOOR ASSEMBLY: Removal and Installation".
- 3. Remove front door hinge mounting bolts (body side), and then remove front door hinge.

#### INSTALLATION

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- Apply anticorrosive agent onto the mounting surface.
- Check front door open/close, lock/unlock operation after installation.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.
- After installation, perform the fitting adjustment. Refer to <u>DLK-225</u>, "<u>DOOR ASSEMBLY</u>: <u>Adjust-ment"</u>.
- After installation, apply touch-up paint (the body color) onto the head of door hinge mounting nuts.

### DOOR CHECK LINK

DOOR CHECK LINK: Removal and Installation

INFOID:0000000006226079

### **REMOVAL**

- 1. Fully close the front door window.
- Remove front door finisher. Refer to <u>INT-14, "Removal and Installation"</u>.
- Remove front door speaker mounting bolts.
- 4. Disconnect connector and remove front door speaker.

## **FRONT DOOR**

## < REMOVAL AND INSTALLATION >

- 5. Remove mounting bolts, and then front door speaker bracket.
- 6. Remove mounting bolt of door check link on the vehicle.
- 7. Remove mounting nuts of door check link on door panel.
- 8. Take door check link out from the hole of door panel.

## **INSTALLATION**

Note the following item, and then install in the reverse order of removal.

## **CAUTION:**

Check front door open/close operation after installation.

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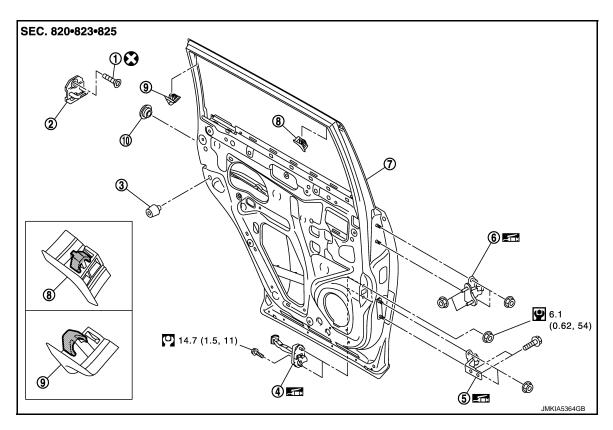
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## **REAR DOOR**

Exploded View



- 1. TORX bolt
- 4. Door check link
- 7. Rear door panel
- 10. Grommet

- 2. Door striker
- 5. Door hinge (lower)
- 8. Rear door sash inner cover (front)
- 3. Bumper rubber
- 6. Door hinge (upper)
- 9. Rear door sash inner cover (rear)

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Refer to GI-4, "Components" for symbols in the figure.

## DOOR ASSEMBLY

## DOOR ASSEMBLY: Removal and Installation

#### **CAUTION:**

- Perform work with 2 workers, because of it's heavy weight.
- When removing and installing rear door assembly, support door with a jack and shop cloth to protect door and body.

## **REMOVAL**

- 1. Remove rear door harness grommet, and then pull out door harness from the vehicle.
- Disconnect rear door harness connector.
- 3. Remove mounting bolt of door check link on the vehicle.
- 4. Remove door hinge mounting nuts (door side), and then remove rear door assembly.

#### INSTALLATION

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

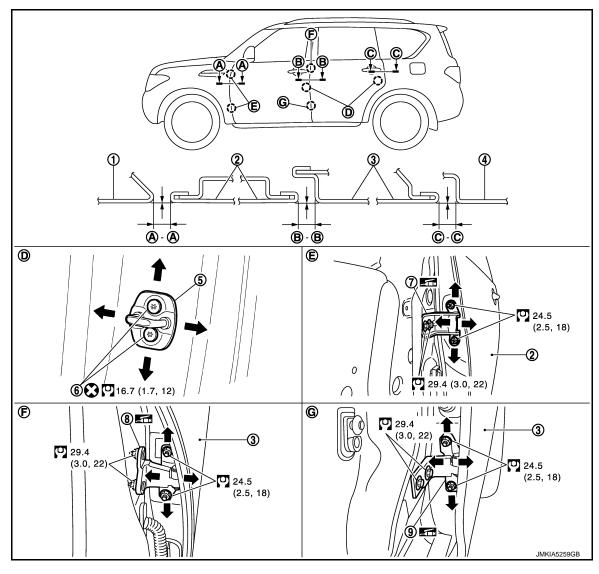
- Apply anticorrosive agent onto the mounting surface.
- Check rear door open/close, lock/unlock operation after installation.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.

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- After installation, perform the fitting adjustment. Refer to DLK-229, "DOOR ASSEMBLY: Adjustment".
- After installation, apply touch-up paint (the body color) onto the head of door hinge mounting nuts.

DOOR ASSEMBLY: Adjustment

INFOID:0000000006226082



Front fender 1.

2. Front door

3. Rear door

4. Body side outer 5. Door striker 6. TORX bolt

- Front door hinge (upper/lower) 7.
- 8. Rear door hinge (upper)
- 9. Rear door hinge (lower)

Refer to GI-4, "Components" for symbols in the figure.

Check the clearance and surface height between rear door and each part by visually and touching. If the clearance and the surface height are out of specification, adjust them according to the procedures shown below.

Unit: mm (in)

Portion		Clearance	Surface height	
Front door – Rear door	B – B	3.2 – 5.2 (0.126 – 0.205)	(-1.0) - (+1.0) [(-0.039) - (+0.039)]	
Rear door – Body side outer	C – C	3.2 - 5.2 (0.126 - 0.205)	(-1.0) - (+1.0) [(-0.039) - (+0.039)]	

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## **REAR DOOR**

## < REMOVAL AND INSTALLATION >

- 1. Remove center pillar lower garnish. Refer to <a href="INT-22">INT-22</a>, "CENTER PILLAR LOWER GARNISH: Removal and Installation".
- 2. Loosen door hinge mounting nuts on door side.
- Adjust the surface height of rear door according to the fitting standard dimension.
- 4. Temporarily tighten door hinge mounting nuts on door side.
- 5. Loosen door hinge mounting nuts and bolts on body side.
- 6. Raise rear door at rear end to adjust clearance of rear door according to the fitting standard dimension.
- 7. After adjustment tighten bolts and nuts to the specified torque.

## **CAUTION:**

- After installation, apply touch-up paint (the body color) onto the head of hinge mounting bolts and nuts.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.
- 8. Install center pillar lower garnish. Refer to <a href="INT-22">INT-22</a>, "CENTER PILLAR LOWER GARNISH: Removal and <a href="Installation">Installation</a>.

### DOOR STRIKER ADJUSTMENT

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

### DOOR STRIKER

## DOOR STRIKER: Removal and Installation

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### **REMOVAL**

Remove TORX bolts, and then remove door striker.

## **INSTALLATION**

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- Check rear door open/close, after installation.
- After installation, be sure to perform the fitting adjustment. Refer to <u>DLK-229</u>, "<u>DOOR ASSEMBLY</u>:
   <u>Adjustment</u>".

## DOOR HINGE

### DOOR HINGE: Removal and Installation

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### **CAUTION:**

- Perform work with 2 workers, because of it's heavy weight.
- When removing and installing rear door assembly, support door with a jack and shop cloth to protect door and body.

### REMOVAL

- Remove rear door assembly. Refer to DLK-228, "DOOR ASSEMBLY: Removal and Installation".
- 2. Remove center pillar lower garnish. Refer to <a href="INT-22">INT-22</a>, "CENTER PILLAR LOWER GARNISH: Removal and Installation".
- 3. Remove rear door hinge mounting bolts and nuts (body side), and then remove door hinge.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

## **CAUTION:**

- Apply anticorrosive agent onto the mounting surface.
- Check rear door open/close operation after installation.
- Check door hinge rotating part for poor lubrication. If necessary, apply body grease.
- When removing and installing rear door assembly, perform the fitting adjustment. Refer to <u>DLK-229</u>, <u>"DOOR ASSEMBLY: Adjustment"</u>.
- After installing, apply the touch-up paint (the body color) onto the head of door hinge mounting nuts.
   DOOR CHECK LINK

## DOOR CHECK LINK: Removal and Installation

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## **REAR DOOR**

## < REMOVAL AND INSTALLATION >

- Fully close the rear door window.
- 2. Remove rear door finisher. Refer to INT-16, "Removal and Installation".
- 3. Remove rear door speaker mounting bolts.
- 4. Disconnect connector and remove rear door speaker.
- 5. Remove mounting bolt of the check link on the vehicle.
- 6. Remove mounting nuts of the check link on door panel.
- 7. Take door check link out from the hole of door panel.

## **INSTALLATION**

Note the following item, and then install in the reverse order of removal.

**CAUTION:** 

Check rear door open/close operation after installation.

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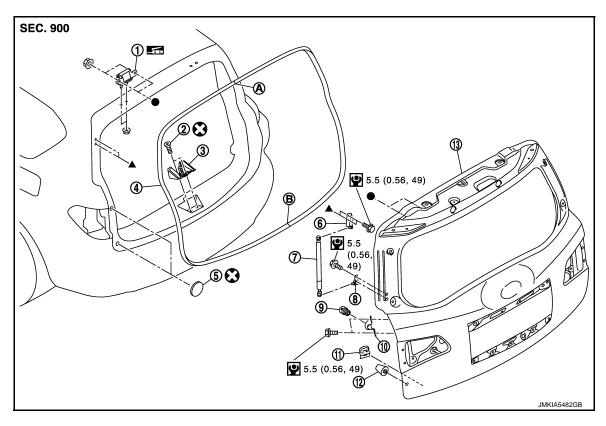
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## **BACK DOOR**

Exploded View



- 1. Back door hinge
- 4. Back door weather-strip
- 7. Back door stay
- 10. Bumper rubber bracket
- 13. Back door assembly
- A : Center mark
- B : Seam

- 2. TORX bolt
- 5. Stopper seal
- 8. Back door lower bracket
- 11. Drain plug

- 3. Back door striker
- 6. Back door stay bracket
- 9. Bumper rubber (side)
- 12. Bumper rubber (lower)

Refer to GI-4, "Components" for symbols in the figure.

## BACK DOOR ASSEMBLY

## BACK DOOR ASSEMBLY: Removal and Installation

#### **CAUTION:**

- · Operate with two workers, because of its heavy weight.
- Use protective tape or cloth to protect from damage during remove and installation.

### **REMOVAL**

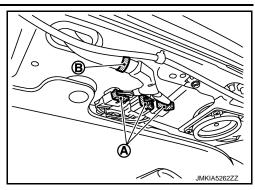
- 1. Remove stud ball of back door support rod. Refer to <u>DLK-247, "BACK DOOR SUPPORT ROD : Removal</u> and Installation".
- 2. Remove roof garnish. Refer to INT-29, "Removal and Installation".

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## **BACK DOOR**

## < REMOVAL AND INSTALLATION >

Disconnect back door harness connectors (A) and remove back door harness clip (B).



- 4. Remove back door harness grommet, and then pull harness out of vehicle through roof panel hole.
- Disconnect washer tube.
- 6. Remove washer tube grommet, and then pull washer tube out of vehicle through roof panel hole.
- 7. Support back door lock with the proper material to prevent it from falling.

### **WARNING:**

Body injury may occur if no supporting rod is holding the back door open when removing the back door stay.

- Remove back door stay. Refer to DLK-236, "BACK DOOR STAY: Removal and Installation".
- Remove back door hinge mounting nuts on back door and remove back door assembly.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- Apply anticorrosive agent onto the mounting surface.
- Check back door open/close, lock/unlock operation after installation.
- After installation, perform fitting adjustment. Refer to DLK-234, "BACK DOOR ASSEMBLY: Adjustment".

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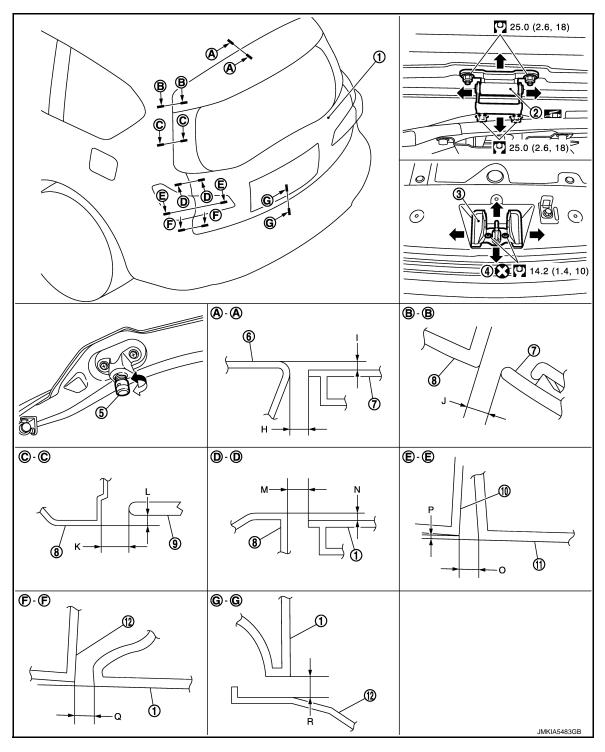
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# **BACK DOOR ASSEMBLY: Adjustment**

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- 1. Back door assembly
- 4. TORX bolt
- 7. Rear roof spoiler
- 10. Rear combination lamp
- 2. Back door hinge
- 5. Bumper rubber
- Body side outer
- 11. Back up lamp

- 3. Back door striker
- 6. Roof
- 9. Back door glass
- 12. Rear bumper fascia

Refer to GI-4, "Components" for symbols in the figure.

Check the clearance and the surface height between back door and each part by visually and touching. If the clearance and the surface height are out of specification, adjust them according to the procedures shown below.

					Unit: mm (ir
Portion				Standard	Difference (LH/RH, MAX)
Roof – Rear roof spoiler A -		Н	Clearance	5.0 - 9.0 (0.197 - 0.354)	_
	A – A	-	Surface height	(-1.0) - (+3.0) [(-0.039) - (+0.118)]	_
Body side outer panel – Rear roof spoiler	B – B	7	Clearance	3.8 - 7.8 (0.150 - 0.307)	≤2.0 (0.079)
Body side outer panel – Back door glass	C – C	K	Clearance	3.0 - 7.0 (0.118 - 0.276)	≤2.0 (0.079)
	0-0	L	Surface height	0.0 - 4.0 (0.000 - 0.157)	≤2.0 (0.079)
Body side outer panel – Back door	D D	M	Clearance	4.0 - 6.0 (0.157 - 0.236)	≤1.0 (0.039)
	ט-ט	N	Surface height	(-1.0) - (+1.0) [(-0.039) - (+0.039)]	≤1.0 (0.039)
Rear combination lamp  – Back up lamp		0	Clearance	2.5 - 7.5 (0.098 - 0.295)	≤2.2 (0.087)
	E-E	Р	Surface height	(-2.2) - (+2.2) [(-0.087) - (+0.087)]	≤2.2 (0.087)
Rear bumper fascia – Back door	F-F	Q	Clearance	2.9 - 7.1 (0.114 - 0.280)	≤2.1 (0.083)
Rear bumper fascia –	G – G	R	Clearance	4.0 - 8.0	_

1. Remove luggage rear plate mask. Refer to <a href="INT-35">INT-35</a>, "LUGGAGE REAR PLATE: Removal and Installation".

(0.157 - 0.315)

- Loosen back door striker mounting bolts.
- 3. Loosen back door hinge mounting nuts (back door side).
- 4. Loosen bumper rubber (side and lower).
- 5. Lift up back door approximately 100 150 mm (3.937 5.906 in) height then close it lightly and check that it is engaged firmly with back door closed.
- Check the clearance and surface height.
- 7. Finally tighten back door hinge, bumper rubber, and back door striker.
- Install luggage rear plate mask. Refer to <u>INT-35</u>, "<u>LUGGAGE REAR PLATE</u>: Removal and Installation".

## BACK DOOR STRIKER ADJUSTMENT

Adjust back door striker so that i becomes parallel with back door lock insertion direction.

## BACK DOOR STRIKER

## BACK DOOR STRIKER: Removal and Installation

### REMOVAL

**Back door** 

- Remove luggage rear plate. Refer to <u>INT-35. "LUGGAGE REAR PLATE: Removal and Installation"</u>.
- Remove mounting TORX bolts, and then remove back door striker.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

#### **CAUTION:**

- Check back door open/close operation after installation.
- When removing and installing back door striker, check to perform the fitting adjustment. Refer to <u>DLK-234, "BACK DOOR ASSEMBLY: Adjustment"</u>.

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## **BACK DOOR HINGE**

## BACK DOOR HINGE: Removal and Installation

#### INFOID:0000000006226090

#### **CAUTION:**

- Operate with two workers, because of its heavy weight.
- Use protective tape or cloth to protect from damage during remove and installation.

## **REMOVAL**

- 1. Remove back door assembly. Refer to DLK-232, "BACK DOOR ASSEMBLY: Removal and Installation".
- 2. Remove back door hinge mounting nuts (body side), and then remove back door hinge.

### **INSTALLATION**

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- Apply anticorrosive agent onto the mounting surface.
- Check back door open/close operation after installation.
- Check back door hinge rotating part for poor lubrication. If necessary, apply body grease.
- When removing and installing back door assembly, perform the fitting adjustment. Refer to <u>DLK-234</u>, <u>"BACK DOOR ASSEMBLY: Adjustment"</u>.
- After installation, apply touch-up paint (the body color) onto the head of back door hinge mounting nuts.

**BACK DOOR STAY** 

BACK DOOR STAY: Removal and Installation

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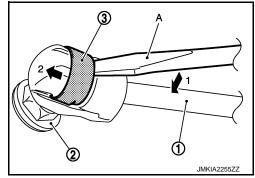
### **REMOVAL**

1. Support back door lock with the proper material to prevent it from falling.

#### WARNING:

Body injury may occur if no supporting rod is holding the back door open when removing the back door stay.

- 2. Remove the metal clip (3) located on the connection between the back door stay (1) and the stud ball (2) (back door side) by using a flatted-blade screwdriver (A).
- 3. Remove back door stay (back door side).



4. In the same way, remove back door stay (body side).

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

#### **CAUTION:**

Check back door open/close operation after installation.

## **BACK DOOR STAY: Disposal**

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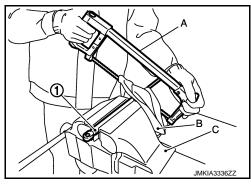
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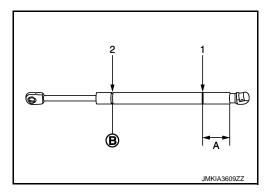
- 1. Fix back door stay (1) using a vise (C).
- 2. Using hacksaw (A) slowly make 2 holes in the back door stay, in numerical order as shown in the figure.

### **CAUTION:**

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



A: 20 mm (0.787 in) B: Cut at the groove.



## BACK DOOR WEATHER-STRIP

## BACK DOOR WEATHER-STRIP: Removal and Installation

INFOID:0000000006226093

### **REMOVAL**

- Remove stud ball of back door support rod from back door assembly. Refer to DLK-247, "BACK DOOR SUPPORT ROD: Removal and Installation".
- 2. Pull up and remove engagement with body from weather-strip joint.

### **CAUTION:**

Never pull strongly on weather-strip.

### INSTALLATION

1. Working from the upper section, align weather-strip mark with vehicle center position mark and install weather-strip onto the vehicle.

For the lower section, align weather-strip seam with center of back door striker.

3. Pull weather-strip gently to ensure that there is no loose section.

### NOTE:

Check that weather-strip is fit tightly at each corner and luggage rear plate.

Install mounting bolts of power back door drive assembly (Back door side).

Install stud ball of back door support rod to back door assembly. Refer to DLK-247, "BACK DOOR SUP-PORT ROD: Removal and Installation".

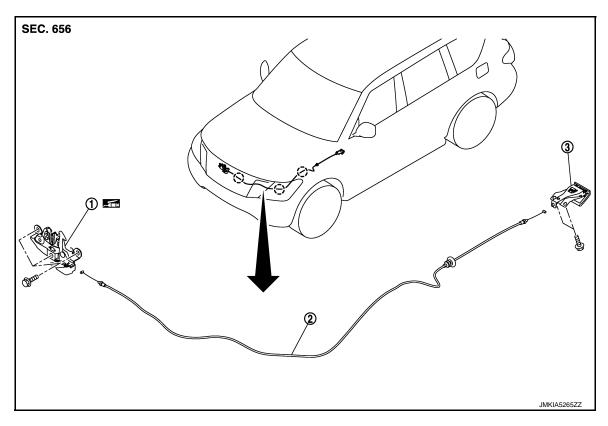
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## **HOOD LOCK**

Exploded View



- Hood lock assembly
- 2. Hood lock control cable
- 3. Hood lock opener lever

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Refer to GI-4, "Components" for symbols in the figure.

## Removal and Installation

**REMOVAL** 

- 1. Remove bumper molding. Refer to EXT-13, "Removal and Installation".
- 2. Remove mounting bolts, and then remove hood lock assembly.
- 3. Disconnect hood lock cable from hood lock assembly.
- 4. Remove hood lock cable clip.
- 5. Remove mounting bolts, and then remove hood lock opener lever.
- 6. Disconnect hood lock cable from hood lock opener lever.
- Remove grommet on the lower dash, and pull the hood lock control cable toward the passenger compartment.

### **CAUTION:**

While pulling, never to damage (peeling) the outside of hood lock control cable.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

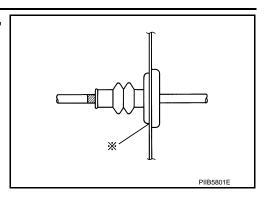
#### CAUTION

• Never to bend cable too much, keeping the radius 100 mm (3.937 in) or more.

## **HOOD LOCK**

## < REMOVAL AND INSTALLATION >

 Check that cable is not offset from the positioning grommet, and apply the sealant to the grommet (at \* mark) properly.



- Check that hood lock control cable is properly engaged with hood lock.
- After installation, perform hood fitting adjustment. Refer to <u>DLK-216, "HOOD ASSEMBLY: Adjustment".</u>
- After installation, perform hood lock control inspection. Refer to <u>DLK-239</u>, "Inspection".

Inspection INFOID:000000006226096

### NOTE:

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

- 1. Check that secondary latch is properly engaged with secondary striker [6.8 mm (0.268 in)] by hood weight.
- 2. While operating hood opener, carefully check that the front end of hood is raised by approximately 20.0 mm (0.787 in). Also check that hood opener returns to the original position.
- 3. Check that hood opener operating is condition 49 N (5.0 kg, 11.0 lb) or below.
- 4. Install so that static closing face of hood is 680 N·m (69.0 kg-m, 502 ft-lb) or less.

#### NOTE:

- Exert vertical force on right side and left side of hood lock.
- Never press simultaneously both sides.
- 5. Check the hood lock lubrication condition. If necessary, apply body grease to hood lock.

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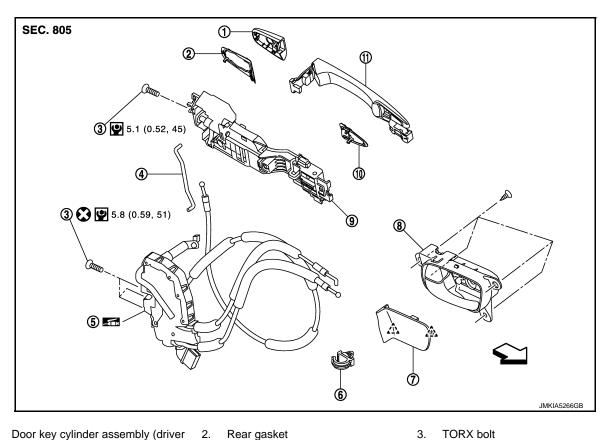
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## FRONT DOOR LOCK

**Exploded View** INFOID:0000000006226097



- 1. Door key cylinder assembly (driver
  - Outside handle escutcheon (passenger side)
- 4. Key rod (driver side)
- Door finisher cap
- 10. Front gasket

- Door lock assembly
- 8. Inside handle
- 11. Outside handle

- TORX bolt
- Cable clip
- Outside handle bracket

INFOID:0000000006226098

六:Pawl

: Vehicle front

Refer to GI-4, "Components" for symbols in the figure.

## DOOR LOCK

## DOOR LOCK: Removal and Installation

## **REMOVAL**

- Remove outside handle and outside handle bracket. Refer to <u>DLK-241</u>, "OUTSIDE HANDLE: Removal and Installation".
- 2. Remove door lock assembly TORX bolts.
- Disconnect door lock actuator connector, and then remove door lock assembly.
- 4. Remove key rod from door lock assembly.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

## **CAUTION:**

- Check door lock cables are properly engaged with inside handle and outside handle.

When installing key rod, rotate key rod holder until a click is felt.

## FRONT DOOR LOCK

## < REMOVAL AND INSTALLATION >

• After installation, check door open/close, lock/unlock operation.

## INSIDE HANDLE

## INSIDE HANDLE: Removal and Installation

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### **REMOVAL**

- 1. Remove front door finisher. Refer to INT-14, "Removal and Installation".
- Remove inside handle escutcheon. Refer to INT-13, "Exploded View".
- 3. Remove inside handle mounting screws, and then remove the inside handle.

## INSTALLATION

Note the following items, and then install in the reverse order of removal.

## **CAUTION:**

- Check door lock cables are properly engaged with inside handle.
- After installation, check door open/close, lock/unlock operation.

## **OUTSIDE HANDLE**

## OUTSIDE HANDLE: Removal and Installation

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### **REMOVAL**

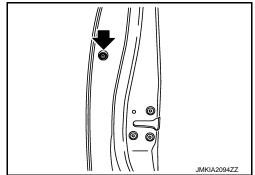
- Fully close front door glass.
- 2. Remove front door finisher. Refer to INT-14, "Removal and Installation".
- 3. Remove sealing screen.

### NOTE:

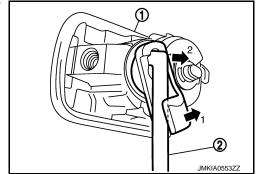
Cat the buty-tape so that some parts of the buty-tape do not remain on the sealing screen, if the sealing screen is reused.

- 4. Disconnect door antenna and door request switch connector, and then remove harness clamp (models with Intelligent Key system) on outside handle bracket.
- Remove door side grommet, and loosen TORX bolt from grommet hole.

=: TORX bolt



6. Reach in to separate key rod (2) connection [on the door key cylinder assembly (1)] (driver side).



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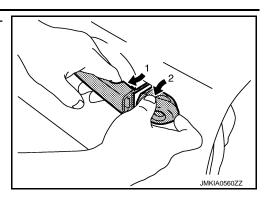
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Revision: 2010 May **DLK-241** 2011 QX56

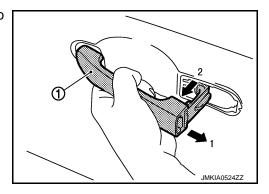
## FRONT DOOR LOCK

## < REMOVAL AND INSTALLATION >

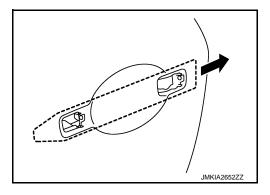
While pulling outside handle, remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side).



8. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



- 9. Remove front gasket and rear gasket.
- 10. Slide toward rear of vehicle to remove outside handle bracket.



11. Disconnect door lock cable from outside handle bracket.

## **INSTALLATION**

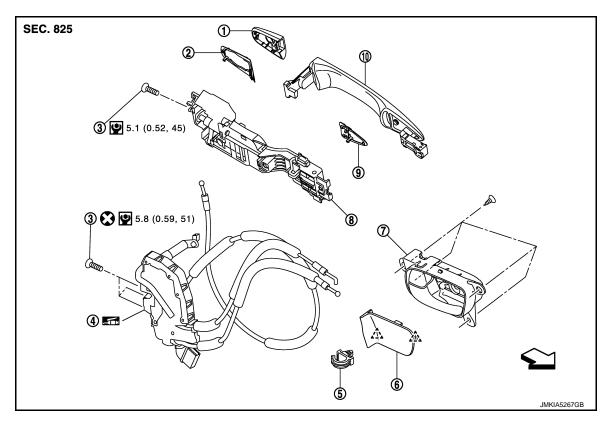
Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- When installing key rod, rotate key rod holder until a click is felt.
- Check door lock cable is properly engaged with outside handle bracket.
- After installation, check door open/close, lock/unlock operation.

## **REAR DOOR LOCK**

Exploded View



- 1. Outside handle escutcheon
- 4. Door lock assembly
- 7. Inside handle
- 10. Outside handle
- 六: Pawl

Refer to GI-4, "Components" for symbols in the figure.

- 2. Rear gasket
- 5. Cable clip
- 3. Outside handle bracket
- 3. TORX bolt
- 6. Door finisher cap
- 9. Front gasket

## **DOOR LOCK**

## DOOR LOCK: Removal and Installation

REMOVAL

- 1. Remove outside handle and outside handle bracket. Refer to <u>DLK-244, "OUTSIDE HANDLE : Removal and Installation"</u>.
- 2. Remove door lock assembly TORX bolts.
- 3. Disconnect door lock actuator connector, and then remove door lock assembly.

## **INSTALLATION**

Note the following items, and then install in the reverse order of removal. **CAUTION:** 

- Check door lock cables are properly engaged with inside handle and outside handle.
- After installation, check door open/close, lock/unlock operation.

INSIDE HANDLE

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## **REAR DOOR LOCK**

## < REMOVAL AND INSTALLATION >

## **INSIDE HANDLE:** Removal and Installation

INFOID:0000000006226103

## **REMOVAL**

- 1. Remove rear door finisher. Refer to <a href="INT-16">INT-16</a>, "Removal and Installation".
- Remove inside handle escutcheon. Refer to <u>INT-16</u>, "Exploded View"
- 3. Remove inside handle mounting screws, and then remove inside handle.

#### INSTALLATION

Note the following items, and then install in the reverse order of removal.

## **CAUTION:**

- Check door lock cables are properly engaged with inside handle.
- After installation, check door open/close, lock/unlock operation.

## **OUTSIDE HANDLE**

## **OUTSIDE HANDLE: Removal and Installation**

INFOID:0000000006226104

## **REMOVAL**

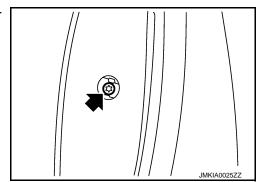
- 1. Fully close rear door glass.
- 2. Remove rear door finisher. Refer to <a href="INT-16">INT-16</a>, "Removal and Installation".
- 3. Remove sealing screen.

## NOTE:

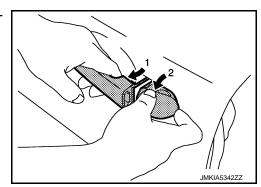
Cat the buty-tape so that some parts of the buty-tape do not remain on the sealing screen, if the sealing screen is reused.

Remove door side grommet, and loosen TORX bolt from grommet hole.

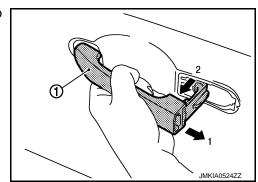
=: TORX bolt



5. While pulling outside handle, remove outside handle escutcheon.



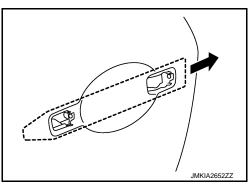
6. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



## **REAR DOOR LOCK**

## < REMOVAL AND INSTALLATION >

- 7. Remove front gasket and rear gasket.
- 8. Slide toward rear of vehicle to remove outside handle bracket.



9. Disconnect door lock cable from outside handle bracket.

## **INSTALLATION**

Note the following items, and then install in the reverse order of removal. **CAUTION:** 

- Check door lock cable is properly engaged with outside handle bracket.
- After installation, check door open/close, lock/unlock operation.

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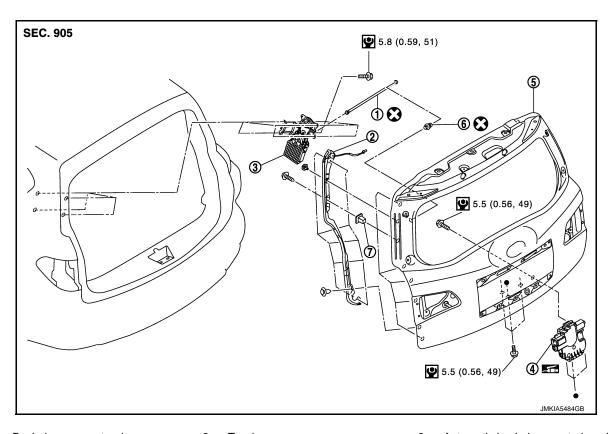
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## **BACK DOOR LOCK**

**Exploded View** INFOID:0000000006226105



1. Back door support rod

Screw grommet

- 4. Back door lock assembly
- 2. Touch sensor
- 5. Back door assembly
- Automatic back door control module

INFOID:0000000006226106

INFOID:0000000006226107

6. Stud ball

DOOR LOCK

DOOR LOCK: Removal and Installation

Refer to GI-4, "Components" for symbols in the figure.

**REMOVAL** 

- Remove back door finisher lower. Refer to <u>INT-39</u>, "Removal and Installation".
- 2. Disconnect back door lock assembly harness connector.
- Remove back door lock mounting bolts, and then remove back door lock assembly.

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

Check back door open/close, lock/unlock operation after installation.

TOUCH SENSOR

TOUCH SENSOR: Removal and Installation

**CAUTION:** 

Take care not to bend touch sensor.

## **REMOVAL**

- Remove back door finisher side. Refer to INT-39, "Removal and Installation".
- Disconnect touch sensor connector.

**DLK-246** Revision: 2010 May 2011 QX56

## **BACK DOOR LOCK**

## < REMOVAL AND INSTALLATION >

- Remove clips and TORX screws of touch sensor.
- Pull harness of touch sensor out of back door and remove touch sensor.

### INSTALLATION

Note the following item, and then install in the reverse order of removal.

#### **CAUTION:**

Check back door open/close operation after installation.

BACK DOOR SUPPORT ROD

## BACK DOOR SUPPORT ROD: Removal and Installation

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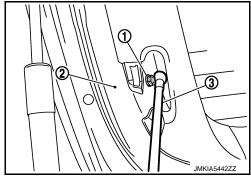
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### REMOVAL

- Remove cap of back door finisher side (LH). Refer to <u>INT-39</u>, "Exploded View".
- Remove stud ball (1) of back door support rod (3) from back door assembly (2).



Remove automatic back door control module. Refer to DLK-262, "Removal and Installation".

## NOTE:

When replacing back door support rod, replace stud ball and automatic back door control module as a set, since back door support rod is engaged and connected to stud ball and automatic back door control module.

### INSTALLATION

Note the following items, and then install in the reverse order of removal.

#### **CAUTION:**

- When reusing stud ball, always apply locking sealant before installing stud ball to back door.
- Check back door open/close operation after installation.

### EMERGENCY LEVER

## **EMERGENCY LEVER: Unlock procedures**

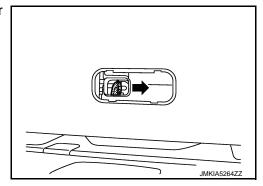
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## UNLOCK PROCEDURES

#### NOTE:

If back door lock cannot be unlocked due to a malfunction or battery discharge, follow the procedures to unlock back door.

- Remove the emergency handle mask. Refer to <a href="INT-39">INT-39</a>, "Exploded View".
- From inside the vehicle, rotate emergency lever toward lower direction and unlock.



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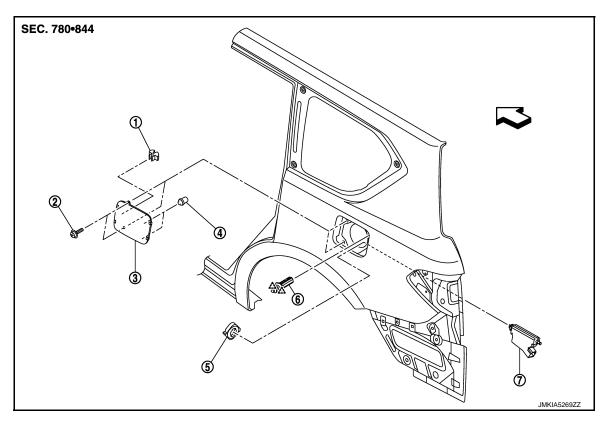
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**DLK-247** Revision: 2010 May 2011 QX56

# **FUEL FILLER LID OPENER**

Exploded View



- 1. Fuel filler spring
- 4. Fuel lid bumper rubber
- 7. Fuel filler lid lock actuator
- ےٰے: Pawl
- ⟨⇒ : Vehicle front

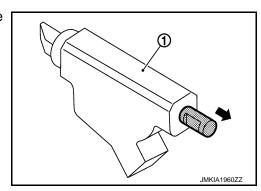
- 2. TORX bolt
- 5. Lock nut

- 3. Fuel filler lid assembly
- 6. Lock & rod assembly

# Removal and Installation

## NOTE:

When fuel filler lid lock actuator (1) is a defective operation, pull the rod to open fuel filler lid.



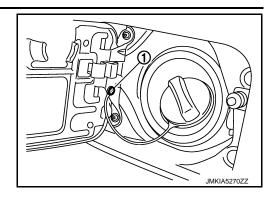
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**REMOVAL** 

## **FUEL FILLER LID OPENER**

## < REMOVAL AND INSTALLATION >

Remove fuel mounting pin (1).



- 2. Remove mounting TORX bolts, and then remove fuel filler lid.
- 3. Remove luggage side lower finisher LH. Refer to INT-36, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- 4. Disconnect woofer connector.
- 5. Remove woofer mounting bolts, and then remove woofer.
- 6. Rotate lock nut counterclockwise, and then remove lock nut.
- 7. Push fuel filler lid lock actuator behind the vehicle, while pushing the pawl.
- Disconnect harness connector and remove fuel filler lid lock actuator.
- 9. Pull and remove lock & rod assembly forward, while pushing the pawls.

## INSTALLATION

Note the following items, and then install in the reverse order of removal.

### **CAUTION:**

- After installation, check fuel filler lid assembly open/close, lock/unlock operation.
- · After installation, apply touch-up paint (the body color) onto the head of fuel filler lid mounting screws.

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**DLK-249** Revision: 2010 May 2011 QX56 D

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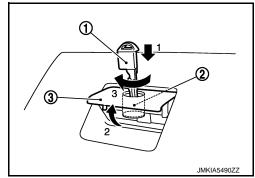
# KEY CYLINDER GLOVE BOX LID KEY CYLINDER

## GLOVE BOX LID KEY CYLINDER: Removal and Installation

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#### REMOVAL

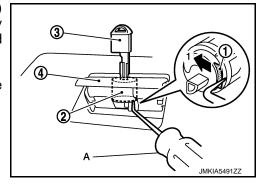
- 1. Remove glove box assembly. Refer to IP-14, "Removal and Installation".
- 2. Insert mechanical key (1) into glove box lid lock cylinder (2).
- 3. Set glove box lid release handle (3) to the pulled-up status.
- 4. Rotate mechanical key and turn glove box lid key cylinder to the lock position.



5. Press tumbler stopper (1) into glove box lid lock cylinder (2) using a hook and pick tool (A), and then remove mechanical key (3) and glove box lid lock cylinder together from glove box lid release handle (4).

### NOTE:

When removing glove box lid lock cylinder, write a short note describing its position against glove box lid release handle.



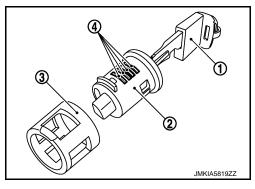
6. Remove sleeve (3) from glove box lid release handle, and then install sleeve to glove box lid lock cylinder.

### NOTE:

When removing sleeve, write a short note describing its position against glove box lid release handle.

#### **CAUTION:**

Never pull out mechanical key (1) from glove box lid lock cylinder (2) while sleeve is uninstalled. Otherwise, tumbler (4) pops out of glove box lid lock cylinder.



### INSTALLATION

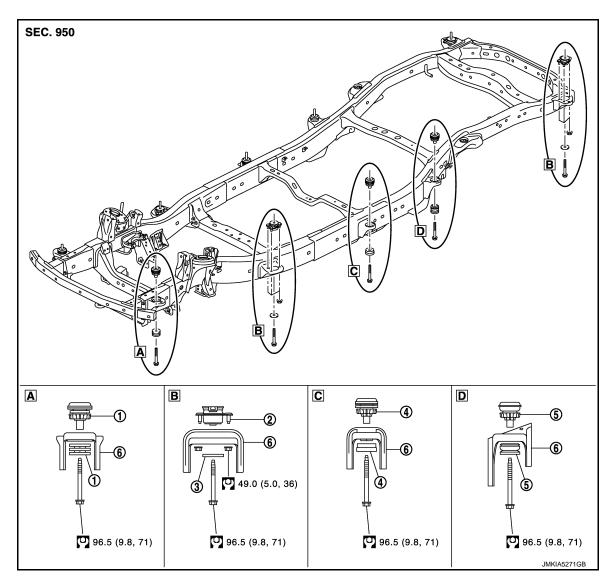
Note the following item, and then install in the reverse order of removal.

#### **CAUTION:**

After installation, check glove box assembly open/close, lock/unlock operation.

## CAB MOUNTING INSULATOR

**Exploded View** INFOID:0000000006226113



Cab mounting insulator (1st)

Cab mounting insulator (3rd)

- Cab mounting insulator (2nd and
- Cab mounting insulator (4th)
- Washer
- Frame assembly

Refer to GI-4, "Components" for symbols in the figure.

### Removal and Installation

Set the vehicle position for lifting body assembly using a 2-pole lift.

- Remove side step. Refer to EXT-45, "Removal and Installation".
  - For replacing cab mounting insulator, separate body assembly and frame assembly. Because separating operation lifts only body assembly, determine the vehicle position by aligning the position of body side sill portion and arm of 2-pole lift. **CAUTION:**

Never lift up by body side sill using 2-pole lift before separating body assembly from frame assembly. Otherwise, body may be damaged.

- Set arm of 2-pole lift to lifting point of frame assembly. Refer to GI-33. "2-Pole Lift". 2.
- Preparation.

**REMOVAL** 

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## CAB MOUNTING INSULATOR

### < REMOVAL AND INSTALLATION >

- Drain brake fluid from brake line. Refer to BR-10, "Draining".
- Release fuel pressure. Refer to EC-153, "Work Procedure".
- Disconnect both battery cables. Refer to PG-164, "Removal and Installation".
- Drain engine coolant from radiator. Refer to CO-8, "Draining".
- Discharge refrigerant from A/C circuit. Refer to <u>HA-20, "Recycle Refrigerant"</u>.
- Drain power steering fluid from reservoir tank.
- 4. Remove parts relating to connection of body assembly and frame assembly.
  - Tire and wheel: Refer to WT-64, "Removal and Installation" (with TPMS).
  - Front fender protector (LH and RH): Refer to <u>EXT-23</u>, "FENDER PROTECTOR: Removal and Installation".
  - Front bumper: Refer to <u>EXT-13</u>, "Removal and Installation".
  - Radiator core support upper: Refer to <a href="DLK-220">DLK-220</a>, "Removal and Installation".
  - Fan shroud: Refer to <u>CO-16</u>, "Removal and Installation".
  - Battery and battery case: Refer to PG-164, "Removal and Installation".
  - Air cleaner case (upper and lower): Refer to EM-27, "Removal and Installation".
  - Engine cover: Refer to <u>EM-25</u>. "Removal and Installation".
  - Rear wheel house protector (LH and RH): <u>EXT-24</u>, "<u>REAR WHEEL HOUSE PROTECTOR</u>: <u>Removal and Installation</u>".
  - Rear bumper: Refer to EXT-17, "Removal and Installation".
  - Fuel filler tube: Remove to <u>FL-8, "Exploded View"</u>.
  - Spare tire
  - Towing hook bracket.
- Separate parts relating to connection of body assembly and frame assembly.
   Vehicle front
  - Disconnect ICC sensor connector. (models with ICC) Refer to <u>CCS-176, "Removal and Installation"</u>.
  - Remove radiator upper hose and radiator lower hose from radiator assembly. Refer to <u>CO-13</u>, "Exploded View".
  - Remove A/T fluid cooler hose B and A/T fluid cooler hose E from A/T fluid cooler tubes. Refer to TM-202, "Exploded View".
  - Remove power steering return hose from oil cooler, and then power steering return hose clamp bolt from frame assembly. Refer to <u>ST-54</u>, "<u>Exploded View</u>".
  - Remove power steering suction hose from reservoir tank. Refer to <u>ST-54, "Exploded View"</u>.

## Never spill power steering fluid in engine room.

- Remove A/C low-presser flexible hose from A/C low-presser pipe. Refer to <u>HA-35, "LOW-PRESSURE FLEXIBLE HOSE</u>: Removal and Installation".
- Remove A/C hi-presser flexible hose from condenser. Refer to <u>HA-34, "HIGH-PRESSURE FLEXIBLE HOSE: Removal and Installation".</u>
- Remove all engine Control Harness connectors, harness clips and others that are connected to the body assembly side of the engine room. (engine room LH and RH side). Refer to <u>PG-148</u>. "<u>Engine Control Harness</u>".

## NOTE:

Separate harness connectors from ECM (engine control module). Refer to <u>EC-10, "General Precautions"</u>.

### **CAUTION:**

- When pulling out harnesses, never damage harnesses or connectors.
- After temporarily securing connectors, cover them with vinyl or similar material to protect against adhesion of foreign materials.
- Disconnect engine room harness connectors and remove harness clips from engine assembly (engine RH side). Refer to <a href="PG-146">PG-146</a>, "Engine Room Harness".
- Remove heater hoses from front water outlet tube (engine room RH side). Refer to <u>HA-33</u>, "Exploded View".
- Disconnect front wheel sensor connectors (LH and RH). Refer to <a href="BRC-134">BRC-134</a>, "FRONT WHEEL SENSOR : Exploded View".
- Disconnect fuel feed tube and EVAP hose (front wheel well LH side).
- Remove steering lower shaft from steering gear side assembly. Refer to <u>ST-37</u>, "Removal and Installation"

### **CAUTION:**

Spiral cable may be cut if steering wheel turns while separating steering column assembly and steering gear assembly.

#### CAB MOUNTING INSULATOR

# < REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION >		
<ul> <li>Remove brake tube from connector (front wheel well LH and RH side). Refer to <u>BR-22</u>. <u>Exploded View"</u> Vehicle center side</li> </ul>	<u>"FRONT :</u>	\
<ul> <li>Remove A/T control cable from manual lever. Refer to <u>TM-178, "Removal and Installation"</u>.</li> </ul>		
<ul> <li>Separate parking brake rear cable (LH and RH) from parking brake front cable. Refer to <u>PB-5</u>, and <u>Installation</u>".</li> </ul>	<u>"Removal</u>	3
<ul> <li>Remove engine room harness connector (frame assembly RH center side). Refer to <u>PG-146</u> <u>Room Harness</u>"</li> </ul>	<u>3, "Engine</u>	
- Remove harness connector protector.	C	)
<ul> <li>Disconnect chassis harness connector from engine room harness connector.</li> </ul>		
- Remove harness bracket bolt, and then remove engine room harness connector from frame a	ıssembly.	
Vehicle rear side	D	)
Remove EVAP hose (canister side).      Remove rear final drive breather have from air breather tube (bady side). Refer to DLN 201.	"Domovol	
<ul> <li>Remove rear final drive breather hose from air breather tube (body side). Refer to <u>DLN-201</u>, and Installation".</li> </ul>	Removal	
<ul> <li>Disconnect body harness connector from chassis harness connectors (frame assembly LH Refer to PG-150, "Body Harness"</li> </ul>	rear side).	Ξ
6. Set safety stand to frame assembly. Release arm of 2-pole lift.		
7. Remove cab mounting insulator bolts.	F	-
3. Set arm of 2-pole lift to body side sill portion of body.		
9. Slowly lift 2-pole lift.		
CAUTION:	G	ì
Check that there is no interference with the vehicle.		
Check that all connection points are disconnected.		
10. Remove cab mounting insulator.	Н	1
NSTALLATION		

Note the following items, and then install in the reverse order of removal.

- Before starting engine, check oil/fluid levels including engine coolant and engine oil. If levels are less than the required quantity, fill to the specified level. Refer to MA-10, "Fluids and Lubricants".
- Warm up engine thoroughly to check that there is no leakage of fuel, exhaust gases, or any oil/fluids including engine oil and engine coolant.

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**DLK-253** Revision: 2010 May 2011 QX56

# **DOOR SWITCH**

# < REMOVAL AND INSTALLATION >

# **DOOR SWITCH**

# Removal and Installation

INFOID:0000000006226115

**REMOVAL** 

Remove the door switch mounting bolt, and then remove door switch.

**INSTALLATION** 

#### DOOR REQUEST SWITCH

#### < REMOVAL AND INSTALLATION > DOOR REQUEST SWITCH Α **DRIVER SIDE** DRIVER SIDE: Removal and Installation INFOID:0000000006226116 В REMOVAL Remove the driver side outside handle. Refer to <u>DLK-241</u>, "OUTSIDE HANDLE: Removal and Installation". **INSTALLATION** Install in the reverse order of removal. PASSENGER SIDE D PASSENGER SIDE: Removal and Installation INFOID:0000000006226117 Е **REMOVAL** Remove the passenger side outside handle. Refer to DLK-241, "OUTSIDE HANDLE: Removal and Installation". F INSTALLATION Install in the reverse order of removal. **BACK DOOR** BACK DOOR: Removal and Installation INFOID:0000000006226118 Н **REMOVAL** Remove the back door finisher. Refer to <a href="INT-39">INT-39</a>, "Removal and Installation". **INSTALLATION**

Install in the reverse order of removal.

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Revision: 2010 May **DLK-255** 2011 QX56

#### **INSIDE KEY ANTENNA**

#### < REMOVAL AND INSTALLATION >

# INSIDE KEY ANTENNA INSTRUMENT CENTER

#### **INSTRUMENT CENTER:** Removal and Installation

#### INFOID:0000000006226119

#### REMOVAL

- 1. Remove the cluster lid C. Refer to IP-14, "Removal and Installation".
- 2. Remove the inside key antenna (instrument center) mounting screw, and then remove inside key antenna (instrument center).

#### INSTALLATION

Install in the reverse order of removal.

CONSOLE

**CONSOLE**: Removal and Installation

INFOID:0000000006226120

#### **REMOVAL**

- 1. Remove the console rear finisher. Refer to IP-29, "Removal and Installation".
- Remove the inside key antenna (console) mounting screw, and then remove inside key antenna (console).

#### INSTALLATION

Install in the reverse order of removal.

LUGGAGE ROOM

LUGGAGE ROOM: Removal and Installation

INFOID:0000000006226121

#### **REMOVAL**

- 1. Remove the second seat seatback. Refer to <u>SE-126, "SEATBACK: Disassembly and Assembly"</u>.
- 2. Remove the inside key antenna (luggage room) mounting clip, and then remove inside key antenna (luggage room).

#### **INSTALLATION**

#### **OUTSIDE KEY ANTENNA**

#### < REMOVAL AND INSTALLATION >

# **OUTSIDE KEY ANTENNA**

**DRIVER SIDE** 

DRIVER SIDE: Removal and Installation

INFOID:0000000006226122

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REMOVAL

Remove the driver side outside handle. Refer to <u>DLK-241</u>, "OUTSIDE HANDLE: Removal and Installation".

**INSTALLATION** 

Install in the reverse order of removal.

PASSENGER SIDE

PASSENGER SIDE: Removal and Installation

INFOID:0000000006226123

INFOID:0000000006226124

**REMOVAL** 

Remove the passenger side outside handle. Refer to DLK-241, "OUTSIDE HANDLE: Removal and Installation".

INSTALLATION

Install in the reverse order of removal.

**BACK DOOR** 

BACK DOOR: Removal and Installation

**REMOVAL** 

Remove the back door finisher inner. Refer to INT-39, "Removal and Installation".

**INSTALLATION** 

Install in the reverse order of removal.

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**DLK-257** Revision: 2010 May 2011 QX56

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# INTELLIGENT KEY WARNING BUZZER

# < REMOVAL AND INSTALLATION >

# INTELLIGENT KEY WARNING BUZZER

# Removal and Installation

INFOID:0000000006226125

#### **REMOVAL**

Remove the Intelligent Key warning buzzer mounting bolt, and then remove the Intelligent Key warning buzzer.

#### **INSTALLATION**

#### REMOTE KEYLESS ENTRY RECEIVER

< REMOVAL AND INSTALLATION >

# REMOTE KEYLESS ENTRY RECEIVER

# Removal and Installation

INFOID:0000000006226126

#### **REMOVAL**

- Remove the luggage side finisher. Refer to <u>INT-38</u>, "<u>LUGGAGE SIDE UPPER FINISHER</u>: Removal and Installation".
- 2. Remove the remote keyless entry receiver mounting bolt, and then remove remote keyless entry receiver.

#### **INSTALLATION**

Install in the reverse order of removal.

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#### INTELLIGENT KEY BATTERY

#### < REMOVAL AND INSTALLATION >

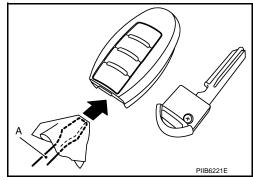
#### INTELLIGENT KEY BATTERY

#### Removal and Installation

- Release the lock knob at the back of the Intelligent Key and remove the mechanical key.
- Insert a flat-blade screwdriver (A) wrapped with a cloth into the slit of the corner and twist it to separate the upper part from the lower part.

#### **CAUTION:**

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



INFOID:0000000006226127

3. Replace the battery with new one.

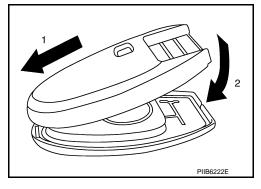
**Battery replacement** 

:Coin-type lithium battery (CR2025)

4. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

#### **CAUTION:**

- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.
- After replacing the battery, check that all Intelligent Key functions work normally.



# **BACK DOOR CONTROL UNIT**

#### < REMOVAL AND INSTALLATION >

# **BACK DOOR CONTROL UNIT**

# Removal and Installation

#### INFOID:0000000006226128

#### **REMOVAL**

- 1. Remove the back door finisher inner. Refer to <a href="INT-39">INT-39</a>, "Removal and Installation".
- 2. Remove the back door control unit mounting bolts, and then remove back door control unit.

#### **INSTALLATION**

Install in the reverse order of removal.

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#### **AUTOMATIC BACK DOOR CONTROL MODULE**

#### < REMOVAL AND INSTALLATION >

# AUTOMATIC BACK DOOR CONTROL MODULE

#### Removal and Installation

INFOID:0000000006226129

#### **REMOVAL**

- 1. Remove the luggage side finisher lower LHD. Refer to <a href="INT-36">INT-36</a>, "LUGGAGE SIDE LOWER FINISHER: Removal and Installation".
- Remove the automatic back door control unit bracket mounting bolt and nats, and then remove the automatic back door control unit bracket.
- 3. Remove the automatic back door control unit mounting bolt, and then remove the automatic back door control unit.

#### **INSTALLATION**

Install in the reverse order of removal.

#### NOTE:

After installing back door control unit, perform additional service when replace control unit. Refer to <u>DLK-80</u>, <u>"ADDITIONAL SERVICE WHEN REPLACING (AUTOMATIC BACK DOOR CONTROL MODULE) : Work Procedure"</u>.

#### **AUTOMATIC BACK DOOR WARNING BUZZER**

# < REMOVAL AND INSTALLATION >

# AUTOMATIC BACK DOOR WARNING BUZZER

#### Removal and Installation

#### INFOID:0000000006226130

#### **REMOVAL**

- 1. Remove the back door finisher inner. Refer to INT-39, "Removal and Installation".
- 2. Remove the automatic back door warning buzzer mounting nut, and then remove the automatic back door warning buzzer.

#### **INSTALLATION**

Install in the reverse order of removal.

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# **AUTOMATIC BACK DOOR MAIN SWITCH**

#### < REMOVAL AND INSTALLATION >

# **AUTOMATIC BACK DOOR MAIN SWITCH**

#### Removal and Installation

#### INFOID:0000000006226131

#### **REMOVAL**

- 1. Remove the instrument driver lower panel LH. Refer to IP-14, "Removal and Installation".
- 2. Widen the pawl, and remove the automatic back door main switch from switch bracket.

#### **INSTALLATION**

# **AUTOMATIC BACK DOOR CLOSE SWITCH**

#### < REMOVAL AND INSTALLATION >

# **AUTOMATIC BACK DOOR CLOSE SWITCH**

# Removal and Installation

#### INFOID:0000000006226132

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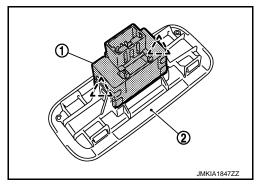
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#### **REMOVAL**

- 1. Remove the automatic back door close switch finisher.
- 2. Widen the pawl, and remove the automatic back door close switch (1) from automatic back door close switch finisher (2).



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#### **INSTALLATION**

Install in the reverse order of removal.

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Revision: 2010 May **DLK-265** 2011 QX56

#### **AUTOMATIC BACK DOOR SWITCH**

# < REMOVAL AND INSTALLATION >

# **AUTOMATIC BACK DOOR SWITCH**

# Removal and Installation

#### INFOID:00000000006226133

#### **REMOVAL**

- 1. Remove the instrument driver lower panel. Refer to IP-14, "Removal and Installation".
- 2. Widen the pawl, and remove the automatic back door switch from automatic back door switch finisher.

#### **INSTALLATION**