

SECTION **DLK**  
DOOR & LOCK

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

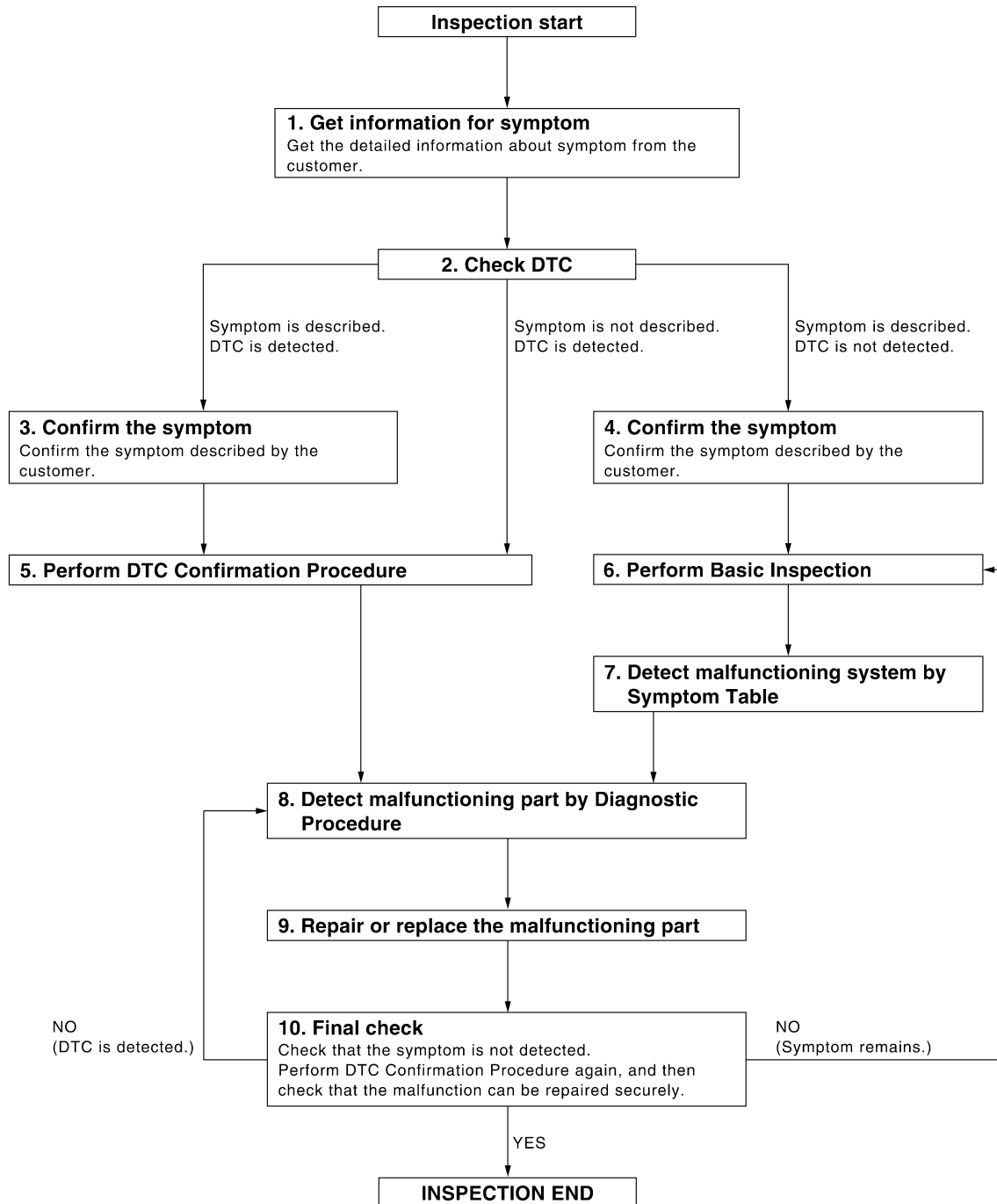
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001278006

OVERALL SEQUENCE



DETAILED FLOW

ALKIA0246GB



# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

## 1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

## 2.CHECK DTC

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

Is any symptom described and any DTC detected?

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

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

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

## 3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 5.

## 4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 6.

## 5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [DLK-138. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

### NOTE:

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

Is DTC detected?

Yes >> GO TO 8.

No >> Refer to [GI-39. "Intermittent Incident"](#).

## 6.PERFORM BASIC INSPECTION

Perform [DLK-8. "Work Flow"](#).

Inspection End>>GO TO 7.

## 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to [DLK-175. "Symptom Table"](#) based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 8.

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## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

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### 8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

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Inspect according to Diagnostic Procedure of the system.

**NOTE:**

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

Is malfunctioning part detected?

Yes >> GO TO 9.

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

### 9. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

### 10. FINAL CHECK

---

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

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

OK or NG

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

NG (Symptom remains)>>GO TO 6.

OK >> **INSPECTION END**

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

## INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

A

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000001278007

B

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

C

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000001278008

D

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

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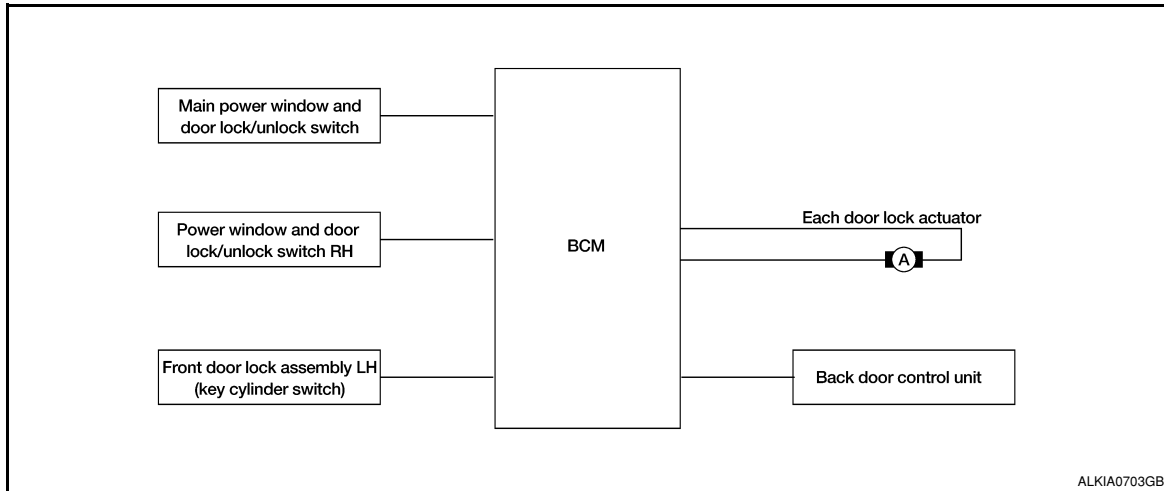
FUNCTION DIAGNOSIS

DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:000000001278009



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000001278010

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

DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

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

Selective Unlock Operation

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

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-37, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

Refer to [DLK-34, "System Description"](#).

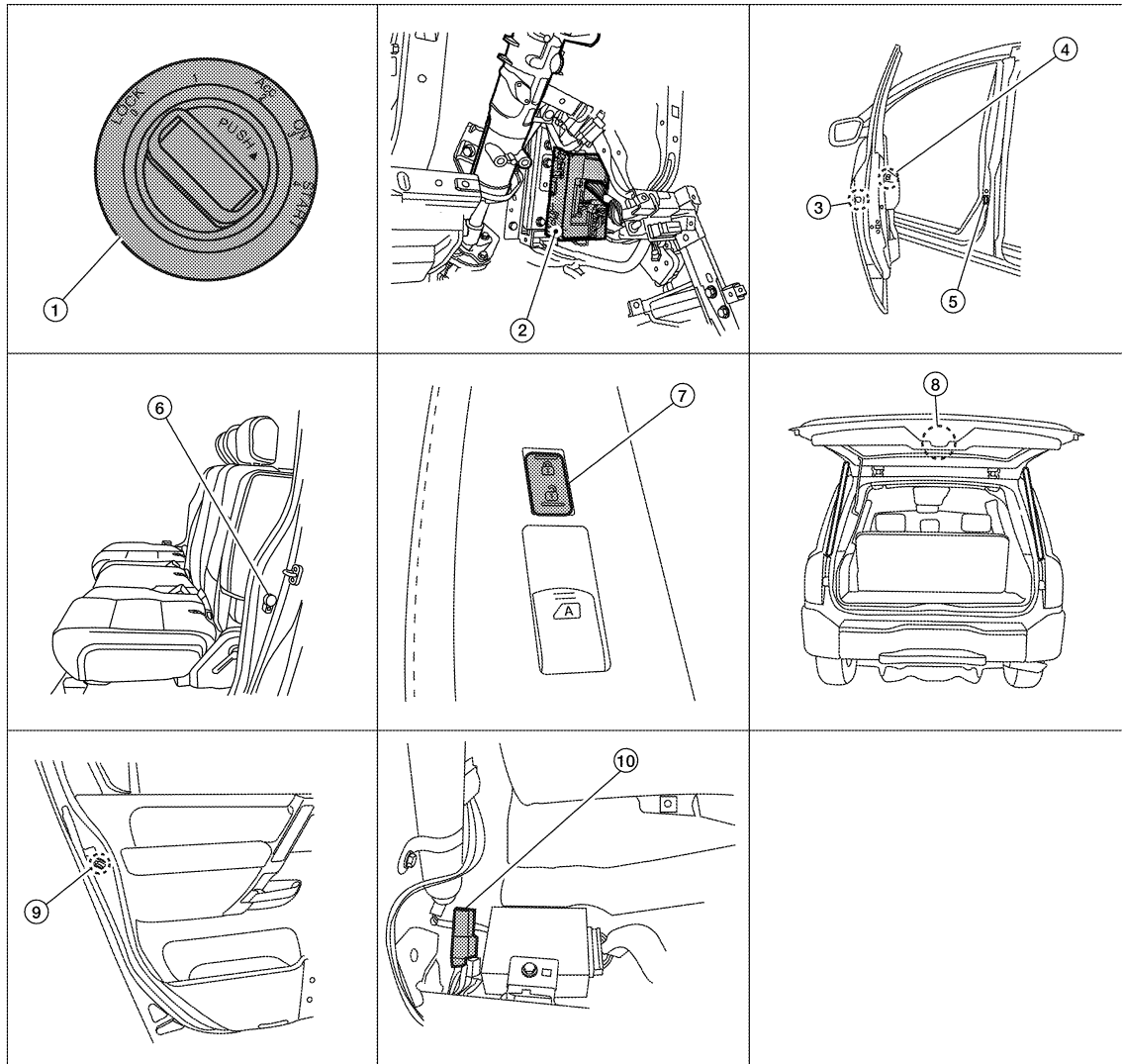
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000001278011



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|---|--|--|
| 1. Key switch and ignition knob switch M12                                      | 2. BCM M18, M19, M20<br>(view with instrument panel removed) | 3. Front door lock assembly LH (key cylinder switch) D14<br>Front door lock actuator RH D114 |
| 4. Main power window and door lock/unlock switch D7, D8                         | 5. Front door switch<br>LH B8<br>RH B108                     | 6. Rear door switch<br>LH B18<br>RH B116   |
| 7. Power window and door lock/unlock switch RH D105                             | 8. Back door latch (door ajar switch) D503                   | 9. Rear door lock actuator<br>LH D205<br>RH D305   |
| 10. Passenger select unlock relay M7<br>(view with instrument panel LH removed) |  |  |

## DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000001278012

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

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

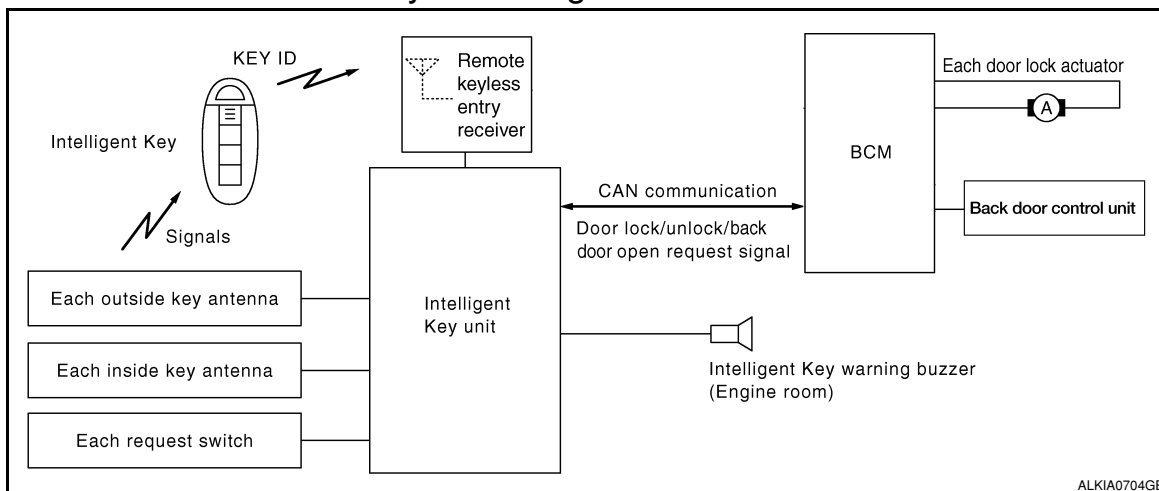
[WITH INTELLIGENT KEY SYSTEM]

Item	Function
Door switch	Transmits door open/close condition to BCM.
Passenger select unlock relay	Enables or disables the unlocking of rear doors when this Intelligent Key option is selected.

## DOOR REQUEST SWITCH

### DOOR REQUEST SWITCH : System Diagram

INFOID:000000001278013



### DOOR REQUEST SWITCH : System Description

INFOID:000000001278014

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

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

**CAUTION:**

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

- If an action that does not meet the operating conditions of the Intelligent Key system is taken, the buzzer goes off to inform the driver (Warning chime function).
- When a door lock is locked or unlocked with request switch or remote controller button operation, the hazard lamps flash and the Intelligent Key warning buzzer or horn sounds (Hazard and buzzer/horn reminder function).
- The settings for each function can be changed with the 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 the CONSULT-III.

#### OPERATION DESCRIPTION/DOOR LOCK/UNLOCK

- When the BCM detects that each door request switch is pressed, it starts 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 sends the door lock/unlock signal and sounds Intelligent Key buzzer warning (lock: 2 times, unlock: 1 time) at the same time as a reminder.

#### OPERATION CONDITION

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

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

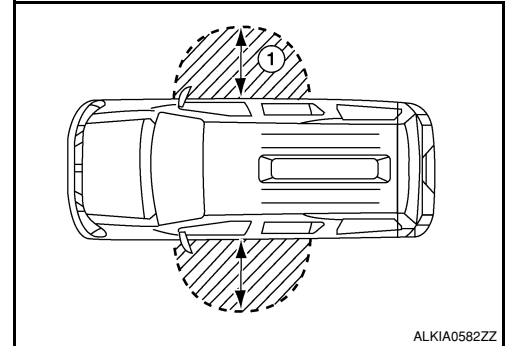
[WITH INTELLIGENT KEY SYSTEM]

Each request switch operation	Operation condition
Lock operation	<ul style="list-style-type: none"> <li>All doors are closed</li> <li>Ignition switch is in OFF position</li> <li>Intelligent Key is outside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>
Unlock Operation	<ul style="list-style-type: none"> <li>Intelligent Key is outside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area *</li> </ul>

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

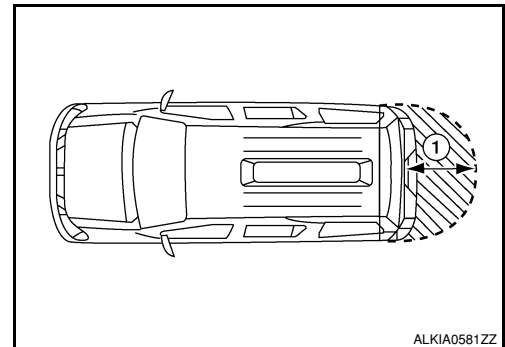
## OUTSIDE KEY ANTENNA DETECTION AREA

The outside key antenna detection area of door lock/unlock function is in the range of approximately 80 cm (31.50 in) surrounding the driver and passenger door handles (1).



## OUTSIDE KEY ANTENNA DETECTION AREA

The outside key antenna detection area of back door lock/unlock function is in the range of approximately 80 cm (31.50 in) surrounding the back door handle (1).



## SELECTIVE UNLOCK FUNCTION

When a LOCK signal is sent from door request switch (driver side or passenger side), all doors will be locked. When an UNLOCK signal is sent from door request switch (driver side or passenger side) once, driver's door will be unlocked.

Then, if an UNLOCK signal is sent from door request switch (driver side and passenger side) again within 5 seconds, all other doors will be unlocked.

## HAZARD AND BUZZER REMINDER FUNCTION

During lock or unlock operation by each request switch, the hazard warning lamps and Intelligent Key warning buzzer will blink or honk as a reminder.

When doors are locked, unlocked by each request switch, IPDM E/R honks Intelligent Key warning buzzer as a reminder and transmits hazard request signal to BCM via CAN communication line.

BCM flashes hazard warning lamps as a reminder.

Operating function of hazard warning lamps and buzzer reminder

Operation	Hazard warning lamps flash	Intelligent Key warning buzzer sounds
Unlock	Once	Once
Lock	Twice	Twice
Trunk open	—	Four times

## How to change hazard and buzzer reminder mode

Refer to [DLK-40. "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)".](#)

## AUTO DOOR LOCK FUNCTION

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## DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

When all doors are locked, ignition switch is in OFF position and key switch is OFF, doors are unlocked with door request switch

When BCM does not receive the following signals within 60 seconds, all doors are locked.

- Door switch is ON (door is opened)
- Door is locked
- Ignition switch is ON (ignition switch is pressed)
- Key switch is ON

Auto door lock mode can be changed by "AUTO LOCK SET" mode in "WORK SUPPORT". Refer to [DLK-40, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

### ROOM LAMP OPERATION

When the following conditions are met:

- Condition of interior lamp switch is in DOOR position
- Door switch OFF (all the doors are closed)

Intelligent Key system turns on interior lamp (for up to 30 seconds maximum) by receiving UNLOCK signal from door request switch. For detailed description, refer to [DLK-12, "DOOR LOCK AND UNLOCK SWITCH : System Description"](#).

### LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

Door lock function	Intelligent Key	Ignition key switch	Remote keyless entry receiver	Door switch	Door request switch (Driver, Passenger)	Door lock actuator	Inside key antenna	Outside key antenna (Driver, Passenger)	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamp
Door lock/unlock function by request switch	×	×	×	×	×	×	×	×		×	×	
Hazard and buzzer reminder function for door lock/unlock operation									×	×	×	×
Key reminder function	×	×	×	×	×	×	×	×	×	×	×	×
Selective unlock function by request switch (Driver side)	×				×	×	×	×		×	×	
Selective unlock function by request switch (Passenger side)	×				×	×	×	×		×	×	
Auto door lock function	×	×		×	×	×				×	×	



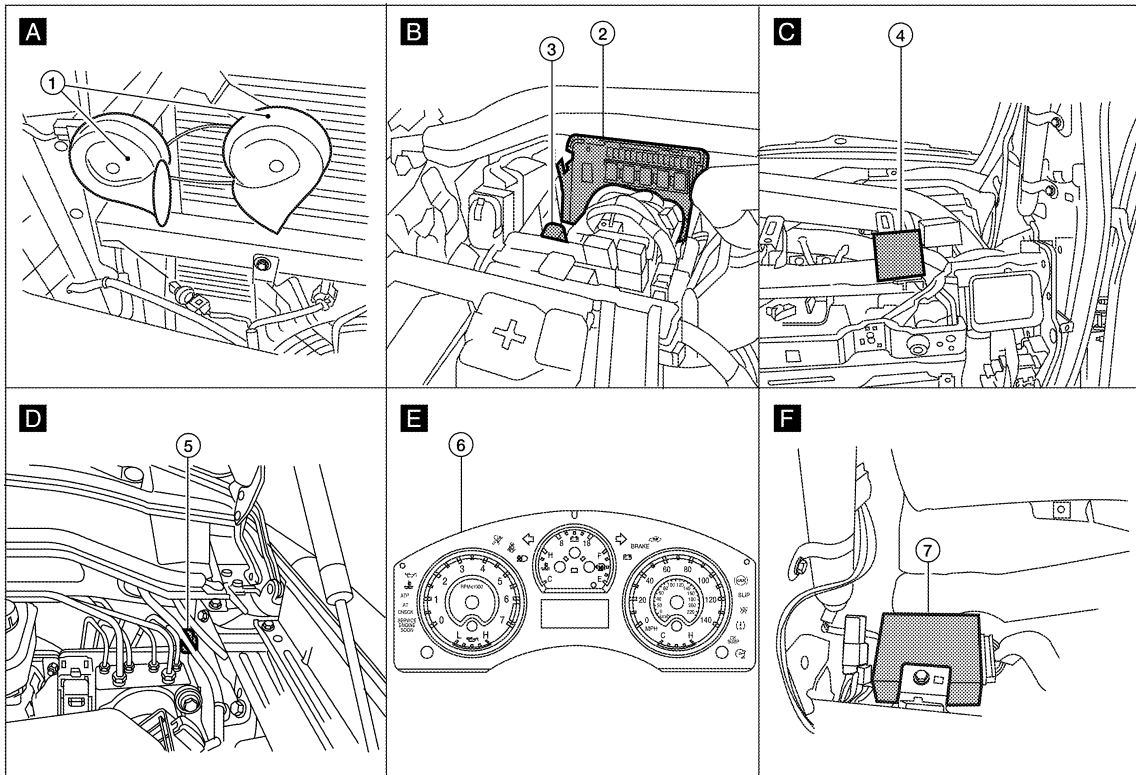
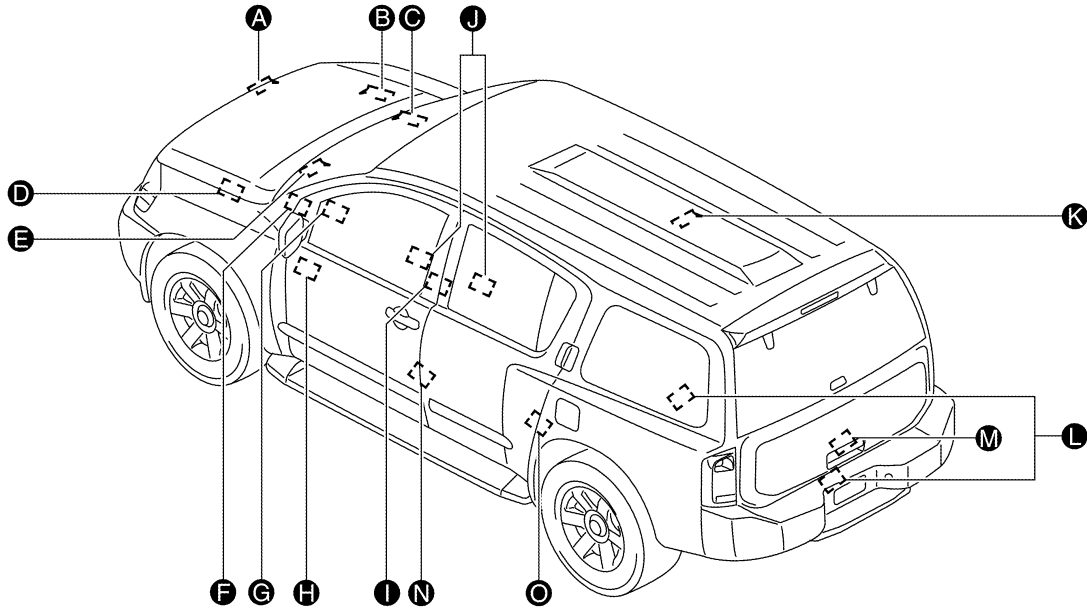
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH : Component Parts Location

INFOID:000000001278015



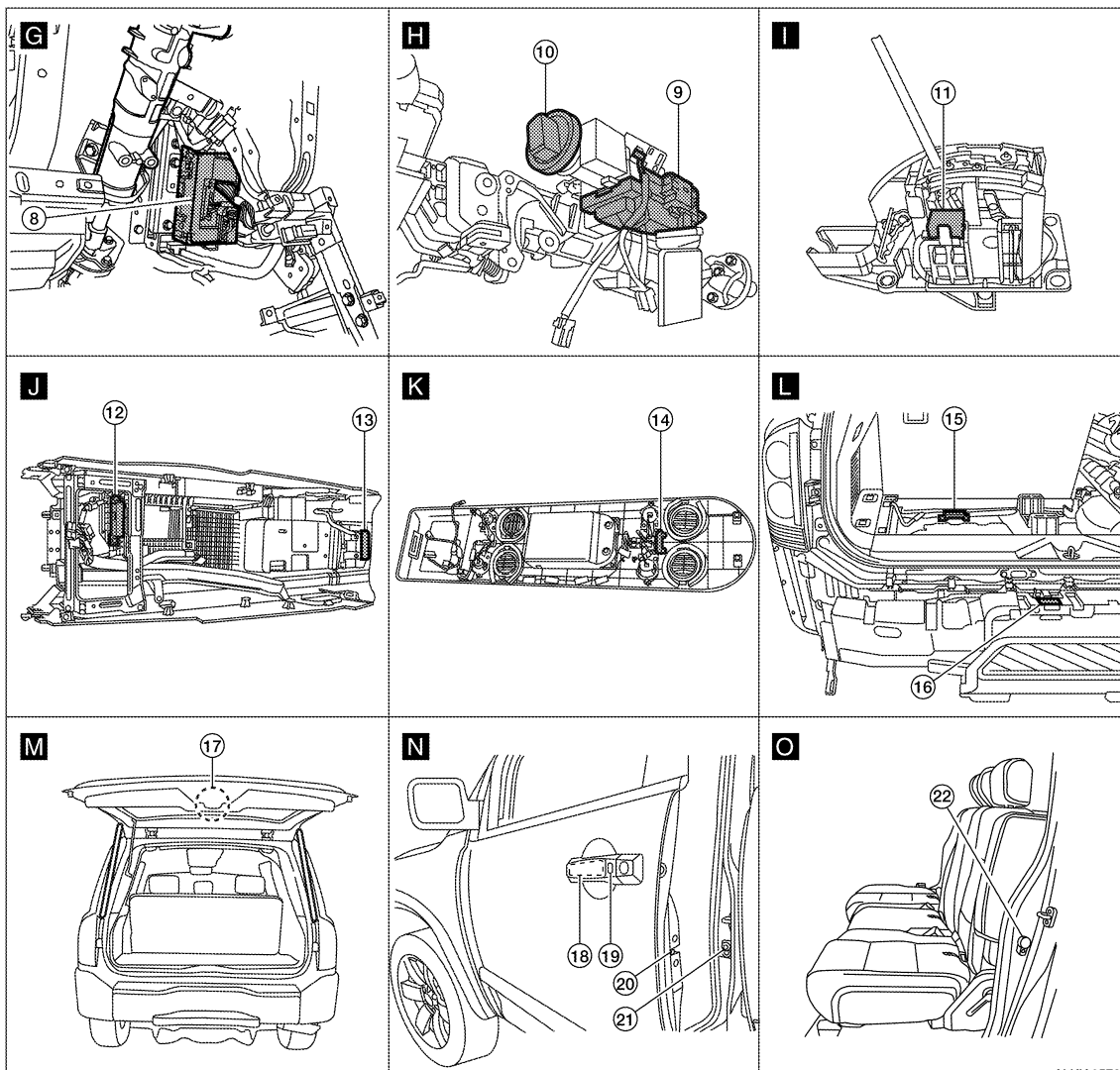
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# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



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|---|---|---|
| 1. Horn E3<br>(view with front grille removed)                                  | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T device (detention switch key) M203<br>(view with center console removed)              | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH : Component Description

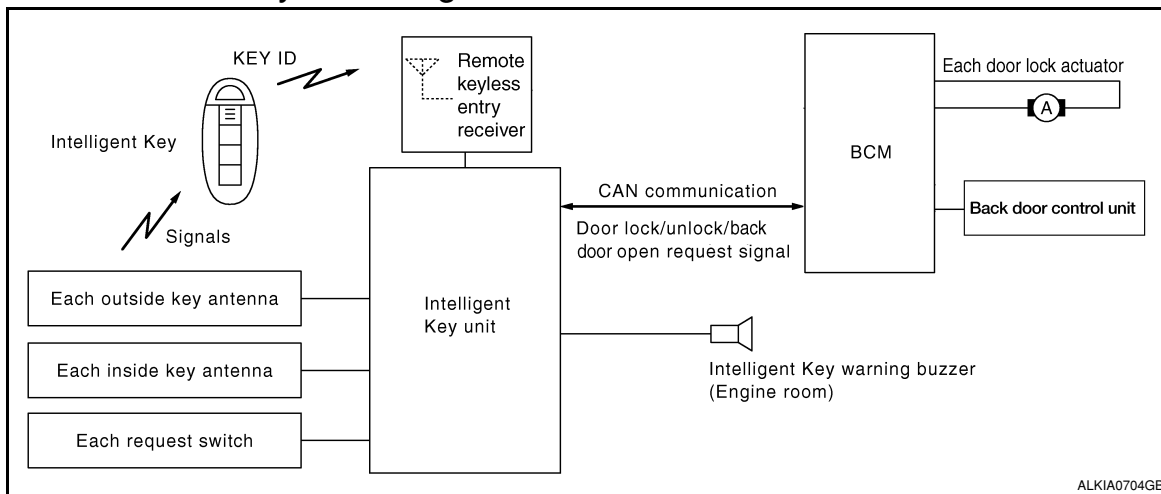
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Item	Function
Intelligent Key unit	Receives lock/unlock signal from remote keyless entry receiver, and then transmits to BCM.
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Transmits door open/close condition to BCM.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to Intelligent Key unit.
Request switch	Transmits lock/unlock operation to Intelligent Key unit.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Outside key antenna	Detects if Intelligent Key is outside the vehicle.
Inside key antenna	Detects if Intelligent Key is inside the vehicle.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.

## INTELLIGENT KEY

### INTELLIGENT KEY : System Diagram

INFOID:000000001278017



### INTELLIGENT KEY : System Description

INFOID:000000001278018

The Intelligent Key has the same functions as the remote control entry system. In addition to other safety features, it can be used to lock and unlock all doors as well as open the back door.

#### OPERATION DESCRIPTION/DOOR LOCK/UNLOCK FUNCTION

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

#### OPERATION CONDITION

Remote controller operation	Operation condition	Operation
Lock	• All doors closed	All doors lock
Unlock	• Intelligent Key is out of the ignition key cylinder	All doors unlock

#### OPERATION AREA

- Operating Range

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- To ensure the Intelligent Key works effectively, use within 80 cm range of each doors, however the operable range may differ according to surroundings.

## SELECTIVE UNLOCK FUNCTION

When a LOCK signal is transmitted from Intelligent Key, all doors will be locked.

When an UNLOCK signal is transmitted from Intelligent Key once, driver's door will be unlocked.

Then, if an UNLOCK signal is transmitted from Intelligent Key again within 5 seconds, all other doors will be unlocked.

When a liftgate signal is transmitted from Intelligent Key for more than 0.5 second, the back door operates to the full open position. After opening, another signal will cause the back door to close.

## HAZARD AND HORN REMINDER FUNCTION

When doors are locked or unlocked by Intelligent Key, BCM flashes hazard warning lamps as a reminder and sends horn chirp signal to IPDM E/R. IPDM E/R sounds horn 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 mode			S mode		
	Lock	Unlock	Back door open	Lock	Unlock	Back door open
Intelligent Key operation						
Hazard warning lamp flash	Twice	Once	—	Twice	—	—
Horns sound	Once	—	—	—	—	—

Hazard and horn reminders do not operate if any door switch is ON (any door is OPEN).

### How to change hazard and horn reminder mode

#### With CONSULT-III

Refer to [DLK-40, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

#### Without CONSULT-III

Refer to Owner's Manual for instructions.

## AUTO DOOR LOCK FUNCTION

### Auto Door Lock Function

When all doors are locked, ignition switch is OFF (ignition switch is not pressed) and key switch is OFF, doors are unlocked with Intelligent Key button. When BCM does not receive the following signals within 30 seconds, all doors are locked.

- Door switch is ON (door is opened)
- Door is locked
- Ignition switch is ON
- Key switch is ON (mechanical key is inserted in ignition key cylinder)

Auto door lock mode can be changed by DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-37, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

## PANIC ALARM FUNCTION

When ignition switch is OFF (ignition switch is not pressed) and key switch is OFF, BCM receives PANIC ALARM signal from Intelligent Key through the remote keyless entry receiver and the Intelligent Key unit.

BCM turns on and off headlamp intermittently and transmits theft warning horn signal to IPDM E/R. Then, IPDM E/R turns on and off horn intermittently.

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off:

- After 25 seconds
- When BCM receives any signal from Intelligent Key

Panic alarm function mode can be changed by PANIC ALARM SET mode in "WORK SUPPORT". Refer to [DLK-40, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

## KEYLESS POWER WINDOW DOWN (OPEN) FUNCTION

Front power windows (with left and right front power window anti-pinch system) open when the unlock button on Intelligent Key is activated and kept pressed for more than 3 seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.

The power window opening stops when the following operations are performed:

- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

While retained power operation activate, Keyless power window down (open) function cannot be operated. Keyless power window down operation mode can be changed by PW DOWN SET mode in "WORK SUPPORT". Refer to [DLK-40, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

## ROOM LAMP ILLUMINATION OPERATION

When the following conditions are met:

- Condition of interior lamp switch is in DOOR position
- Door switch OFF (all the doors are closed)

Intelligent Key system turns on interior lamp (for 30 seconds) by receiving UNLOCK signal from Intelligent Key. For detailed description, refer to [DLK-19, "INTELLIGENT KEY : System Description"](#).

## LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

Remote keyless entry functions	Intelligent Key	Intelligent Key unit	Key switch and ignition knob switch	Door request switch (Driver, Passenger)	Door switch	Door lock actuator	Intelligent Key warning buzzer	CAN communication system	BCM	Combination meter	Hazard warning lamps	Horn	IPDM E/R	Head lamp
Door lock/unlock function by remote control button	×	×	×		×	×		×	×					
Hazard and horn reminder function	×	×					×	×	×	×	×	×	×	
Selective unlock function	×	×			×	×		×	×					
Keyless power window down (open) function	×	×	×					×	×					
Auto door lock function	×	×	×		×			×	×					
Panic alarm function	×	×		×				×	×			×	×	×

## INTELLIGENT KEY : Component Parts Location

INFOID:000000001278019

Refer to [DLK-17, "DOOR REQUEST SWITCH : Component Parts Location"](#).

## INTELLIGENT KEY : Component Description

INFOID:000000001278020

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to Intelligent Key unit.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Intelligent Key unit	Receives button operation from remote keyless entry receiver and transmits to BCM.
Intelligent key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.

# BACK DOOR OPENER FUNCTION

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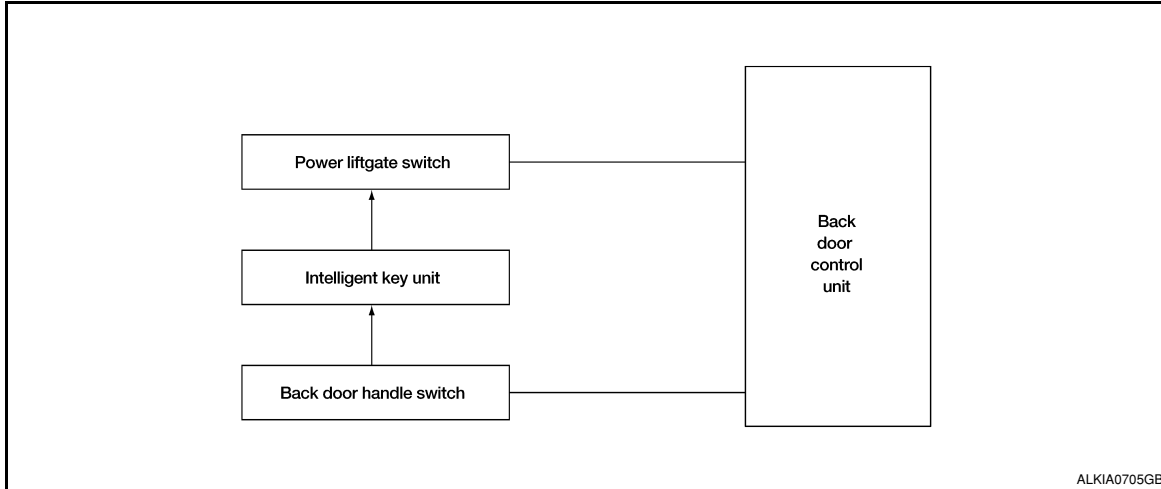
[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER FUNCTION

### BACK DOOR OPENER SWITCH

#### BACK DOOR OPENER SWITCH : System Diagram

INFOID:000000001278021



#### BACK DOOR OPENER SWITCH : System Description

INFOID:000000001278022

#### BACK DOOR OPENER OPERATION

##### NOTE:

**The automatic back door system must be initialized by fully closing the back door anytime the battery power is lost to the back door control unit.**

The automatic back door system consists of a one piece unit that combines the back door control unit along with the back door motor, back door clutch and the back door encoder. The back door latch contains a lock function that can control the two functions of automatic back door latch closure and electrical opener with a single motor when you close the back door to the halfway-state.

- Back door auto closure

When the back door is closed to the halfway state (half-latch) position, the motor automatically drives to rotate the latch lever and pull it in from half latched to full latched.

- Power back door

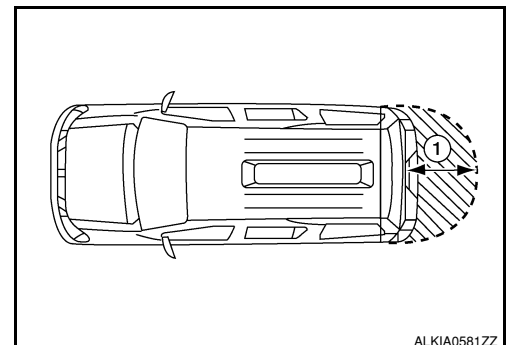
With the back door closed, if you press the power liftgate switch or press the keyfob button, or pull the back door handle with the back door unlocked, the back door latch motor drives the open the locking plate and releases the latch. The back door motor then raises the door to the full open position.

With the back door fully open, if you press the power liftgate switch, keyfob button or the back door close switch, the back door motor closes the door to the half-latch state. The back door latch motor then drives the latch to the full close position.

At the onset of each power open or power close application, the hazard lamps will flash 3 times and the warning chime will sound 3 dings lasting a total of 2 seconds.

#### OUTSIDE KEY ANTENNA DETECTION AREA

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



#### OPERATION DESCRIPTION

Power Liftgate Switch Operation (Fully Closed → Fully Open Operation)

# BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

- When the power liftgate switch is pressed, back door control unit terminal 23 receives the signal.
- The back door control unit checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Remote Keyless Entry Operation (Fully Closed → Fully Open Operation)

- When the keyfob button is pressed for at least 0.5 seconds, back door control unit terminal 21 receives the signal.
- The back door control unit checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Back Door Handle Switch Operation (Fully Closed → Fully Open Operation)

- When the back door handle is pulled, back door control unit terminal 26 receives the signal.
- The back door control unit checks that the back door is unlocked and checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed, battery voltage and back door close switch position through terminal 13.
- When the back door control unit receives the signal, if all auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Power Liftgate Switch Operation (Fully Open → Fully Closed Operation)

- When the power liftgate switch is pressed, the back door control unit terminal 23 receives the signal.
- The back door control units checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.

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# BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

### Remote Keyless Entry Operation (Fully Open → Fully Closed Operation)

- When the remote keyless entry switch is pressed for at least 0.5 seconds, the back door control unit terminal 21 receives the signal.
- The back door control unit checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

### Back Door Close Switch Operation (Fully Open → Fully Closed Operation)

- When the back door close switch is pressed, the back door control unit terminal 8 receives the signal.
- The back door control unit checks back door close switch (terminal 13) status and door position (must be fully opened), through rotary encoder and battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

### Reversal

The door will reverse direction during power open or close operation if the automatic door main switch, keyfob or back door close switch is operated. A chime will sound to announce the reversal.

### Anti-Pinch Function

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

### Gas Stay Check

- During each power open operation, the back door control unit monitors motor current draw to determine if the gas stays are functioning properly.
- If a malfunction of the gas stays is detected, the back door control unit will close the back door while sounding the warning chime. The back door cannot be opened using the switches until the gas stay malfunction is repaired.

### Warning Functions

- The hazard warning lamps flash and a warning chime is sounded according to the back door operating state, operations, and conditions.

### Auto Back Door Operation Enable Conditions



# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Operation	Power liftgate switch		Remote keyless entry		Back door handle switch		Back door close switch
Operating direction	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully open → closed
Close switch	CANCEL or NEUTRAL				NEUTRAL		NEUTRAL
Vehicle stop condition	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	—
Battery voltage	Approx. 11V or more						
Back door lock status	—	—	—	—	Unlocked	—	—
Glass hatch	Closed						

## Control When Operating Enable Conditions Not Met During Power Open/Close

Items	Operation condition	Not met case	Control
A/T selector lever P position	P or N position with ignition ON or any position with ignition OFF	Other	Continue power open or close, but sounds warning chime.
Back door close switch	NEUTRAL	CANCEL	Cancels power open/close operation or door will release to manual mode.
Voltage drop	11V or more	11 > V > 9	
		9 > V > reset voltage	
		Reset voltage > V	No power function available
Handle switch	Normal (GND)	Error (OPEN)	No operation. Cancel power open/close release to manual.
Glass hatch	Closed	OFF	Cancels power door open operation, door will release to manual mode.

## Control When Operating Enable Conditions No Longer Met

Description	Operation	Control
Back door close switch turned to CANCEL	Warning chime active → Shift to manual mode after full open or close operation is complete (Recovery to power mode when main switch turned OFF or door fully closed)	→ Shift to manual mode
A/T selector lever P or N position with ignition switch ON	Warning chime active and one-way operation continuous (Warning chime inactive and door fully open or fully closed or operating conditions recovered)	Full open: power close operation allowed Full close: operating conditions not met → no power open function.
Voltage drop 11 - 9V	One-way operation continued (equivalent to the case of starting voltage ← 11V for handle operation with warning chime active)	Not allowed
Voltage drop less than 9V (Microcomputer reset voltage - clutch hold voltage)	<ul style="list-style-type: none"> <li>• Motor stopped</li> <li>• Clutch may slip</li> <li>• Control not possible because microcomputer being reset</li> </ul>	Control not possible because microcomputer being reset

## Warning Chime Active Conditions

## BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

The warning chime uses two types of audio warnings, a friendly chime and a warning chime. The friendly chime consists of dings lasting 0.66 seconds each immediately followed by the next ding. The warning chime consists of beeps lasting 0.33 seconds with a pause of 0.33 seconds between each beep.

Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Power liftgate switch operation	Friendly chime 2 seconds, 3 dings
	Remote keyless entry operation	
	Back door handle switch operation	
	Back door close switch operation	
When reverse operation starts	When reverse request is detected from power liftgate switch, remote keyless entry or back door close switch	Friendly chime 1.3 seconds, 2 dings
	When obstacle is detected	Warning chime 2 seconds, 3 beeps
Operating at low voltage	While opening or closing	Warning chime 2 seconds, 3 beeps
A/T selector lever not in P position	Back door close operation	Friendly chime Continuously dings
	Back door open operation	Warning chime Continuously beeps (until close operation is started)

### Reverse Conditions

Type	Overload reverse
Operation covered	Both directions
Detection method	Operation speed and motor current change direction
	Pinch strips during back door close operation
Non-reversed area	<ul style="list-style-type: none"> <li>• For about 0.5 seconds immediately after drive motor operation starts</li> <li>• Between full open and approx. 7° from full open</li> <li>• Closure operation area (half switch - close switch)</li> </ul>
Number of times reverse allowed	One reversal is allowed (if a second obstacle is detected during a power open or close operation, the door reverts to manual mode).

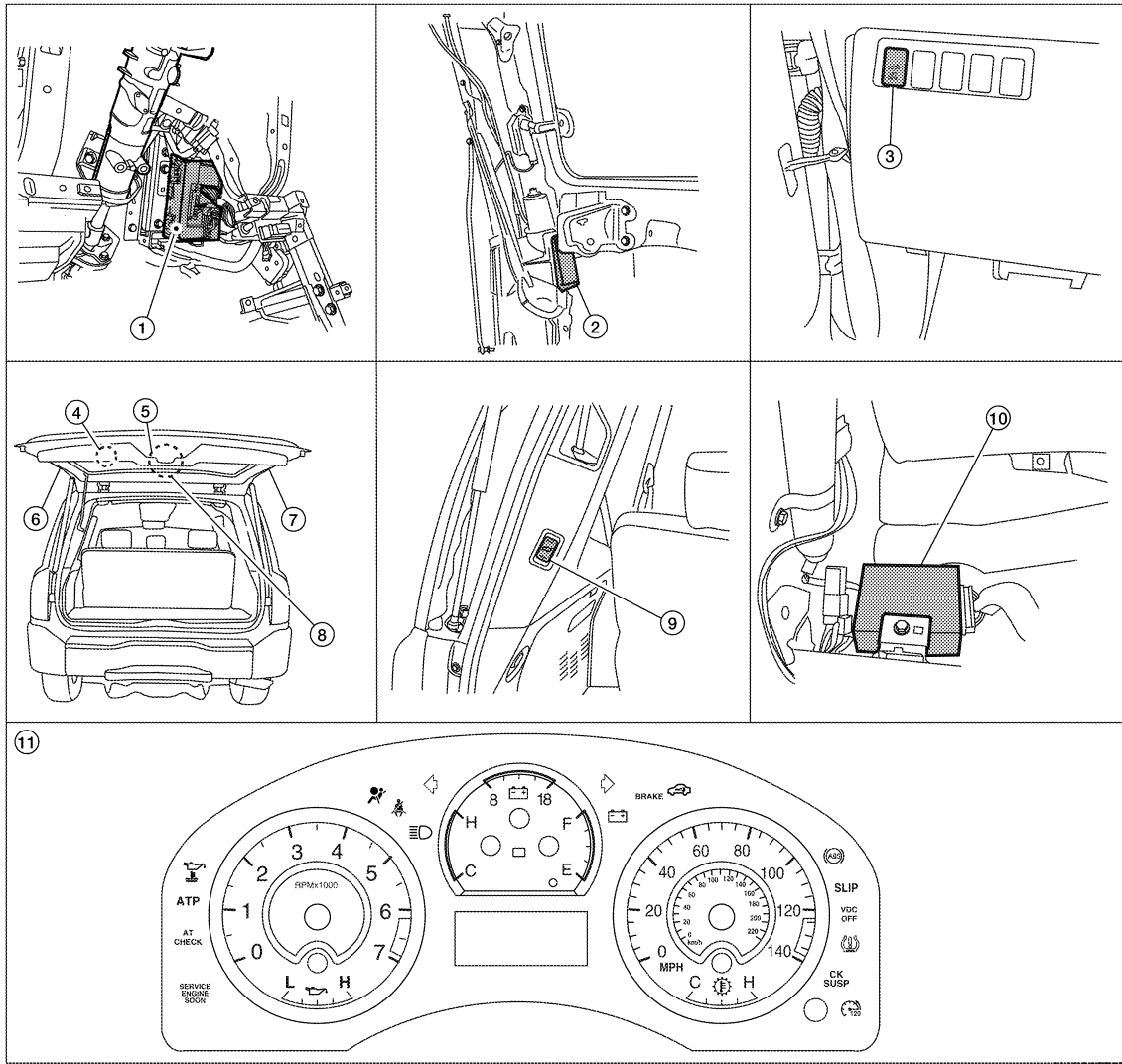
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER SWITCH : Component Parts Location

INFOID:000000001278023



- |   |   |                               |
|---|---|-------------------------------|
| 1. BCM M18, M19, M20<br>(view with instrument panel LH removed)         | 2. Back door control unit B55<br>(view with right rear panel removed) | 3. Power liftgate switch M92  |
| 4. Back door warning chime D514   | 5. Back door latch D503<br>Back door handle switch D706               | 6. Pinch strip LH D517        |
| 7. Pinch strip RH D715  | 8. Glass hatch ajar switch D707                                       | 9. Back door close switch B63 |
| 10. Intelligent Key unit M70<br>(view with instrument panel RH removed) | 11. Combination meter M24   |                               |

## BACK DOOR OPENER SWITCH : Component Description

INFOID:000000001278024

Item	Function
Power liftgate switch	Transmits liftgate open operation signal to back door control unit.
Back door control unit	Transmits liftgate open operation to liftgate motor.
Back door close switch	Transmits back door close signal to back door control unit.
Back door handle switch	Transmits back door open signal to back door control unit.
Pinch strip (LH, RH)	While closing, reverses door direction to full open position when an obstacle is in the way.
Back door warning chime	Announces opening and closing of back door.

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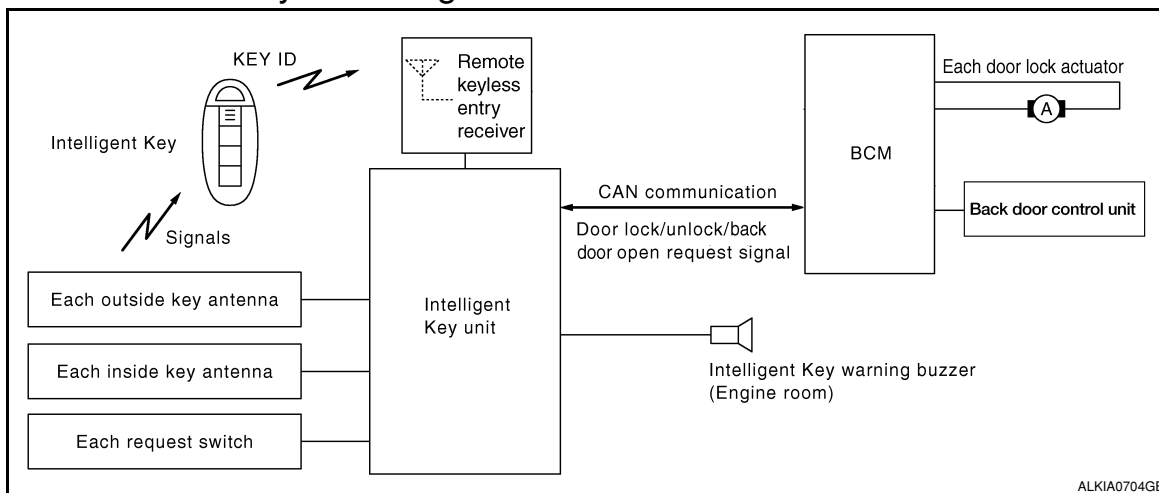
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY

### INTELLIGENT KEY : System Diagram



### INTELLIGENT KEY : System Description

INFOID:000000001278030

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 back door open button.

#### OPERATION DESCRIPTION/BACK DOOR OPEN FUNCTION

- When back door button of the Intelligent Key is pressed, the back door open signal is transmitted from the Intelligent Key to the back door control unit via remote keyless entry receiver and the Intelligent Key unit.
- When back door control unit receives the back door open request signal, it operates the back door motor and opens the liftgate.

#### OPERATION CONDITION

Remote controller operation	Operation condition	Operation
Back door open	• Press and hold the back door open button for 0.5 second or more	Back door opens

#### OPERATION AREA

- Operating Range
- To ensure the Intelligent Key works effectively, use within 80 cm range of each door, however the operable range may differ according to surroundings.

#### HAZARD AND HORN REMINDER FUNCTION

When doors are locked or unlocked by Intelligent Key. BCM flashes hazard warning lamps as a reminder and transmits horn chirp signal to IPDM E/R. IPDM E/R sound horns 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 mode			S mode		
	Lock	Unlock	Trunk open	Lock	Unlock	Trunk open
Intelligent Key operation	Lock	Unlock	Trunk open	Lock	Unlock	Trunk open
Hazard warning lamp flash	Twice	Once	—	Twice	—	—
Horn sound	Once	—	—	—	—	—

Hazard and horn reminders do not operate if any door switch is ON (any door is OPEN).

#### How to change hazard and horn reminder mode

##### ☑ With CONSULT-III

Refer to [DLK-40. "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)".](#)

##### ☒ Without CONSULT-III

Refer to Owner's Manual for instructions.

#### LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Remote keyless entry functions	Intelligent Key	Ignition key	Back door latch	Back door warning chime	Intelligent Key warning buzzer	CAN communication system	Back door control unit	Combination meter	Hazard warning lamps	Horns	IPDM E/R
Back door open function by remote control button	x	x	x	x		x	x				
Hazard and horn reminder function	x				x	x	x	x	x	x	x

## INTELLIGENT KEY : Component Parts Location

INFOID:000000001278031

Refer to [DLK-21, "INTELLIGENT KEY : Component Parts Location"](#).

## INTELLIGENT KEY : Component Description

INFOID:000000001278032

Item	Function
Remote keyless entry receiver	Receives back door open signal from the Intelligent Key, and then transmits to Intelligent Key unit.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Intelligent Key unit	Receives button operation from remote keyless entry receiver and transmits to back door control unit.
Back door control unit	Receives button operation from Intelligent Key unit and operates the back door.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with a buzzer sound.

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# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING FUNCTION

### System Description

INFOID:000000001278033

### OPERATION DESCRIPTION

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

- Intelligent Key system malfunction
- OFF position warning
- P position warning
- Take away warning
- Door lock operation warning
- Key warning
- Intelligent Key insert information
- Engine start information
- Steering lock information
- Intelligent key low battery warning
- Key ID warning

### OPERATION CONDITION

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

Warning/Information functions		Operation procedure
Intelligent Key system malfunction		When a malfunction is detected on BCM, warning message will display.
OFF position warning	For internal	<ul style="list-style-type: none"> <li>• Ignition switch: ACC position.</li> <li>• Door switch (driver side): ON (Door is open).</li> </ul>
	For external	OFF position warning (For internal) is in active mode, driver side door has been closed. <b>NOTE:</b> OFF position (For external) active only when each of the sequence has occurred as below: P position warning → ACC warning → OFF position warning (For internal) → OFF position warning (For internal)
P position warning		<ul style="list-style-type: none"> <li>• Shift position: Except P position</li> <li>• Engine is running to stopped (Ignition switch is ON to OFF)</li> </ul>
Take away warning	Door is open to close	<ul style="list-style-type: none"> <li>• Ignition switch: Except LOCK position.</li> <li>• Door switch: ON to OFF (Door is open to close).</li> <li>• Intelligent Key can not be detected inside the vehicle.</li> </ul>
	Door is open	<ul style="list-style-type: none"> <li>• Door switch: ON (Door is open)</li> <li>• Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle.</li> </ul>
	Take away through window	<ul style="list-style-type: none"> <li>• Engine is running.</li> <li>• Key ID verification every 30 seconds when registered Intelligent Key can not be detected inside the vehicle.</li> <li>• After vehicle speed verification, the registered Intelligent Key can not be detect inside the vehicle.</li> </ul>
Door lock operation warning	Request switch operation	When request switch is pushed (lock operation) under the following conditions. <ul style="list-style-type: none"> <li>• Door switch: ON (Any door is open).</li> <li>• Intelligent Key is inside vehicle.</li> </ul>
	Intelligent Key button operation	When Intelligent Key button is pushed (lock operation) under the following conditions. <ul style="list-style-type: none"> <li>• Door switch: ON (Any door is open).</li> <li>• Intelligent key is inside vehicle.</li> </ul>
Key warning		<ul style="list-style-type: none"> <li>• Ignition switch is OFF position.</li> <li>• Driver side door switch: ON (Driver side door is open).</li> <li>• Keyfob is pressed inside the vehicle.</li> </ul>
Intelligent Key insert information		<ul style="list-style-type: none"> <li>• Door switch: ON to OFF (Door is open to close).</li> <li>• Ignition switch: OFF to ON position.</li> <li>• Intelligent Key can not be detected inside the vehicle.</li> </ul>

# WARNING FUNCTION




< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions	Operation procedure	
Engine start information	Ignition switch is ON position	<ul style="list-style-type: none"> <li>Ignition switch: ON position.</li> <li>Shift position: P position</li> <li>Engine is stopped</li> </ul>
	Ignition switch is except ON position	<ul style="list-style-type: none"> <li>Ignition switch: Except ON position.</li> <li>Shift position: P position</li> <li>Intelligent Key can be detected inside the vehicle.</li> </ul>
Steering lock information	When steering lock can not be released after ignition switch is turned ON.	
Intelligent Key low battery warning	When Intelligent Key has low battery, it is detected by BCM 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.	

## WARNING METHOD

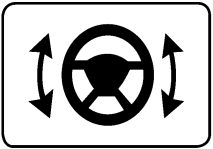
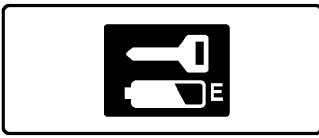
The following table shows the alarm or warning methods with chime.  
Combination meter shows information display when the warning conditions are met.

Warning/Information functions	Combination meter display	Warning chime	
		Combination meter buzzer	Intelligent Key warning buzzer
Intelligent Key system malfunction	—	—	—
OFF position warning	For internal	Activate	—
	For external	—	Activate
P position warning	 <small>JMKIA0037GB</small>	Activate	—
Take away warning	Door is open to close	Activate	Activate
	Door is open	—	—
	Take away through window	 <small>JMKIA0036GB</small>	Activate
Door lock operation warning	Request switch operation	—	Activate
	Intelligent Key operation	—	Activate
Key ID warning	 <small>JMKIA0036GB</small>	—	—

# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions	Combination meter display	Warning chime	
		Combination meter buzzer	Intelligent Key warning buzzer
Steering lock information	 <small>ALKIA0702ZZ</small>	—	—
Intelligent Key low battery warning	 <small>JMKIA0048GB</small>	—	—

## LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

Warning function	Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	“KEY” warning lamp
Intelligent Key system malfunction		×								×				×
OFF position warning	For internal		×		×				×	×				
	For external		×		×			×		×				
P position warning		×	×						×	×		×	×	
Take away warning	Door is open or close	×	×		×		×	×	×	×	×	×		
	Door is open	×	×		×					×	×	×		
	Take away through window	×	×			×			×	×		×		
	Intelligent Key is removed from vehicle	×	×			×				×		×		
Door lock operation warning	×	×		×	×	×	×	×	×	×				
Key ID warning	×	×	×			×			×	×	×			
Key warning	×	×		×				×	×	×	×			
Intelligent Key insert information	×	×	×	×		×				×	×	×		
Engine start information	Ignition switch is ON position	×	×	×		×				×	×	×	×	
	Ignition switch is except ON position	×	×	×		×				×	×	×		



# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Warning function	Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	"KEY" warning lamp
Steering lock information		×	×							×		×		
Intelligent Key low battery warning	×	×				×				×		×		

## Component Parts Location

INFOID:000000001278034

Refer to [DLK-21, "INTELLIGENT KEY : Component Parts Location"](#).

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# KEY REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY REMINDER FUNCTION

### System Description

INFOID:000000001278035

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

Key reminder function	Operation condition	Operation
Driver door closed*	Right after driver side door is closed under the following conditions <ul style="list-style-type: none"><li>• Door lock operation is performed</li><li>• Driver side door is opened</li><li>• Driver side door is in unlock state</li></ul>	All doors unlock
Door is open or closed	Right after all doors are closed under the following conditions <ul style="list-style-type: none"><li>• Intelligent Key is inside the vehicle</li><li>• Any door is opened</li><li>• All doors are locked by door lock and unlock switch or door lock knob</li></ul>	<ul style="list-style-type: none"><li>• All doors unlock</li><li>• Sounds Intelligent Key warning buzzer</li></ul>
Back door is closed	Right after trunk is closed under the following conditions <ul style="list-style-type: none"><li>• Intelligent Key is inside luggage compartment</li><li>• All doors are closed</li><li>• All doors are locked</li></ul>	<ul style="list-style-type: none"><li>• Back door open</li><li>• Sounds Intelligent Key warning buzzer</li></ul>

\*: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 will be performed 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 will not operate when the Intelligent Key is on the instrument panel, rear of vehicle, 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.
- When the key reminder function is operated when the trunk is open/closed and the buzzers sound, if the following operations are performed, the key reminder function is cleared and buzzer sounds are stopped.
  - Remote controller door lock button operation of Intelligent Key
  - Remote controller door unlock button operation of Intelligent Key
  - When the liftgate is closed, the Intelligent Key is not inside the vehicle
  - When any door is open

### Component Parts Location

INFOID:000000001278036

Refer to [DLK-21, "INTELLIGENT KEY : Component Parts Location"](#).

# HAZARD AND BUZZER REMINDER FUNCTION

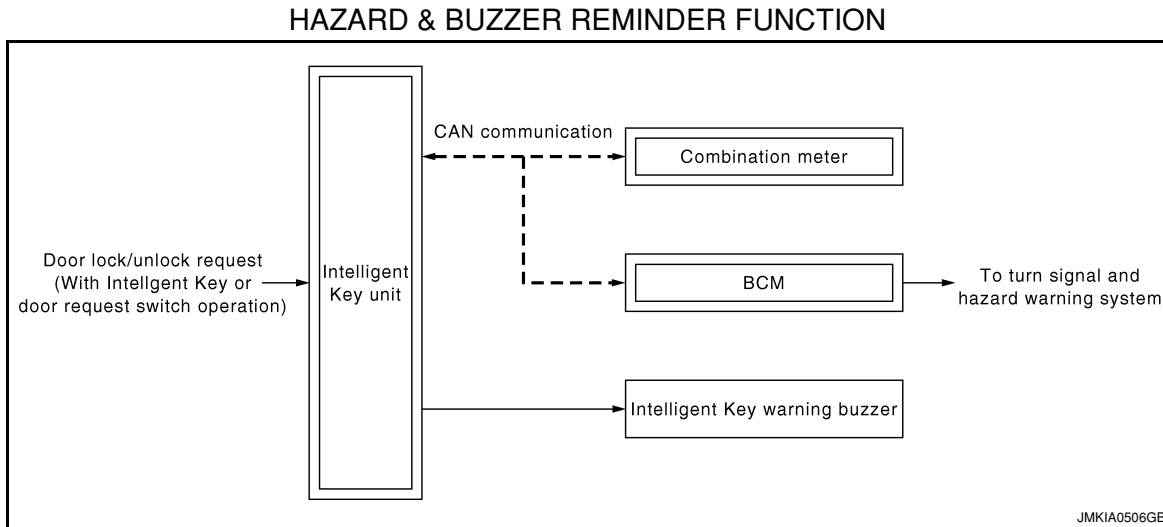
< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HAZARD AND BUZZER REMINDER FUNCTION

### System Diagram

INFOID:000000001306767



### System Description

INFOID:000000001306768

#### HAZARD AND BUZZER REMINDER FUNCTION

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

**NOTE:**

Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to [DLK-43. "CONSULT-III Function \(INTELLIGENT KEY\)"](#).

### Component Parts Location

INFOID:000000001306769

Refer to [DLK-34. "Component Parts Location"](#).

### Component Description

INFOID:000000001306770

Item	Function
BCM	Controls the hazard and buzzer reminder function (without Intelligent Key).
Intelligent Key unit	Controls the hazard and buzzer reminder function (with Intelligent Key).
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.
Intelligent Key warning buzzer	Sounds by the request signal from Intelligent Key unit via CAN communication.

# HOMELINK UNIVERSAL TRANSCEIVER

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Component Description

INFOID:000000001278037

Item	Function	Reference page
Homelink universal transceiver	A maximum of 3 radio signals can be stored and transmitted to operate the garage door, etc.	Refer to Owner's Manual

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

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

INFOID:000000001278038

#### 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-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to <a href="#">DLK-138, "DTC Index"</a> .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Intelligent Key system	INTELLIGENT KEY	×	×	×
BCM	BCM	×		
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
RAP system	RETAINED PWR		×	

DLK

## DOOR LOCK

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

INFOID:000000001278039

#### BCM CONSULT-III FUNCTION

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

#### WORK SUPPORT

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.

#### DATA MONITOR

# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Contents
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 trunk opener request switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock unlock switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.

## ACTIVE TEST

Test item	Description
DOOR LOCK	<p>This test is able to check door lock/unlock operation.</p> <ul style="list-style-type: none"><li>• The all door lock actuators are locked when “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 door lock actuator (driver side) is unlocked when “DR UNLK” on CONSULT-III screen is touched.</li><li>• The 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>

## REMOTE KEYLESS ENTRY

### REMOTE KEYLESS ENTRY : CONSULT-III Function (BCM - RKE)

INFOID:000000001306773

#### “MULTI REMOTE ENT”

##### Data Monitor

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from keyfob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
KEYLESS PBD	Indicates [ON/OFF] condition of power back door signal from keyfob.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

Monitored Item	Description
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
RKE LCK-UNLCK	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock signal from keyfob.

### Active Test

Test Item	Description
FLASHER	This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when "RH" on CONSULT-III screen is touched and the left hazard lamp turns on when "LH" on CONSULT-III screen is touched.
POWER WINDOW DOWN	This test is able to check power window down operation. The windows are lowered when "ON" on CONSULT-III screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after "ON" on CONSULT-III screen is touched.
DOOR LOCK	This test is able to check door lock operation. The doors lock and unlock based on the item on CONSULT-III screen touched.
TRUNK/BACK DOOR	This test is able to check back door actuator operation. The back door is opened when "OPEN" on CONSULT-III screen is touched.

### Work Support

Test Item	Description
REMO CONT ID REGIST	Keyfob ID code can be registered.
REMO CONT ID ERASUR	Keyfob ID code can be erased.
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
HORN CHIRP SET	Horn chirp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
HAZARD LAMP SET	Hazard lamp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
TRUNK OPEN SET	Back door opener operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.

### Hazard and horn reminder mode

	MODE 1 (C mode)		MODE 2 (S mode)		MODE 3		MODE 4		MODE 5		MODE 6	
	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—	—	—	Twice	Once	Twice	—	—	Once
Horn sound	Once	—	—	—	—	—	—	—	Once	—	Once	—

### Auto locking function mode

	MODE 1	MODE 2	MODE 3
Auto locking function	5 minutes	Nothing	1 minute

# DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

### Panic alarm operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

### Back door open operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	0.5 seconds

### Keyless power window down operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	3 seconds	Nothing	5 seconds

## INTELLIGENT KEY

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

INFOID:000000001278040

#### BCM CONSULT-III FUNCTION

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

#### WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window) mode can be changed to operate (ON) or not operate (OFF) with this mode. The operation mode will be changed when (CHANGE SETT" on CONSULT-III screen is touched.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side and passenger side) mode can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. <ul style="list-style-type: none"> <li>• 0.5 sec.</li> <li>• 1.5 sec.</li> <li>• OFF: Non-operation</li> </ul>
PW DOWN SET	Unlock button pressing time on Intelligent Key button to lower front windows can be selected from the following with this mode. <ul style="list-style-type: none"> <li>• 3 sec.</li> <li>• 5 sec.</li> <li>• OFF: Non-operation</li> </ul>
BACK DOOR OPEN DELAY	Back door button pressing time on Intelligent Key button can be selected from the following with this mode. <ul style="list-style-type: none"> <li>• 0.5 sec.</li> <li>• 1.5 sec.</li> <li>• OFF: No delay</li> </ul>
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTION	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.



# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor item	Description
HAZARD ANSWER BACK	Hazard reminder function mode can be selected from the following with this mode. <ul style="list-style-type: none"> <li>• LOCK ONLY: Door lock operation only</li> <li>• UNLOCK ONLY: Door unlock operation only</li> <li>• LOCK AND UNLOCK: Lock/unlock operation</li> <li>• OFF: Non operation</li> </ul>
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. <ul style="list-style-type: none"> <li>• HORN CHIRP: Sound horn</li> <li>• BUZZER: Sound Intelligent Key warning buzzer</li> <li>• OFF: Non-operation</li> </ul>
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

## SELF-DIAG RESULT

Refer to [DLK-138. "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).
PUSH SW	Indicates [ON/OFF] condition of push button ignition switch.
CLUTCH SW	This item is displayed, but cannot be monitored.
BRAKE SW 1	Indicates [ON/OFF] condition of brake 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 (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-F/B	Indicates [ON/OFF] condition of ignition switch.
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.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK) request.
S/L UNLOCK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK) request.
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 CVT by numerical value [Km/h].
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status.
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
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	<b>NOTE:</b> 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.

# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
RKE-TR/BD	Indicates [ON/OFF] condition of BACK DOOR OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

## ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTE DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	This test is able to check warning chime by combination meter operation. <ul style="list-style-type: none"> <li>• Take out warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched.</li> <li>• Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched.</li> <li>• P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched.</li> <li>• ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.</li> </ul>
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	This test is able to check meter display information <ul style="list-style-type: none"> <li>• Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched.</li> <li>• Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched.</li> <li>• Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched.</li> <li>• Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched.</li> <li>• P position warning displays when "P RNG IND" on CONSULT-III screen is touched.</li> <li>• Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched.</li> <li>• Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched.</li> <li>• Take away window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched.</li> <li>• Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched.</li> <li>• OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.</li> </ul>
TRUNK/GLASS HATCH	This test is able to check back door opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply CVT device power is supplied when "ON" on CONSULT-III screen is touched.

# DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

### CONSULT-III Function (INTELLIGENT KEY)

INFOID:000000001306771

#### APPLICATION ITEM

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

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

#### WORK SUPPORT

Support item	Description	Selection item	Condition
CONFIRM KEY FOB ID	It can check whether Intelligent Key ID code is registered or not.	—	—
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window) mode can be changed.	ON	Active
		OFF	Inactive
LOW BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed.	ON	Active
		OFF	Inactive
KEYLESS FUNCTION	Door lock function with Intelligent Key can be changed.	ON	Active
		OFF	Inactive
ANSWER BACK FUNCTION	Buzzer reminder operation can be changed.	ON	Active
		OFF	Inactive
SELECTIVE UNLOCK FUNCTION	Anti-hijack mode can be changed.	ON	Active
		OFF	Inactive
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed.	Refer to <a href="#">DLK-35</a> .	
ANSWER BACK WITH I-KEY LOCK	Buzzer reminder operation (lock operation) mode by each door request switch can be changed.	BUZZER	Active
		OFF	Inactive
ANSWER BACK WITH I-KEY UNLOCK	Buzzer reminder operation (unlock operation) mode by each door request switch can be changed.	BUZZER	Active
		OFF	Inactive
AUTO RELOCK TIMER	Auto door lock operation mode can be changed.	OFF	Inactive
		2 min	Active
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can be changed.	ON	Active
		OFF	Inactive

#### SELF-DIAG RESULT

Refer to [DLK-138. "DTC Index"](#).

#### DATA MONITOR

Monitor Item	Condition
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch.
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side).

# DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

## ACTIVE TEST

Test item	Description
DOOR LOCK/UNLOCK	<p>This test is able to check door lock/unlock operation.</p> <ul style="list-style-type: none"> <li>• ALL UNLK: All door lock actuators are unlocked.</li> <li>• DR UNLK: Door lock actuator (driver side) is unlocked.</li> <li>• AS UNLK: Door lock actuator (passenger side) is unlocked.</li> <li>• BK UNLK: This item is indicated, but inactive.</li> <li>• LOCK: All door lock actuator is locked.</li> </ul>
ANTENNA	<p>This test is able to check Intelligent Key antenna operation. When the following condition are met, hazard warning lamps flash.</p> <ul style="list-style-type: none"> <li>• ROOM ANT1: Inside key antenna (front of center console) detects Intelligent Key, when "ROOM ANT1" is selected.</li> <li>• ROOM ANT2: Inside key antenna (rear luggage area) detects Intelligent Key, when "ROOM ANT2" is selected.</li> <li>• ROOM ANT3: Inside key antenna (rear of center console) detects Intelligent Key, when "ROOM ANT3" is selected.</li> <li>• ROOM ANT4: Inside key antenna (roof console) detects Intelligent Key, when "ROOM ANT4" is selected.</li> <li>• DRIVER ANT: Outside key antenna (driver side) detects Intelligent Key, when "DRIVER ANT" is selected.</li> <li>• ASSIST ANT: Outside key antenna (passenger side) detects Intelligent Key, when "ASSIST ANT" is selected.</li> <li>• BK DOOR ANT: Outside key antenna (rear bumper) detects Intelligent Key, when "BK DOOR ANT" is selected.</li> </ul>
OUTSIDE BUZZER	<p>This test is able to check Intelligent Key warning buzzer operation.</p> <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>
INSIDE BUZZER	<p>This test is able to check warning chime in combination meter operation.</p> <ul style="list-style-type: none"> <li>• TAKE OUT: Take away warning chime sounds.</li> <li>• KNOB: Ignition knob switch warning chime sounds.</li> <li>• KEY: Key warning chime sounds.</li> <li>• OFF</li> </ul>

# U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

#### Description

INFOID:000000001278042

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to [LAN-46, "CAN Communication Signal Chart"](#).

#### DTC Logic

INFOID:000000001278043

#### DTC DETECTION LOGIC

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

#### Diagnosis Procedure

INFOID:000000001278044

#### 1.PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [DLK-45, "Diagnosis Procedure"](#).  
NO >> Refer to [GI-39, "Intermittent Incident"](#).

A  
B  
C  
D  
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L  
M  
N  
O  
P

DLK

# U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## U1010 CONTROL UNIT (CAN)

### DTC Logic

INFOID:000000001278045

### DTC DETECTION LOGIC

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

### Diagnosis Procedure

INFOID:000000001278046

#### 1. REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM.

### Special Repair Requirement

INFOID:000000001278047

#### 1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to (Body Control System) for BCM configuration. Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

# INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

### Description

INFOID:000000001315872

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001315873

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

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 1".
3. When Intelligent Key is inside key antenna (rear of center console) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 1 (rear of center console)</li> <li>• Between Intelligent Key unit and inside key antenna 1 (rear of center console)</li> </ul>

Is the inspection result normal?

YES >> Inside key antenna 1 (rear of center console) is OK.

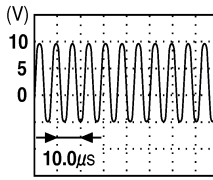
NO >> Refer to [DLK-47, "Diagnosis Procedure"](#).

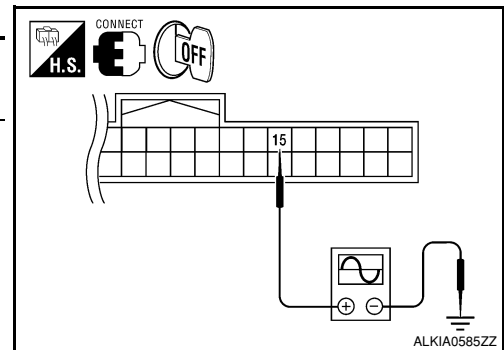
### Diagnosis Procedure

INFOID:000000001315875

#### 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	15	Ground	Ignition switch is pushed.	 PIIB7441E



Is the inspection result normal?

YES >> Inside key antenna 1 (rear of center console) is OK.

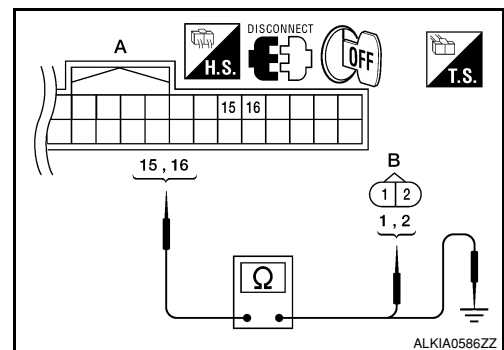
NO >> GO TO 2

#### 2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 1 (rear of center console) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 15, 16 and inside key antenna 1 (rear of center console) harness connector (B) M209 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 1 (rear of center console) connector	Terminals	Continuity
A: M70	15	B: M209	1	Yes
	16		2	

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 15, 16 and ground.



# INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	15	Ground	No
		16		

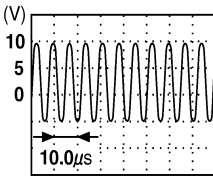
Is the inspection result normal?

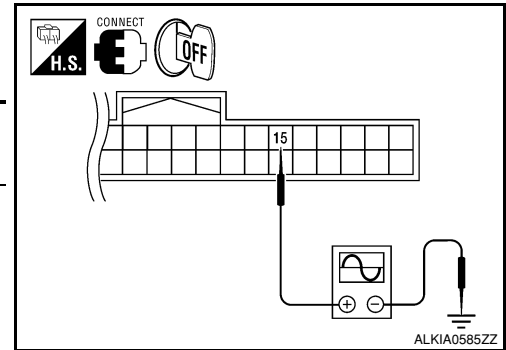
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 1 (rear of center console).

## 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	15	Ground	Ignition switch is pushed.	 <p style="text-align: right; font-size: small;">PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 1 (rear of center console).

NO >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).



# INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

### Description

INFOID:000000001315862

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001315863

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

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 2".
3. When Intelligent Key is inside key antenna (luggage compartment) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 2 (luggage compartment)</li> <li>• Between Intelligent Key unit and inside key antenna 2 (luggage compartment)</li> </ul>

Is the inspection result normal?

YES >> Inside key antenna 2 (luggage compartment) is OK.

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

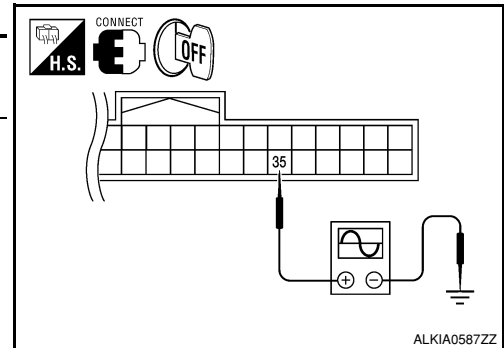
### Diagnosis Procedure

INFOID:000000001315865

#### 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	<p>PIIB7441E</p>



Is the inspection result normal?

YES >> Inside key antenna 2 (luggage compartment) is OK.

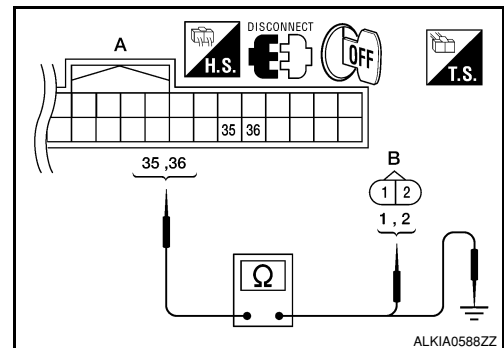
NO >> GO TO 2

#### 2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 2 (luggage compartment) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 35, 36 and inside key antenna 2 (luggage compartment) harness connector (B) B76 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 2 (luggage compartment) connector	Terminals	Continuity
A: M70	35 36	B: B76	1 2	Yes

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 35, 36 and ground.



# INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	35	Ground	No
		36		

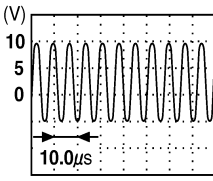
Is the inspection result normal?

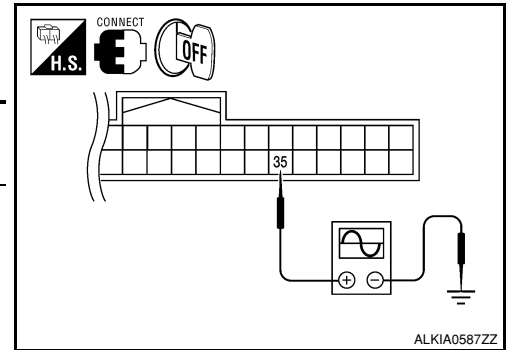
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 2 (luggage compartment).

## 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	 <p style="text-align: right; font-size: small;">PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 2 (luggage compartment).

NO >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).

# INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

### Description

INFOID:000000001278048

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001315099

### 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 3".
3. When Intelligent Key is inside key antenna (front of center console) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 3	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 3 (front of center console)</li> <li>• Between Intelligent Key unit and inside key antenna 3 (front of center console)</li> </ul>

Is the inspection result normal?

YES >> Inside key antenna 3 (front of center console) is OK.

NO >> Refer to [DLK-51, "Diagnosis Procedure"](#).

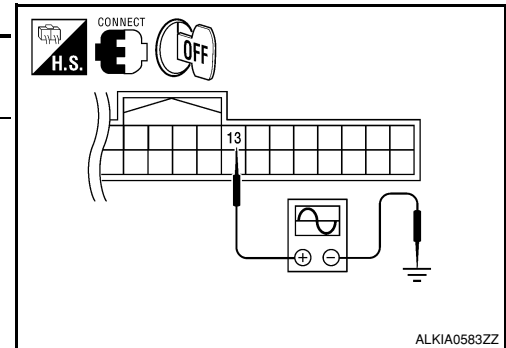
### Diagnosis Procedure

INFOID:000000001315188

### 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	<p>PIIB7441E</p>



Is the inspection result normal?

YES >> Inside key antenna 3 (front of center console) is OK.

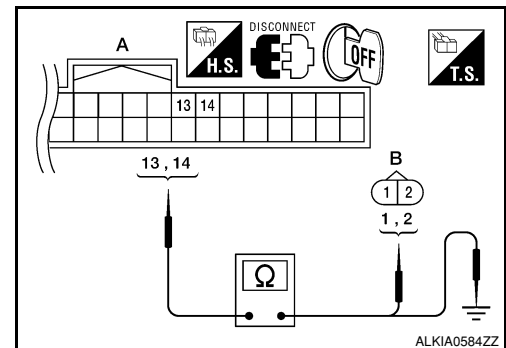
NO >> GO TO 2

### 2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 3 (front of center console) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 13, 14 and inside key antenna 3 (front of center console) harness connector (B) M210 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 3 (front of center console) connector	Terminals	Continuity
A: M70	13 14	B: M210	1 2	Yes

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 13, 14 and ground.



# INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	13	Ground	No
		14		

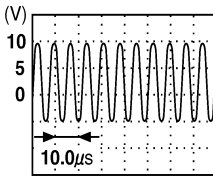
Is the inspection result normal?

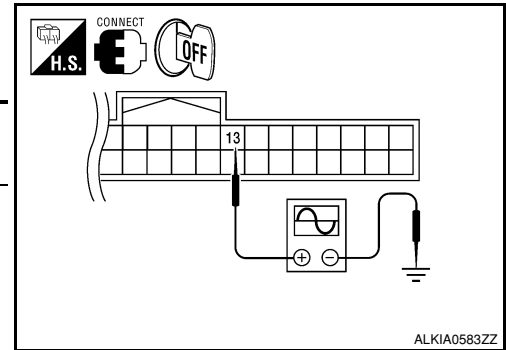
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 3 (front of center console).

## 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	 <p style="text-align: right; font-size: small;">PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 3 (front of center console).

NO >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).

# INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

### Description

INFOID:000000001315877

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001315878

### 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 4".
3. When Intelligent Key is inside key antenna (overhead console area) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 4	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 4 (overhead console area)</li> <li>• Between Intelligent Key unit and inside key antenna 4 (overhead console area)</li> </ul>

Is the inspection result normal?

YES >> Inside key antenna 4 (overhead console area) is OK.

NO >> Refer to [DLK-53, "Diagnosis Procedure"](#).

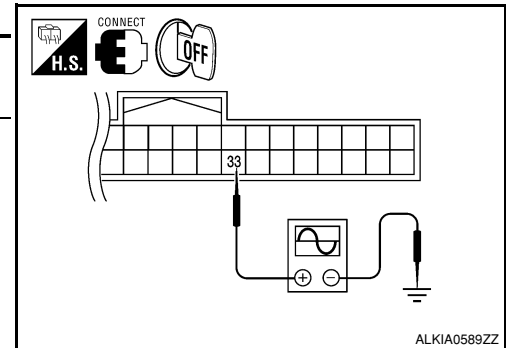
### Diagnosis Procedure

INFOID:000000001315880

### 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	<p>PIIB7441E</p>



Is the inspection result normal?

YES >> Inside key antenna 4 (overhead console area) is OK.

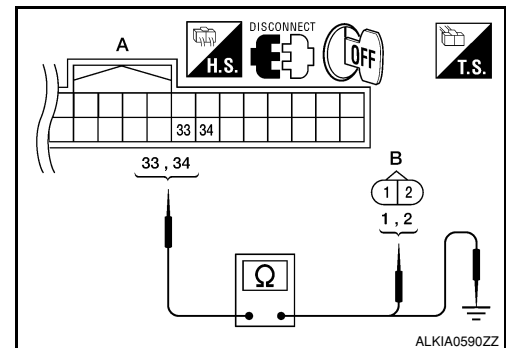
NO >> GO TO 2

### 2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 4 (overhead console area) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 33, 34 and inside key antenna 4 (overhead console area) harness connector (B) R210 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 4 (overhead console area) connector	Terminals	Continuity
A: M70	33 34	B: R210	1 2	Yes

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 33, 34 and ground.



# INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	33	Ground	No
		34		

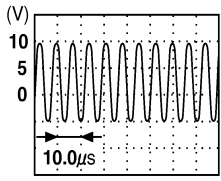
Is the inspection result normal?

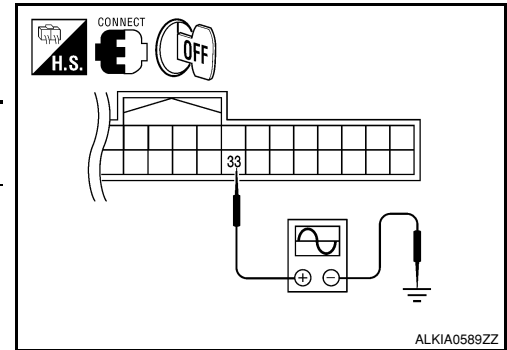
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 4 (overhead console area).

## 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	 <p style="text-align: right; font-size: small;">PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 4 (overhead console area).

NO >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

### INTELLIGENT KEY UNIT : Diagnosis Procedure

INFOID:000000001315954

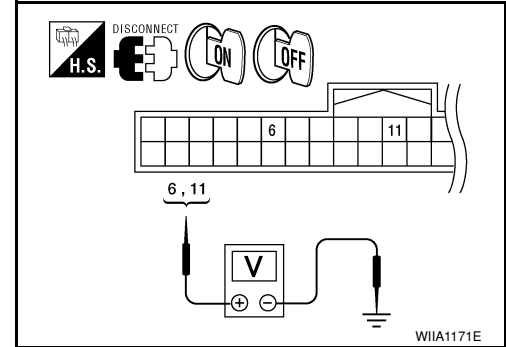
#### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M70 terminals 6, 11 and ground.

Connector	Terminals		Ignition switch position	
	(+)	(-)	OFF	ON
M70	6	Ground	0V	Battery voltage
	11		Battery voltage	Battery voltage

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Repair or replace Intelligent Key power supply circuit.



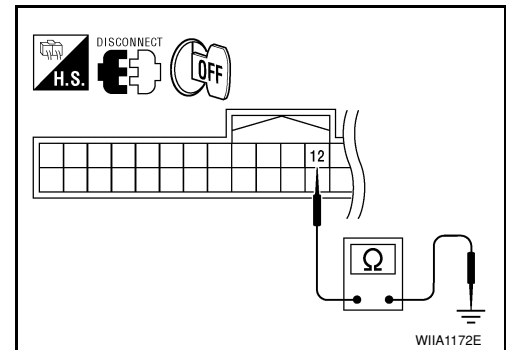
#### 2. CHECK GROUND CIRCUIT

Check continuity between Intelligent Key unit harness connector M70 terminal 12 and ground.

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

Is the inspection result normal?

- YES >> Power supply and ground circuits are OK.  
NO >> Repair or replace the Intelligent Key unit ground circuit.



## BCM (BODY CONTROL MODULE)

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

INFOID:000000001315931

Refer to [BCS-32. "Diagnosis Procedure"](#).

## BACK DOOR

### BACK DOOR : Diagnosis Procedure

INFOID:000000001337939

#### 1. BACK DOOR POWER SUPPLY CIRCUIT INSPECTION

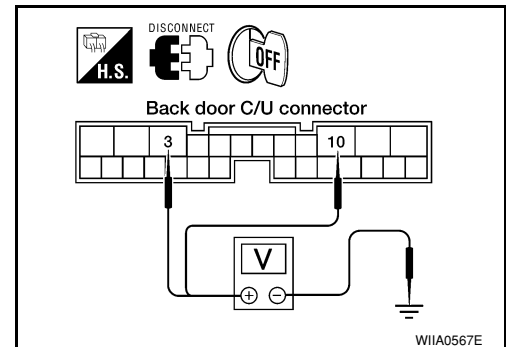
1. Turn ignition switch OFF.
2. Disconnect back door control unit connector.
3. Check voltage between back door control unit connector B55 terminals 3, 10 and ground.

**3 - Ground : Approx. battery voltage**

**10 - Ground : Approx. battery voltage**

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Repair the back door control unit power supply circuit.



#### 2. BACK DOOR GROUND CIRCUIT INSPECTION

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

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# POWER SUPPLY AND GROUND CIRCUIT

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

Check continuity between back door control unit connector B55 terminal 1, 2 and ground.

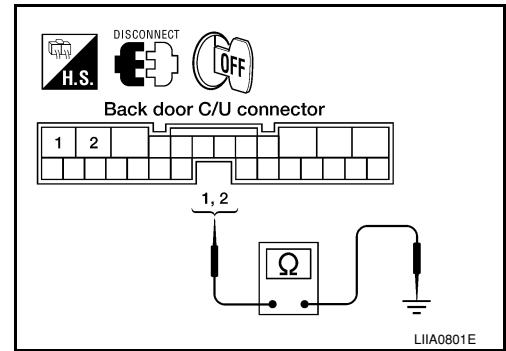
**1 - Ground : Continuity should exist.**

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

Is the inspection result normal?

YES >> Circuit is OK.

NO >> Repair the harness between the back door control unit and ground.





# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR SWITCH

### Description

INFOID:000000001278058

Detects door open/close condition.

### Component Function Check

INFOID:000000001278059

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

- YES >> Door switch is OK.
- NO >> Refer to [DLK-57, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001315966

#### 1. CHECK DOOR SWITCHES INPUT SIGNAL

##### With CONSULT-III

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

- When doors are open:

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

- When doors are closed:

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

##### Without CONSULT-III

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

A  
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C  
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I  
J  
L  
M  
N  
O  
P

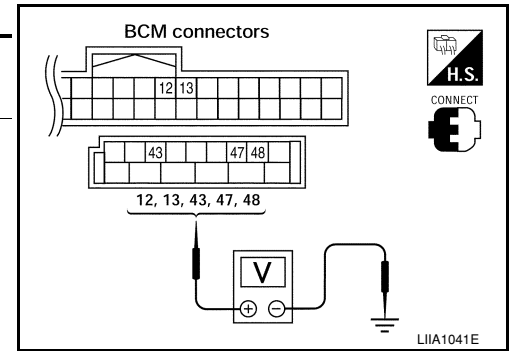
DLK

# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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



Is the inspection result normal?

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

## 2.CHECK DOOR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect door switch and BCM.
- Check continuity between BCM connector (A) M18, M19 terminals 12, 13, 43, 47, 48 and door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D503 terminal 7.

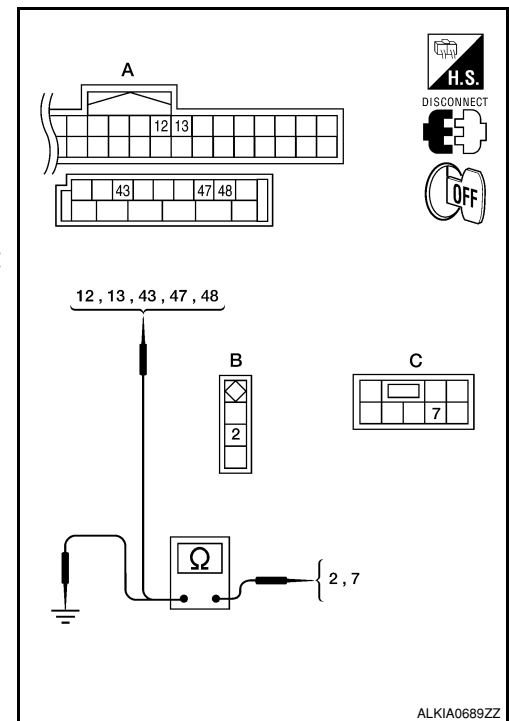
- 2 - 47 :Continuity should exist**  
**2 - 12 :Continuity should exist**  
**2 - 48 :Continuity should exist**  
**2 - 13 :Continuity should exist**  
**7 - 43 :Continuity should exist**

- Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D503 terminal 7 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace harness.



## 3.CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

# DOOR SWITCH

## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Switch	Terminals	Condition	Continuity
A: Door switch (front and rear)	2 – Ground	Open	Yes
		Closed	No
B: Back door switch	7 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Door switch circuit is OK.
- NO >> (Front and rear doors) Replace door switch.
- NO >> (Back door) GO TO 4

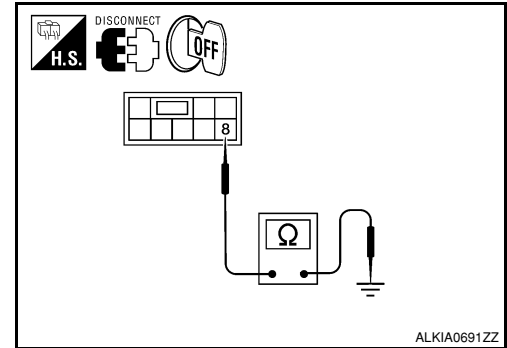
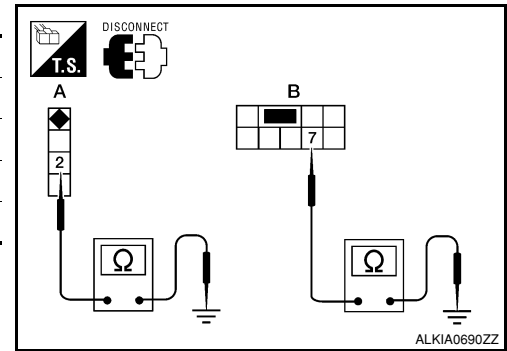
### 4.CHECK BACK DOOR SWITCH CIRCUIT

- Check continuity between door switch connector terminal and ground.

Connector	Terminals	Continuity
Back door switch	8 – Ground	Yes

Is the inspection result normal?

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



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DLK

# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000001278062

Transmits door lock/unlock operation to BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000001278063

#### 1. CHECK FUNCTION

##### ④ With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> refer to [DLK-60, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001315975

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

##### ④ With CONSULT-III

Check main power window and door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III.

- When main power window and door lock/unlock switch is turned to LOCK:

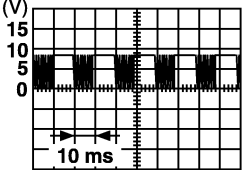
**CDL LOCK SW : ON**

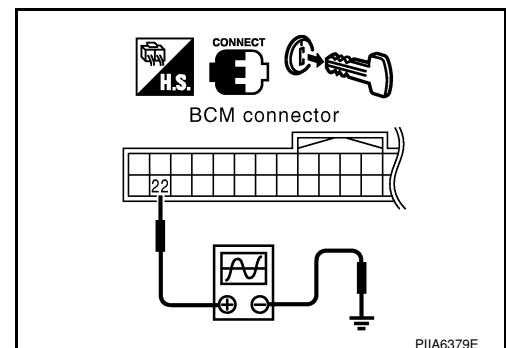
- When main power window and door lock/unlock switch is turned to UNLOCK:

**CDL UNLOCK SW : ON**

##### ④ Without CONSULT-III

1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the door lock/unlock switch is turned to LOCK or UNLOCK.

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 <p>PIIA1297E</p>



Is the inspection result normal?

YES >> Door lock and unlock switch circuit is OK.

# DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

NO >> GO TO 2

## 2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "MULTI REMOTE ENT" with CONSULT-III.

**When "ACTIVE TEST" is performed, the front windows should be lowered.**

Is the inspection result normal?

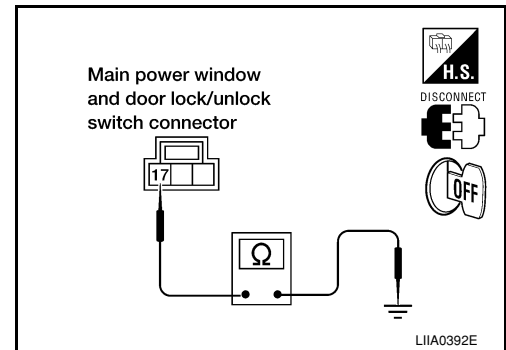
YES >> GO TO 3

NO >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

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

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

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



Is the inspection result normal?

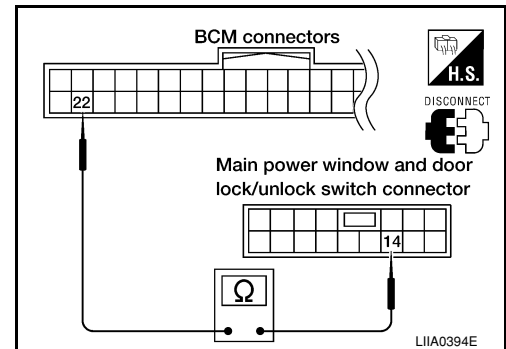
YES >> GO TO 4

NO >> Repair or replace harness.

## 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

**22 - 14 : Continuity should exist.**



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

Transmits door lock/unlock operation to BCM.

### PASSENGER SIDE : Component Function Check

## 1. CHECK FUNCTION

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# DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

**With CONSULT-III**

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to [DLK-62, "PASSENGER SIDE : Diagnosis Procedure"](#).

## PASSENGER SIDE : Diagnosis Procedure

INFOID:000000001315976

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

**With CONSULT-III**

Check power window and door lock/unlock switch RH ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III.

- When power window and door lock/unlock switch RH is turned to LOCK:

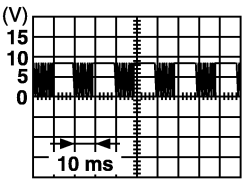
**CDL LOCK SW :ON**

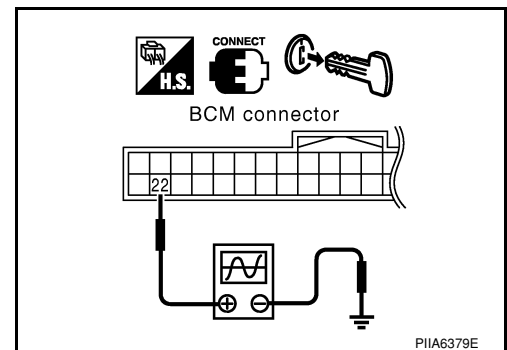
- When power window and door lock/unlock switch RH is turned to UNLOCK:

**CDL UNLOCK SW :ON**

**Without CONSULT-III**

- Remove key from ignition key cylinder.
- Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.
- Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 <p>PIIA1297E</p>



Is the inspection normal?

YES >> Power window and door lock/unlock switch RH circuit is OK.

NO >> GO TO 2

### 2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "MULTI REMOTE ENT" with CONSULT-II.

**When "ACTIVE TEST" is performed, the front windows should be lowered.**

Is the inspection normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

# DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

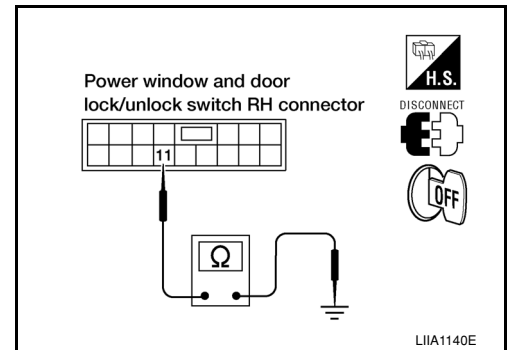
## 3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground

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

Is the inspection normal?

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



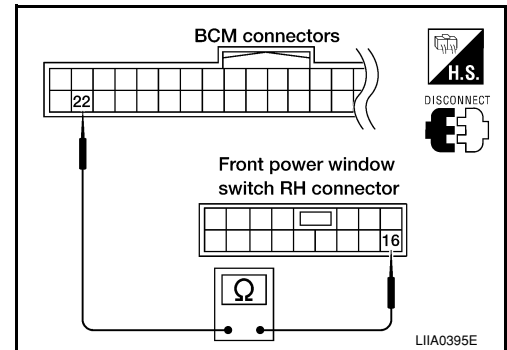
## 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

**22 - 16 : Continuity should exist.**

Is the inspection normal?

- YES >> Replace power window and door lock/unlock switch RH.  
NO >> Repair or replace harness.



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DLK

# KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY CYLINDER SWITCH

### Description

INFOID:000000001278076

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

### Component Function Check

INFOID:000000001278077

#### 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

- YES >> Key cylinder switch is OK.  
 NO >> Refer to [DLK-64, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001316494

#### 1. CHECK DOOR KEY CYLINDER SWITCH LH

④ With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW") in DATA MONITOR mode with CONSULT-III.

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

**KEY CYL LK-SW : ON**

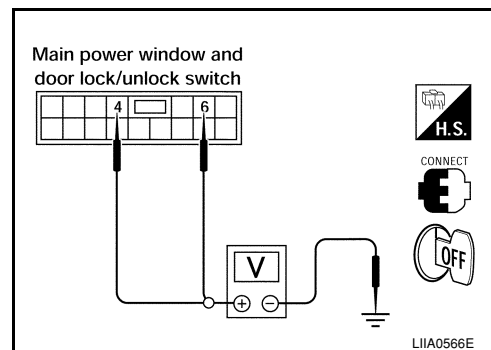
- When key inserted in left front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW : ON**

⊗ Without CONSULT-III

Check voltage between main power window and door lock/unlock switch connector D7 terminals 4, 6 and ground.

Connector	Terminals		Condition of left front key cylinder	Voltage (V) (Approx.)
	(+)	(-)		
D7	4	Ground	Neutral/Unlock	5
			Lock	0
	6		Neutral/Lock	5
			Unlock	0



Is the inspection result normal?

- YES >> Key cylinder switch signal is OK.  
 NO >> GO TO 2

#### 2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

- Turn ignition switch OFF.
- Disconnect front door lock assembly LH (key cylinder switch).



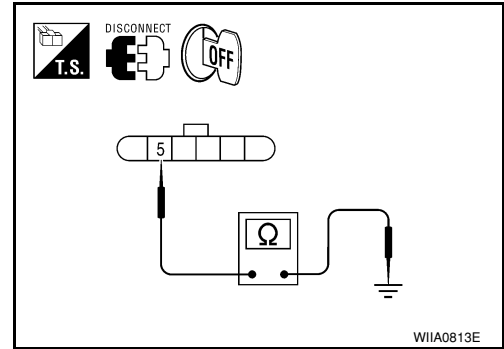
# KEY CYLINDER SWITCH

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



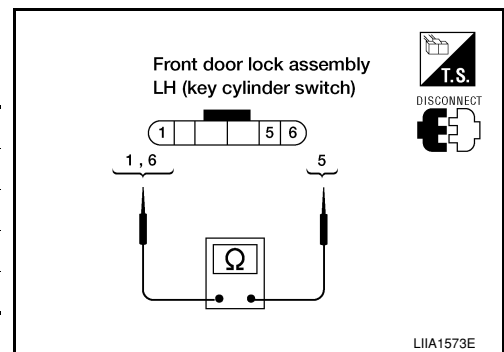
Is the inspection result normal?

- YES >> GO TO 3  
 NO >> Repair or replace harness.

### 3.CHECK DOOR KEY CYLINDER SWITCH LH

Check continuity between front door lock assembly LH (key cylinder switch) terminals.

Terminals	Condition	Continuity
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes



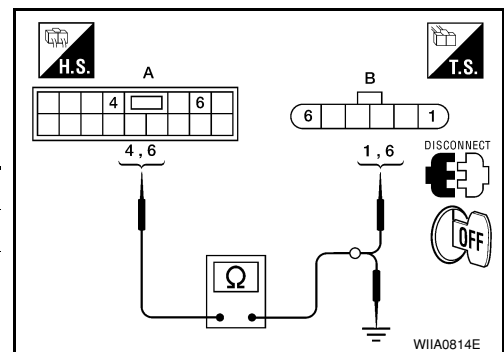
Is the inspection result normal?

- YES >> GO TO 4  
 NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-205. "Removal and Installation"](#).

### 4.CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 1, 6 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main power window and door lock/unlock switch	4	B: Front door lock assembly LH (key cylinder switch)	1	Yes
	6		6	Yes
	4, 6		Ground	No



Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch.  
 NO >> Repair or replace harness.

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DLK

# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

### Description

INFOID:000000001278082

Detects door lock condition of driver door.

### Component Function Check

INFOID:000000001278083

### 1.CHECK FUNCTION

#### With CONSULT-III

Check door unlock sensor in DATA MONITOR mode.

Monitor item	Condition
DOOR STAT SW (DR DOOR STATE)	Front door lock (driver side) LOCK : OFF
	Front door lock (driver side) UNLOCK : ON

Is the inspection result normal?

YES >> Door unlock sensor is OK.

NO >> Refer to [DLK-66, "Diagnosis Procedure"](#).

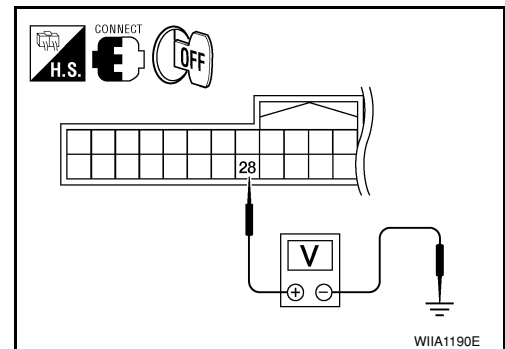
### Diagnosis Procedure

INFOID:000000001316546

### 1.CHECK UNLOCK SENSOR POWER SUPPLY

Check voltage between Intelligent Key unit connector terminal 28 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	28	Ground	Driver side door lock is locked	5
			Driver side door lock is un-locked	0



Is the inspection result normal?

YES >> Front door lock assembly LH (door unlock sensor) is OK.

NO >> GO TO 2

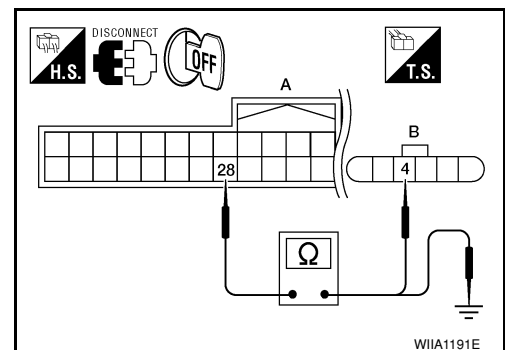
### 2.CHECK UNLOCK SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit and front door lock assembly LH (door unlock sensor) connector.
- Check continuity between Intelligent Key unit harness connector (A) M70 terminal 28 and front door lock assembly LH (door unlock sensor) harness connector (B) D14 terminal 4.

**28 – 4 : Continuity should exist.**

- Check continuity between Intelligent Key unit harness connector (A) M70 terminal 28 and ground.

**28 – Ground : Continuity should not exist.**



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and front door lock assembly LH (door unlock sensor).

### 3.CHECK UNLOCK SENSOR GROUND CIRCUIT

Check continuity between front door lock assembly LH (door unlock sensor) harness connector D14 terminal 5 and ground.

# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

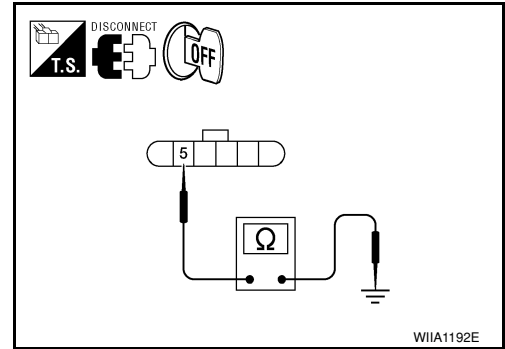
< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

**5 – Ground : Continuity should exist.**

Is the inspection result normal?

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



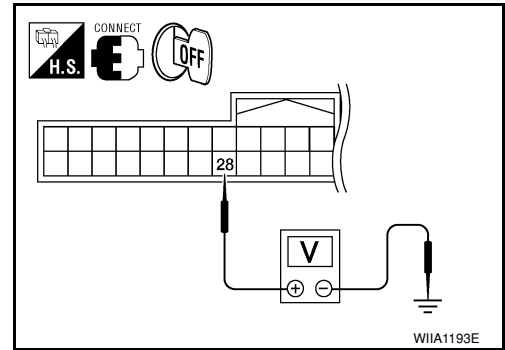
## 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect Intelligent Key unit harness connector.
2. Check voltage between Intelligent Key unit harness connector M70 terminal 28 and ground.

**28 – Ground : Approx. 5V**

Is the inspection result normal?

- YES >> Refer to [DLK-67, "Component Inspection"](#).
- NO >> Replace Intelligent Key unit. Refer to [IP-11, "Removal and Installation"](#).



INFOID:000000001278085

## Component Inspection

### 1. CHECK DOOR UNLOCK SENSOR

Check door unlock sensor.

Terminal		Front door lock assembly LH condition	Continuity
Front door lock assembly LH			
4	5	Unlock	Yes
		Lock	No

Is the inspection result normal?

- YES >> INSPECTION END.
- NO >> Replace front lock assembly LH (door unlock sensor). Refer to [DLK-205, "Removal and Installation"](#).

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DLK

# DOOR REQUEST SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH

### Description

INFOID:000000001278098

Transmits lock/unlock operation to Intelligent Key unit.

### Component Function Check

INFOID:000000001278099

#### 1. CHECK FUNCTION

##### Ⓜ With CONSULT-III

Check door request switch "DR REQ SW" and "AS REQ SW" in DATA MONITOR mode.

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

Is the inspection result normal?

- YES >> Door request switch is OK.
- NO >> Refer to [DLK-68, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001316547

#### 1. CHECK FRONT DOOR REQUEST SWITCH

##### Ⓜ With CONSULT-III

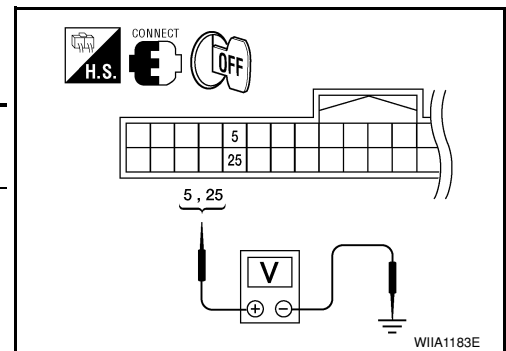
Check front door request switch ("DR REQ SW" or "AS REQ SW") in "DATA MONITOR" mode.

Monitor item	Condition
DR REQ SW AS REQ SW	Front door request switch is pressed: ON
	Front door request switch is released: OFF

##### ⓧ Without CONSULT-III

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key unit harness connector M70 terminals 5, 25 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M70	Front door request switch LH	5	Ground	Door request switch is pressed	0 ↓ Battery voltage
	Front door request switch RH	25		Door request switch is released	



Is the inspection result normal?

- YES >> Front door request switch is OK.
- NO >> GO TO 2

#### 2. CHECK FRONT DOOR REQUEST SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit and front door request switch connectors.
3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 5 (driver door), 25 (passenger door) and front door request switch harness connector (B) D16 (LH), D116 (RH) terminal 1.

# DOOR REQUEST SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

- Driver side 5 - 1 : Continuity should exist.**
- Passenger side 25 - 1 : Continuity should exist.**

4. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 5 (driver door), 25 (passenger door) and ground.

- 5 - Ground : Continuity should not exist.**
- 25 - Ground : Continuity should not exist.**

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Repair or replace harness between Intelligent Key unit and front door request switch.

## 3. CHECK FRONT DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between front door request switch harness connector D16 (driver door), D116 (passenger door) terminal 2 and ground.

- 2 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair or replace door request switch ground circuit.

## 4. CHECK FRONT DOOR REQUEST SWITCH OPERATION

Refer to [DLK-69. "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Replace front door request switch.

## 5. CHECK FRONT DOOR REQUEST SWITCH SIGNAL

1. Connect Intelligent Key unit connector.
2. Check voltage between Intelligent Key unit harness connector M70 terminals 5, 25 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M70	Front door request switch LH	5	Ground	Door request switch is pressed	0 ↓ Battery voltage
	Front door request switch RH	25		Door request switch is released	

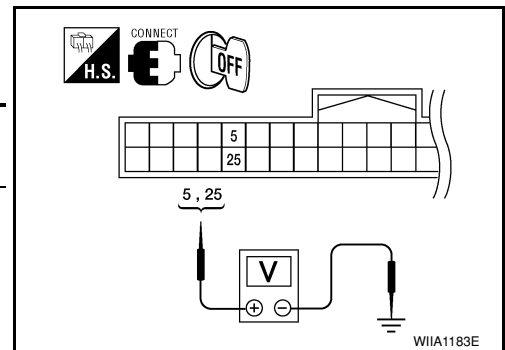
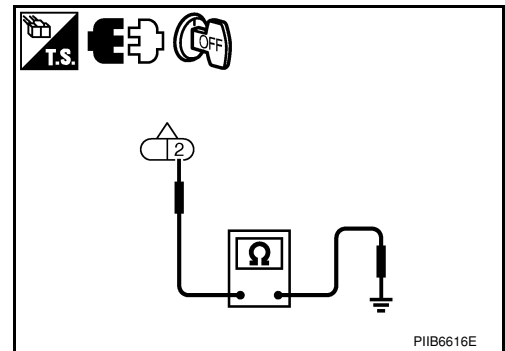
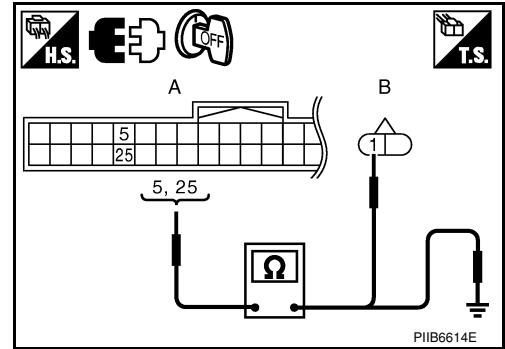
Is the inspection result normal?

- YES >> Refer to Intermittent Incident.
- NO >> Replace Intelligent Key unit. Refer to [SEC-91. "Removal and Installation"](#).

## Component Inspection

### 1. CHECK FRONT DOOR REQUEST SWITCH OPERATION

1. Turn ignition switch OFF.



INFOID:000000001278101

# DOOR REQUEST SWITCH

[WITH INTELLIGENT KEY SYSTEM]

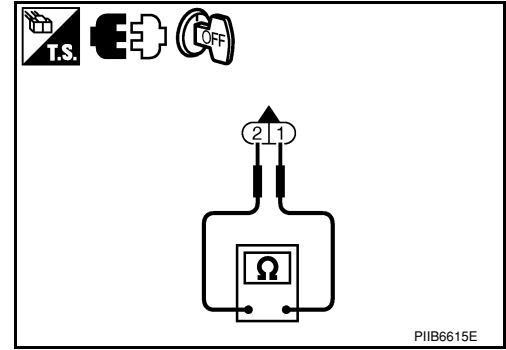
## < COMPONENT DIAGNOSIS >

2. Disconnect front door request switch connector.
3. Check continuity between front door request switch terminals 1 and 2.

Component	Terminals		Condition	Continuity
Front door request switch (LH or RH)	1	2	Front door request switch is pressed	Yes
			Front door request switch is released	No

Is the inspection result normal?

- YES >> Inspection end.  
NO >> Replace front door request switch.



# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## DOOR LOCK ACTUATOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000001278106

Locks/unlocks the door with the signal from BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000001278107

#### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-71, "DRIVER SIDE : Diagnosis Procedure"](#).

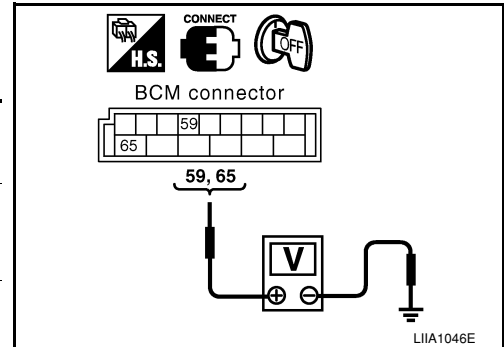
### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001316553

#### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



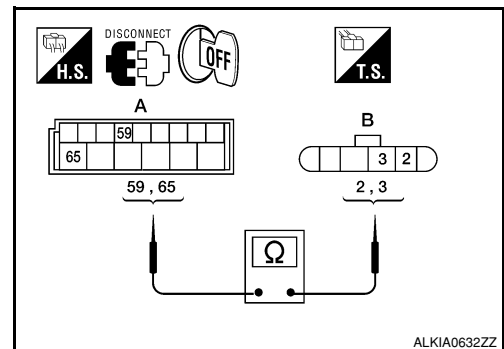
Is the inspection result normal?

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

#### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).
2. Check continuity between BCM connector (A) M20 terminals 59, 65 and front door lock assembly LH (actuator) connector (B) D14 terminals 2, 3.

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
	65		3	Yes



Is the inspection result normal?

- YES >> Replace front door lock assembly LH (actuator).  
 NO >> Repair or replace harness.

#### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).

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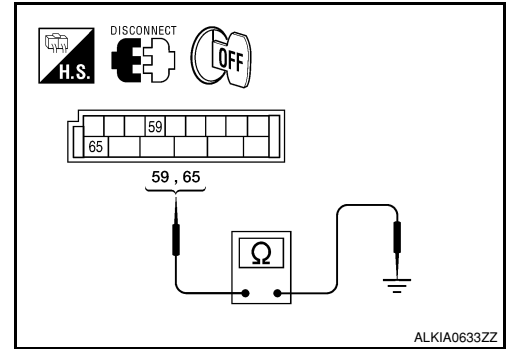
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector M20 terminals 59, 65 and ground.

Connector	Terminals		Continuity
	59	65	
M20	59	Ground	No
	65		No



### Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000001278109

Locks/unlocks the door with the signal from BCM.

### PASSENGER SIDE : Component Function Check

INFOID:000000001278110

## 1.CHECK FUNCTION

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

### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-72. "PASSENGER SIDE : Diagnosis Procedure"](#).

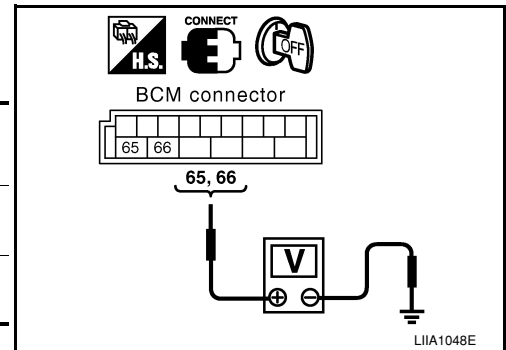
## PASSENGER SIDE : Diagnosis Procedure

INFOID:000000001316554

## 1.CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

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



### Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 3

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and front door lock actuator RH.



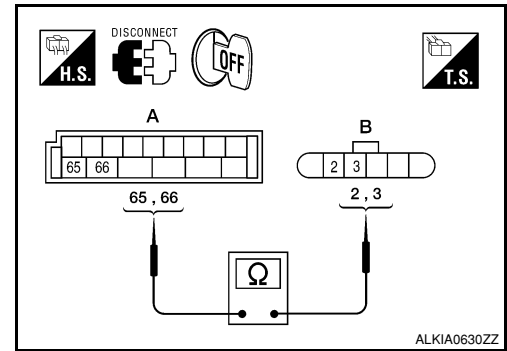
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector (A) M20 terminals 65, 66 and front door lock actuator RH (B) D114 terminals 2, 3.

Terminal		Continuity
65	3	Yes
66	2	Yes



### Is the inspection result normal?

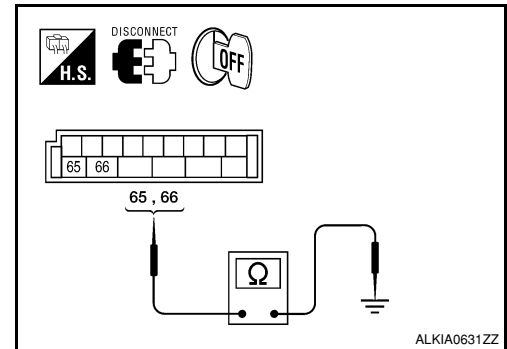
YES >> Replace front door lock actuator RH. Refer to [DLK-205. "Removal and Installation"](#).

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

NO >> Repair or replace harness.

## REAR LH

### REAR LH : Description

Locks/unlocks the door with the signal from BCM.

### REAR LH : Component Function Check

## 1. CHECK FUNCTION

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

### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-73. "REAR LH : Diagnosis Procedure"](#).

### REAR LH : Diagnosis Procedure

## 1. CHECK DOOR LOCK ACTUATOR SIGNAL

- Turn ignition switch OFF.

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INFOID:000000001278112

INFOID:000000001278113

INFOID:000000001316555

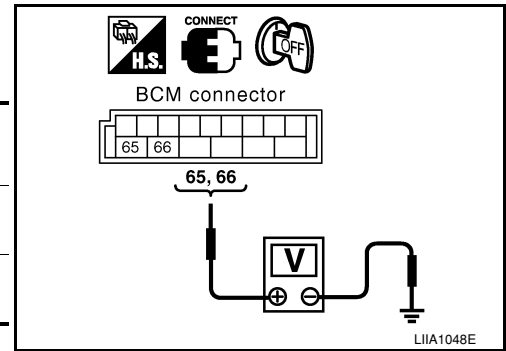
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check voltage between BCM connector M20 terminals 65, 66 and ground.

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



Is the inspection result normal?

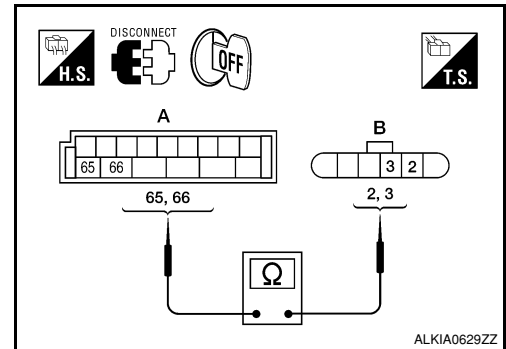
YES >> GO TO 2

NO >> GO TO 3

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and rear door lock actuator LH.
- Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator LH connector (B) D205 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



Is the inspection result normal?

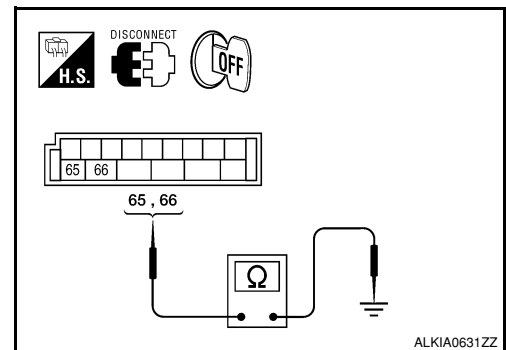
YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness or passenger select unlock relay.

## 3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

NO >> Repair or replace harness or passenger select unlock relay.

## REAR RH

### REAR RH : Description

Locks/unlocks the door with the signal from BCM.

INFOID:000000001278115

# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## REAR RH : Component Function Check

INFOID:0000000013178116

### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-75. "REAR RH : Diagnosis Procedure"](#).

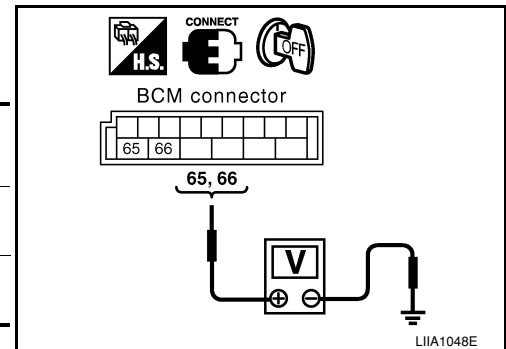
## REAR RH : Diagnosis Procedure

INFOID:000000001316556

### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



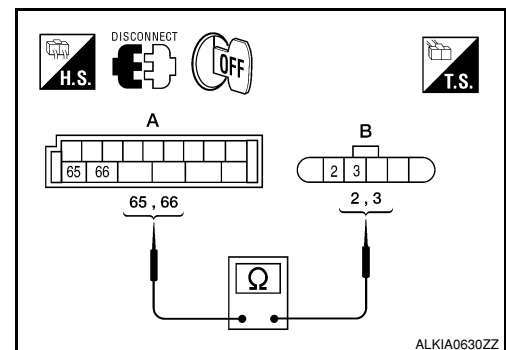
Is the inspection result normal?

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

### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



Is the inspection result normal?

- YES >> Replace rear door lock actuator RH.  
 NO >> Repair or replace harness or passenger select unlock relay.

### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

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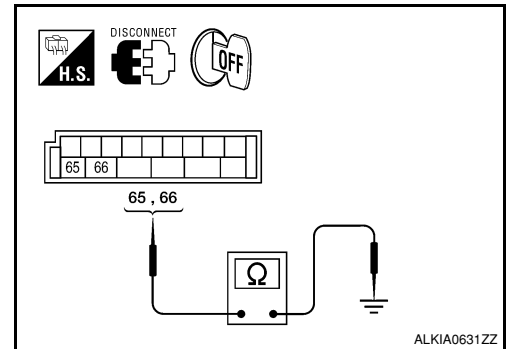
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

2. Check continuity between BCM connector (A) M20 terminals 65, 66 and ground.

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

- YES >> Replace BCM. Refer to BCM REPLACEMENT.  
NO >> Repair or replace harness or passenger select unlock relay.

## BACK DOOR

### BACK DOOR : Description

INFOID:000000001316557

All vehicles equipped with an automatic back door system are not equipped with a back door actuator. Opening and closing the back door is accomplished through the back door control unit assembly. refer to [DLK-107](#), "[Self-Diagnosis Procedure](#)".

# PASSENGER SELECT UNLOCK RELAY

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## PASSENGER SELECT UNLOCK RELAY

### Description

INFOID:000000001278118

Controls the operation of both rear door lock actuators and the back door lock actuator.

### Component Function Check

INFOID:000000001317837

#### 1. CHECK FUNCTION

1. Ensure "SELECTIVE UNLOCK FUNCTION" in WORK SUPPORT is enabled.
2. Use CONSULT-III to perform Active Test "DOOR LOCK".
3. Touch "ALL LOCK" or "ALL UNLOCK" to check that both rear doors and back door work normally.

Is the inspection result normal?

- YES >> Passenger select unlock relay is OK.  
NO >> Refer to [DLK-77. "Component Function Check"](#).

### Diagnosis Procedure

INFOID:000000001317777

#### 1. CHECK PASSENGER SELECT UNLOCK RELAY CIRCUIT

##### NOTE:

Passenger select unlock relay must remain connected during this step.

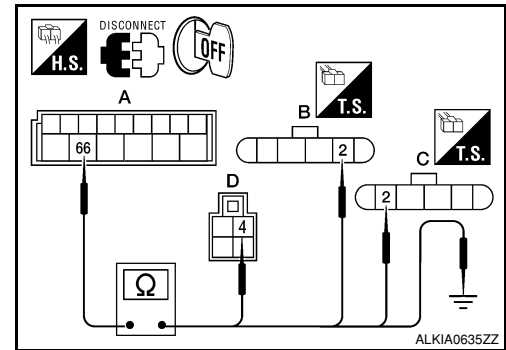
1. Turn ignition switch OFF.
2. Disconnect BCM and inoperative back or rear door lock actuator.
3. Check continuity between BCM connector (A) M20 terminal 66 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (C) D305 Terminal 2 or back door lock actuator (D) D708 terminal 4.

**66 - 2 : Continuity should exist.**

**66 - 4 : Continuity should exist.**

4. Check continuity between BCM connector M20 terminals 66 and body ground.

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



Is the inspection result normal?

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

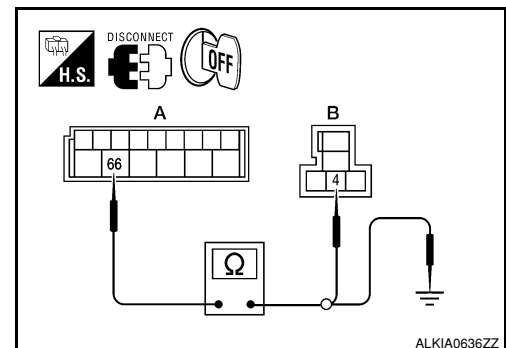
#### 2. CHECK PASSENGER SELECT UNLOCK RELAY INPUT

1. Disconnect passenger select unlock relay.
2. Check continuity between BCM connector (A) M20 terminal 66 and passenger select unlock relay connector (B) M7 terminal 4.

**66 - 4 : Continuity should exist.**

3. Check continuity between BCM connector (A) M20 terminals 66 and body ground.

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



Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace harness between BCM and relay.

#### 3. CHECK PASSENGER SELECT UNLOCK RELAY OUTPUT

1. Disconnect inoperative rear or back door lock actuator.

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# PASSENGER SELECT UNLOCK RELAY

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

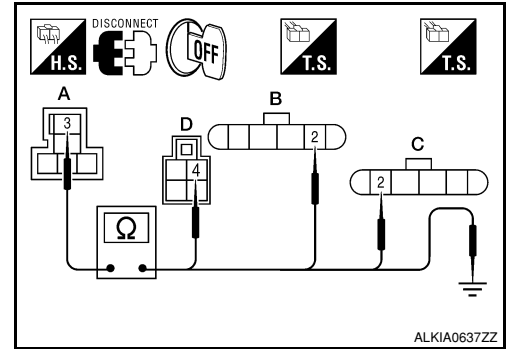
- Check continuity between passenger select unlock relay connector (A) M7 terminal 3 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (C) D305 terminal 2 or back door lock actuator connector (D) D708 terminal 4.

**3 - 2 : Continuity should exist.**

**3 - 4 : Continuity should exist.**

- Check continuity between passenger select unlock relay connector (A) M7 terminal 3 and ground.

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



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### Is the inspection result normal?

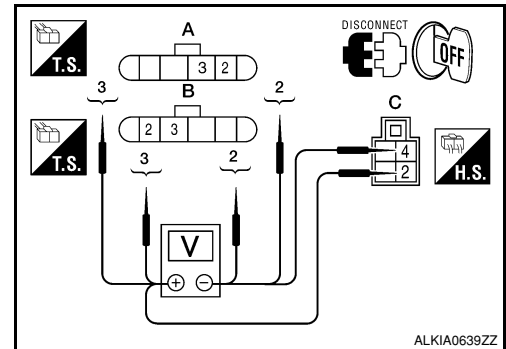
YES >> Replace passenger select unlock relay.

NO >> Repair or replace harness between relay and actuator.

## 4. CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

- Reconnect BCM.
- Check voltage between rear door lock actuator connector LH (A) D205 terminals 2 and 3 or rear door lock actuator connector RH (B) D305 terminals 2 and 3 or back door lock actuator (C) D708 terminals 2 and 4.

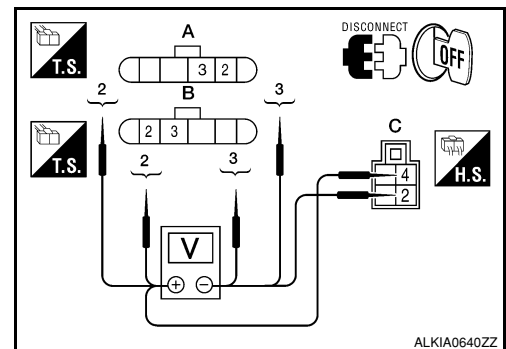
Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH) B: D305 (RH)	3	2	Main power window and door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 msec.
C: D708	2	4		



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- Check voltage between rear door lock actuator connector LH (A) D205 or rear door lock actuator connector RH (B) D305 terminals 2 and 3.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH) B: D305 (RH)	2	3	Main power window and door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 msec.
C: D7085	4	2		



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### Is the inspection result normal?

YES >> Replace rear or back door lock actuator.

NO >> Repair or replace harness between actuator and splice.

# INTELLIGENT KEY WARNING BUZZER

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## INTELLIGENT KEY WARNING BUZZER

### Description

INFOID:000000001278121

Answers back and warns for an inappropriate operation.

### Component Function Check

INFOID:000000001278122

### 1. CHECK FUNCTION

#### Ⓜ With CONSULT-III

Check Intelligent Key warning buzzer "OUTSIDE BUZZER" in Active Test mode.

Is the inspection result normal?

YES >> Intelligent Key warning buzzer (engine room) is OK.

NO >> Refer to [DLK-79, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001322708

### 1. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key warning buzzer (engine room) connector.
3. Check voltage between Intelligent Key warning buzzer (engine room) harness connector E25 terminal 1 and ground.

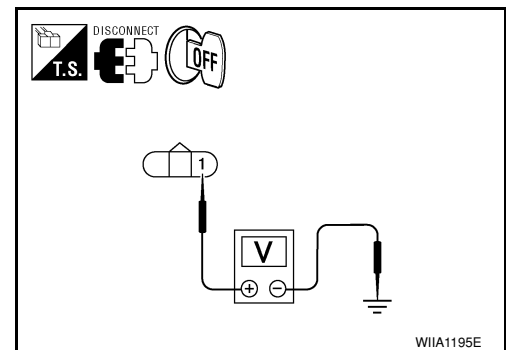
**1 - Ground**

**: Battery voltage**

Is the inspection normal?

YES >> GO TO 2

NO >> Repair or replace Intelligent Key warning buzzer (engine room) power supply circuit.



### 2. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 4 and Intelligent Key warning buzzer (engine room) harness connector E25 terminal 3.

**4 - 3**

**: Continuity should exist.**

3. Check continuity between Intelligent Key warning buzzer (engine room) harness connector E25 terminal 3 and ground.

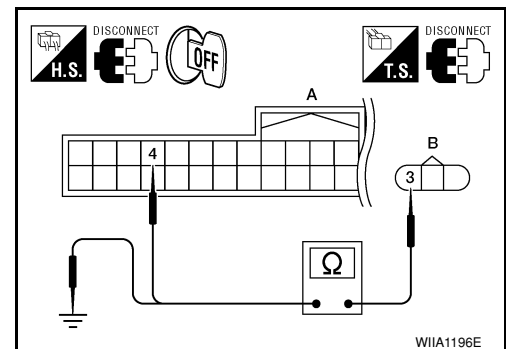
**3 - Ground**

**: Continuity should not exist.**

Is the inspection normal?

YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key warning buzzer (engine room) and Intelligent Key unit.



### 3. CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) OPERATION

Check [DLK-80, "Component Inspection"](#).

>> Inspection end.

# INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Inspection

INFOID:000000001278124

### 1. CHECK INTELLIGENT KEY WARNING BUZZER

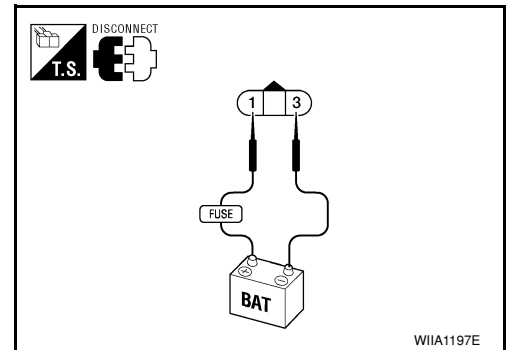
Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 3, and check the operation.

**1 (BAT+) - 3 (BAT-) : the buzzer sounds**

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace Intelligent Key warning buzzer.





# OUTSIDE KEY ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## OUTSIDE KEY ANTENNA

### Description

INFOID:000000001278125

Detects whether the Intelligent Key is in the operating range of the outside antennas. Front outside antennas are integrated in front outside door handles (driver side, passenger side) to allow locking and unlocking of door locks when the Intelligent Key is present. Rear bumper antenna is mounted on the rear bumper and is used to allow the back door handle opening of the back door when the Intelligent Key is present.

### Component Function Check

INFOID:000000001278126

#### 1. CHECK DOOR REQUEST SWITCH

Check that door request switches operate normally.

Is the inspection result normal?

YES >> GO TO 2

NO >> Inspect door request switches. Refer to [DLK-68. "Component Function Check"](#).

#### 2. CHECK FRONT ANTENNAS FUNCTION

Be sure that Intelligent Key is in each outside key antenna detection range.

Does door lock/unlock when each request switch is pressed?

YES >> Outside key antenna is OK.

NO >> Refer to [DLK-81. "Diagnosis Procedure"](#).

#### 3. CHECK REAR ANTENNA FUNCTION

Be sure that Intelligent Key is in rear bumper antenna detection range.

Be sure that back door close switch is not in the "CANCEL" position.

Does power back door open when back door handle switch is operated?

YES >> Rear bumper key antenna is OK.

NO >> Refer to [DLK-81. "Diagnosis Procedure"](#).

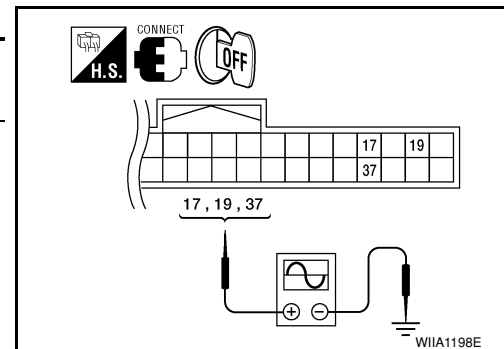
### Diagnosis Procedure

INFOID:000000001322725

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

- Turn ignition switch OFF.
- Check signal between Intelligent Key unit connector M70 terminals 17, 19, 37 and ground with an oscilloscope.

Connector	Item	Terminals		Condition	Signal (Reference value)
		(+)	(-)		
M70	Rear bumper antenna	17	Ground	Request switch is pushed	<p>SIA1910J</p>
	Front outside antenna LH	19			
	Front outside antenna RH	37			



Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> GO TO 2

#### 2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

- Disconnect Intelligent Key unit connector and outside key antenna connector.

A  
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# OUTSIDE KEY ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

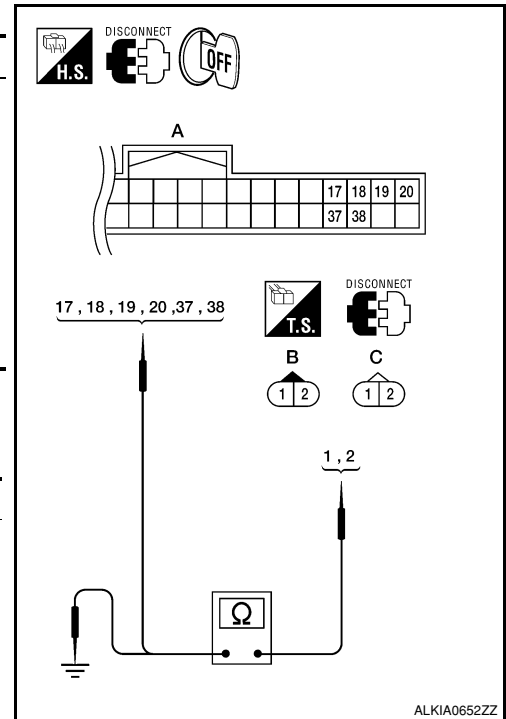
## < COMPONENT DIAGNOSIS >

- Check continuity between each outside key antenna harness connector (B) D15 (driver side) or D115 (passenger side), rear bumper antenna connector (C) C7 terminals 1, 2 and Intelligent Key unit harness connector (A) M70 terminals 17, 18, 19, 20, 37, and 38.

Item	Connector	Terminal	Connector	Terminal	Continuity
Rear bumper antenna	C: C7	1	A: M70	17	Yes
		2		18	
Front outside antenna LH	B: D15	1		19	
		2		20	
Front outside antenna RH	B: D115	1		37	
		2		38	

- Check continuity between each outside key antenna harness connector terminals 1, 2 and ground.

Item	Connector	Terminal	Continuity
Rear bumper antenna	C: C7	1	No
		2	
Front outside antenna LH	B: D15	1	
		2	
Front outside antenna RH	B: D115	1	
		2	



Is the inspection result normal?

YES >> GO TO 3

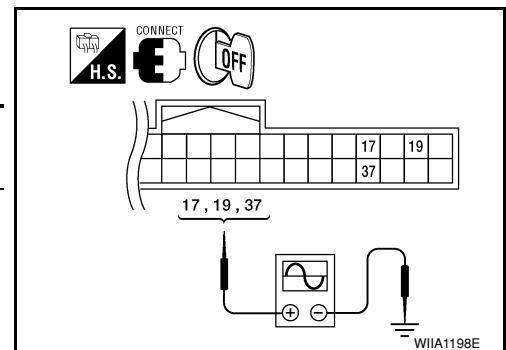
NO >> Repair or replace harness between outside key antenna and Intelligent Key unit.

## 3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

- Replace outside key antenna. (New antenna or other antenna)
- Connect Intelligent Key unit connector and outside key antenna connector.
- Check signal between Intelligent Key unit connector terminals 17, 19, 37 and ground with an oscilloscope.

Connector	Item	Terminals		Condition	Signal (Reference value)
		(+)	(-)		
M70	Rear bumper	17	Ground	Request switch is pushed	
	LH side	19			
	RH side	37			

SIIA1910J



Is the inspection result normal?

YES >> Replace outside key antenna.

NO >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).

# STEERING LOCK UNIT

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## STEERING LOCK UNIT

### Diagnosis Procedure

INFOID:000000001337867

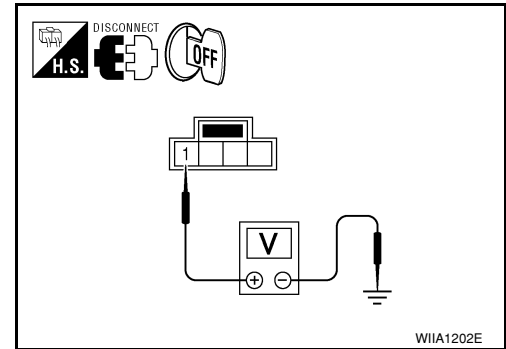
#### 1. CHECK STEERING LOCK SOLENOID POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect steering lock solenoid connector.
3. Check voltage between steering lock solenoid harness connector M15 terminal 1 and ground.

**1 - Ground** : **Battery voltage**

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Repair or replace steering lock solenoid power supply circuit.



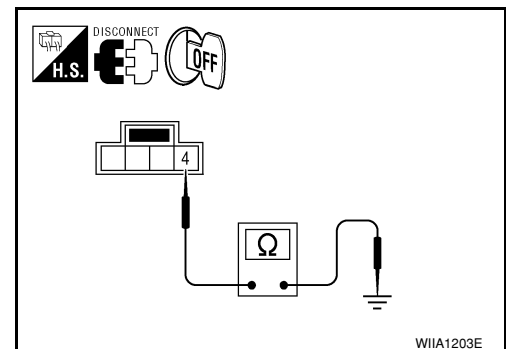
#### 2. CHECK STEERING LOCK SOLENOID GROUND CIRCUIT

Check continuity between steering lock solenoid harness connector M15 terminal 4 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace the steering lock solenoid ground circuit.



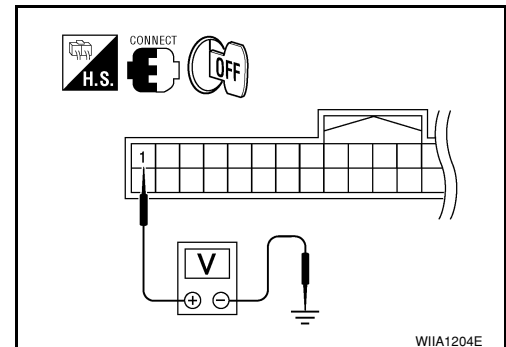
#### 3. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect steering lock solenoid connector.
2. Check voltage between Intelligent Key unit harness connector M70 terminal 1 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4  
NO >> GO TO 6



#### 4. CHECK STEERING LOCK COMMUNICATION SIGNAL

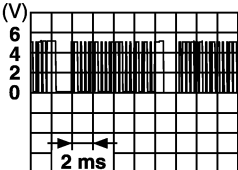
Check signal between Intelligent Key unit connector M70 terminal 32 and ground with oscilloscope.

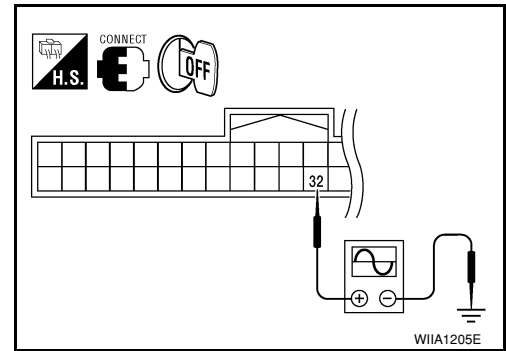
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# STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector	Terminals		Condition	Signal (V) (Reference value)
	(+)	(-)		
M70	32	Ground	Ignition switch is pushed	 <p style="text-align: right; font-size: small;">SIIA1911J</p>



Is the inspection result normal?

- YES >> GO TO 5
- NO >> GO TO 6

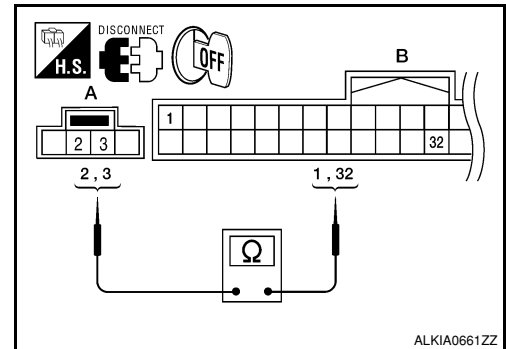
## 5. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR OPEN

1. Disconnect Intelligent Key unit and steering lock solenoid connectors.
2. Check continuity between Intelligent Key unit harness connector (B) M70 terminals 1, 32 and steering lock solenoid connector (A) M15 terminals 2, 3.

- 1 - 2 : Continuity should exist.**
- 32 - 3 : Continuity should exist.**

Is the inspection result normal?

- YES >> Replace steering lock solenoid.
  - After replacing steering lock solenoid, perform registration procedure. Refer to [SEC-19. "COMMON ITEM : CONSULT-III Function \(BCM - COMMON ITEM\)"](#).
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.



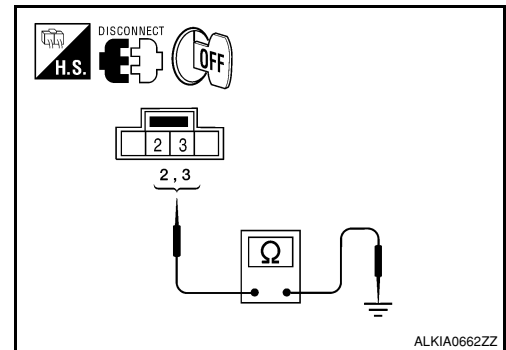
## 6. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR SHORT

1. Disconnect Intelligent Key unit and steering lock solenoid connectors.
2. Check continuity between steering lock solenoid connector M15 terminals 2, 3 and ground.

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

Is the inspection result normal?

- YES >> Replace Intelligent Key unit. Refer to [SEC-91. "Removal and Installation"](#).
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.



# A/T DEVICE (DETENTION SWITCH KEY)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## A/T DEVICE (DETENTION SWITCH KEY)

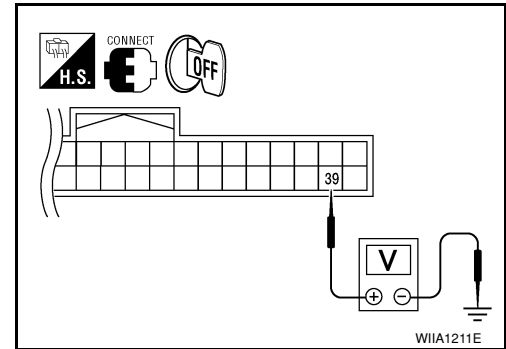
### Diagnosis Procedure

INFOID:000000001337868

#### 1. CHECK A/T DEVICE (DETENTION SWITCH KEY) INPUT SIGNAL

1. Turn ignition switch OFF.
2. While pressing the ignition knob switch, check voltage between Intelligent Key unit harness connector M70 terminal 39 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	39	Ground	Selector lever is in "P" position	Battery voltage
			Other than above	0



Is the inspection result normal?

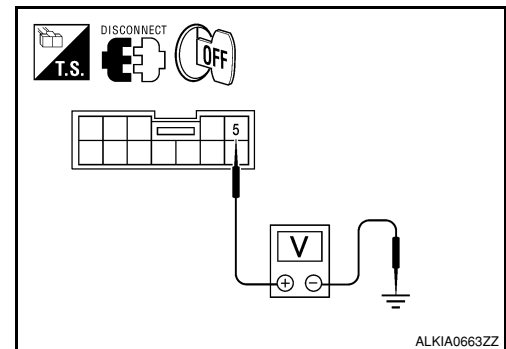
YES >> Replace Intelligent Key unit. Refer to [SEC-91, "Removal and Installation"](#).

NO >> GO TO 2

#### 2. CHECK A/T DEVICE (DETENTION SWITCH KEY) POWER SUPPLY CIRCUIT

1. Disconnect A/T device (detention switch key) connector.
2. While pressing the ignition knob switch, check voltage between A/T device (detention switch key) harness connector M203 terminal 5 and ground.

**5 – Ground : Battery voltage.**



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or ignition knob switch.

#### 3. CHECK A/T DEVICE (DETENTION SWITCH KEY)

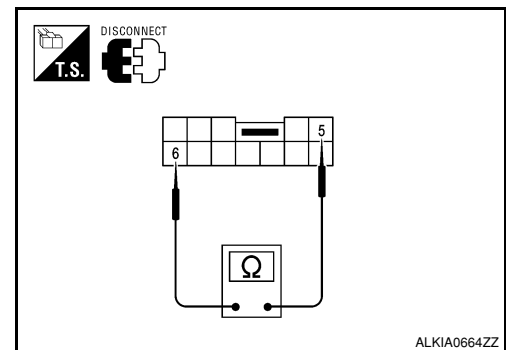
Check continuity between A/T device (detention switch key) terminals 5 and 6.

Component	Terminals		Condition	Continuity
A/T device (detention switch key)	5	6	Selector lever is in "P" position	Yes
			Other than above	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace A/T device (detention switch key).



#### 4. CHECK A/T DEVICE (DETENTION SWITCH KEY) CIRCUIT

1. Disconnect Intelligent Key unit connector.

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## A/T DEVICE (DETENTION SWITCH KEY)

< COMPONENT DIAGNOSIS >

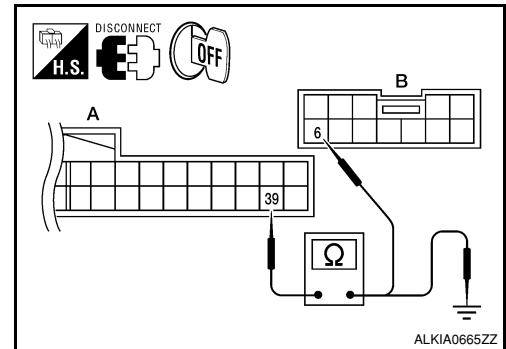
[WITH INTELLIGENT KEY SYSTEM]

2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 39 and A/T device (detention switch key) harness connector (B) M203 terminal 6.

**39 – 6 : Continuity should exist.**

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 39 and ground.

**39 – Ground : Continuity should not exist.**



Is the inspection result normal?

YES >> A/T device (detention switch key) circuit is OK.

NO >> Repair or replace harness.

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## REMOTE KEYLESS ENTRY RECEIVER

### Description

INFOID:000000001278128

Receives Intelligent Key operation and transmits to Intelligent Key unit.

### Component Function Check

INFOID:000000001278129

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

- YES >> Remote keyless entry receiver is OK.
- NO >> Refer to [DLK-87, "Diagnosis Procedure"](#).

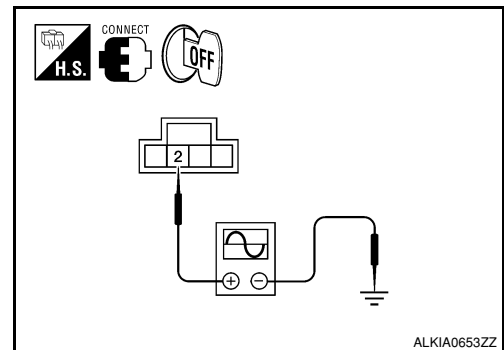
### Diagnosis Procedure

INFOID:000000001329022

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

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

Terminals		Keyfob condition	Signal (Reference value)
(+)	(-)		
Remote keyless entry receiver connector	Terminal		
M25	2	Ground	<p>OCC3879D</p>
		Any button is pressed	<p>OCC3880D</p>



Is the inspection result normal?

- YES >> GO TO 2
- NO >> GO TO 5

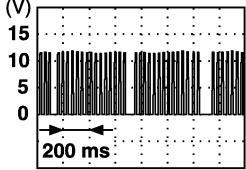
#### 2. REMOTE KEYLESS ENTRY RECEIVER VOLTAGE CIRCUIT INSPECTION

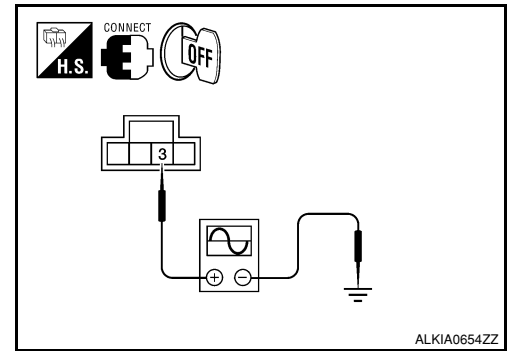
Check voltage between remote keyless entry receiver connector M25 terminal 3 and ground using an oscilloscope.

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminals		Signal (Reference value)
(+)	(-)	
Remote keyless entry receiver connector	Terminal	
M25	3	 <p>(V)</p> <p>15 10 5 0</p> <p>200 ms</p> <p>PIIA2344E</p>



Is the inspection result normal?

YES >> GO TO 3

NO >> GO TO 5

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

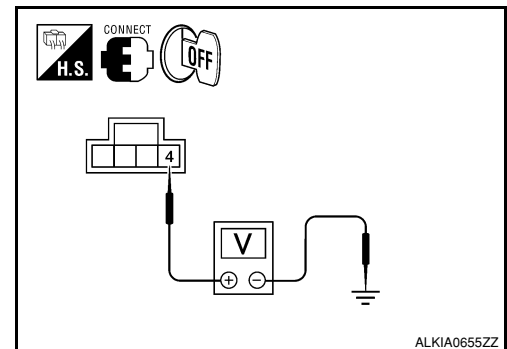
Check voltage between remote keyless entry receiver connector M25 terminal 4 and ground.

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

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 5



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

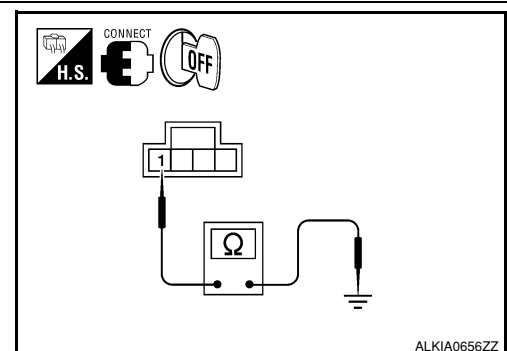
Check continuity between remote keyless entry receiver connector M25 terminal 1 and ground.

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

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to [IP-17, "Exploded View"](#).

NO >> GO TO 5



### 5. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

- Disconnect remote keyless entry receiver and Intelligent Key unit connectors.
- Check continuity between Intelligent Key unit connector (A) M70 terminals 8, 9, 21, 30 and remote keyless entry receiver connector (B) M25 terminals 1, 2, 3, 4.

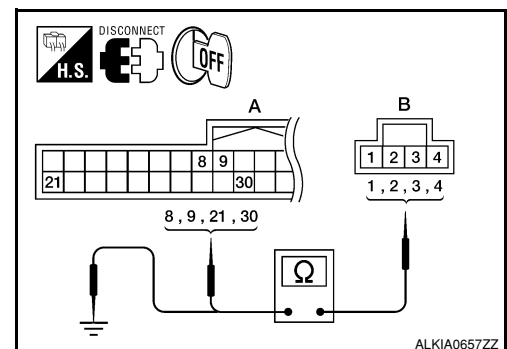
**1 - 8 : Continuity should exist.**

**2 - 9 : Continuity should exist.**

**3 - 21 : Continuity should exist.**

**4 - 30 : Continuity should exist.**

- Check continuity between remote keyless entry receiver connector (B) M25 terminals 1, 2, 3, 4 and ground.





# REMOTE KEYLESS ENTRY RECEIVER

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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

A  
B

Is the inspection result normal?

YES >> Remote keyless entry receiver circuits are OK.

NO >> Repair or replace the harness between the remote keyless entry receiver and Intelligent Key unit.

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# INTELLIGENT KEY BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY BATTERY AND FUNCTION

### Description

INFOID:000000001278131

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

- Door lock/unlock
- Back door open

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

### Component Function Check

INFOID:000000001278132

#### 1. CHECK FUNCTION

##### Ⓢ With CONSULT-III

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

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

Is the inspection result normal?

- YES >> Intelligent Key is OK.  
NO >> Refer to [DLK-90, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001278133

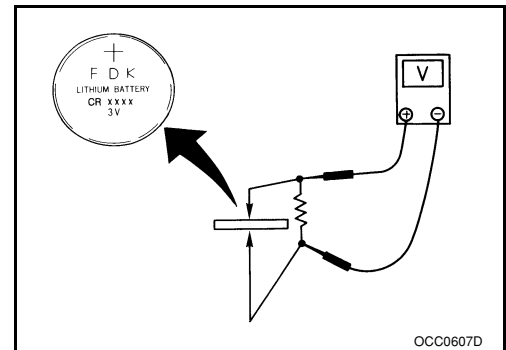
#### 1. CHECK INTELLIGENT KEY BATTERY

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

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

Is the measurement value within specification?

- YES >> GO TO 2  
NO >> Replace Intelligent Key battery.

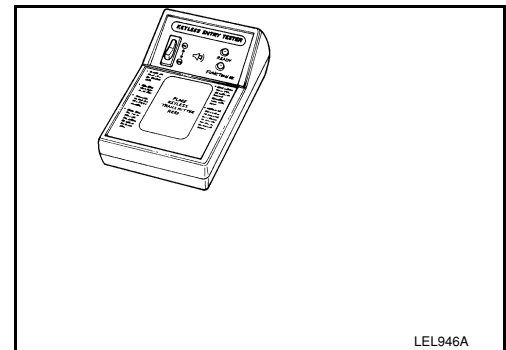


#### 2. CHECK KEYFOB FUNCTION

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

Does the test pass?

- YES >> Keyfob is OK.  
NO >> Replace keyfob. Refer to CONSULT-III Operation Manual.



### Component Inspection

INFOID:000000001278134

#### 1. REPLACE INTELLIGENT KEY BATTERY

1. Release the lock knob at the back of the Intelligent Key and remove the mechanical key.

# INTELLIGENT KEY BATTERY AND FUNCTION

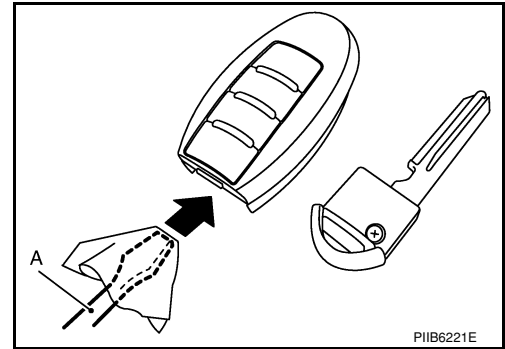
## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. 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 keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.



3. Replace the battery with new one.
4. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

**CAUTION:**

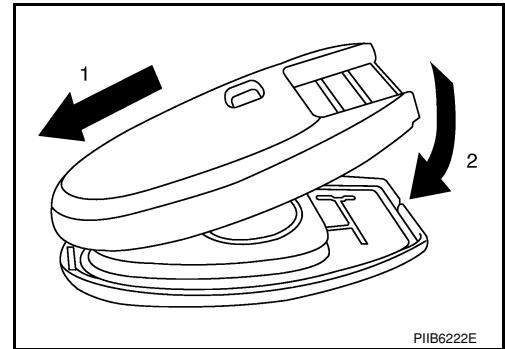
- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

5. After replacing the battery, check that all Intelligent Key functions work properly.

Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Check remote keyless entry receiver. Refer to [DLK-87, "Component Function Check"](#).



## Special Repair Requirement

Refer to CONSULT-III Operation Manual.

INFOID:000000001278135

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# HORN FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Description

INFOID:000000001278139

Perform answer-back for each operation with horn.

### Component Function Check

INFOID:000000001278140

#### 1.CHECK FUNCTION

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

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

Is the operation normal?

- YES >> INSPECTION END.  
 NO >> Go to [DLK-92, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001278141

#### 1.CHECK HORN FUNCTION

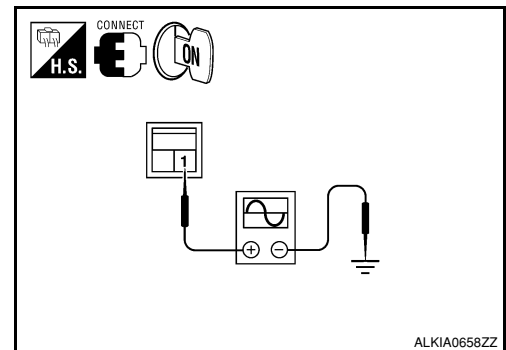
Check horn function with horn switch

Do the horns sound?

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

#### 2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT-III.
3. Using an oscilloscope or analog voltmeter, check voltage between horn relay harness connector and ground.



Horn relay		Ground	Test item	Voltage (V) (Approx.)
Connector	Terminal			
H-1	1	Ground	HORN	Battery voltage → 0 → Battery voltage
			Other than above	Battery voltage

Is the inspection result normal?

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

#### 3.CHECK HORN RELAY CIRCUIT

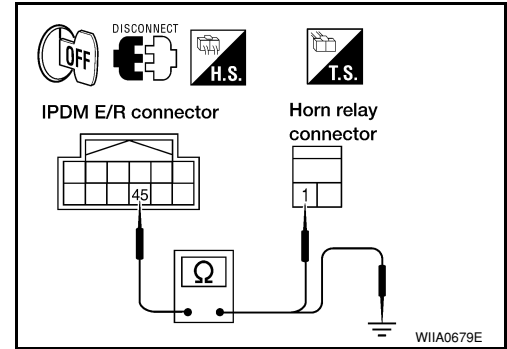
1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.

# HORN FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E122	45	H-1	1	Yes

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

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

Is the inspection result normal?

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

## 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation of IPDM E/R"](#).
- NO >> Repair or replace the malfunctioning part.

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# COMBINATION METER DISPLAY FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## COMBINATION METER DISPLAY FUNCTION

### Description

INFOID:000000001278142

Displays each operation method guide and warning for system malfunction.

### Component Function Check

INFOID:000000001278143

#### 1.CHECK FUNCTION

---

1. Turn ignition switch ON.
2. Open driver door.

Does the open door message appear on the LCD display?

- YES >> Meter information display is OK.  
NO >> Refer to [DLK-94, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001278144

#### 1.CHECK COMBINATION METER

---

Refer to [DLK-138, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Check combination meter. Refer to [MWI-4, "Work Flow"](#).

#### 2.CHECK INTERMITTENT INCIDENT

---

Refer to [GI-39, "Intermittent Incident"](#).

>> INSPECTION END.

# WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING CHIME FUNCTION

### Description

INFOID:000000001278145

Performs operation method guide and warning with buzzer.

### Component Function Check

INFOID:000000001278146

#### 1.CHECK FUNCTION

##### With CONSULT-III

1. Check the operation with "INSIDE BUZZER" in the Active Test.
2. Touch "TAKE OUT", "KNOB" or "KEY" on screen.

Is the inspection result normal?

- Yes >> Warning buzzer into combination meter is OK.  
No >> Refer to [DLK-95. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001278147

#### 1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter.

>> Inspection end.

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DLK

# HAZARD FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HAZARD FUNCTION

### Description

INFOID:000000001278148

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

### Component Function Check

INFOID:000000001278149

#### 1.CHECK FUNCTION

---

Check hazard warning lamp "FLASHER" in ACTIVE TEST.

Is the inspection result normal?

- YES >> Hazard warning lamp circuit is OK.
- NO >> Refer to [DLK-96, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001278150

#### 1.CHECK HAZARD SWITCH CIRCUIT

---

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

Do the lights operate normally?

- YES >> Replace the BCM. Refer to BCS for replacement and configuration procedure.
- NO >> Repair or replace hazard warning switch circuit. Refer to EXTERIOR LIGHTING SYSTEM.



# KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

### Diagnosis Procedure

INFOID:000000001337869

#### 1. CHECK KEY SWITCH

##### With CONSULT-III

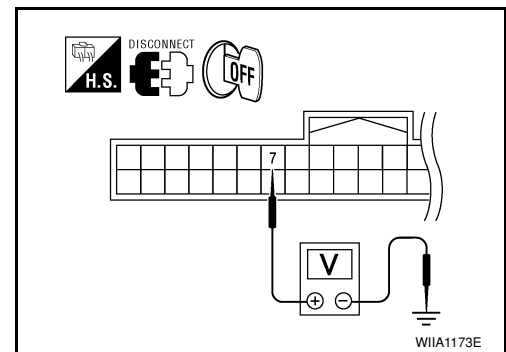
Check key switch ("KEY SW") in "DATA MONITOR" mode with CONSULT-III.

Monitor item	Condition
KEY SW	Insert mechanical key into ignition switch: ON
	Remove mechanical key from ignition switch: OFF

##### Without CONSULT-III

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit harness connector.
- Check voltage between Intelligent Key unit harness connector M70 terminal 7 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	7	Ground	Insert mechanical key into ignition switch	Battery voltage
			Remove mechanical key from ignition switch	0



Is the inspection result normal?

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

#### 2. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

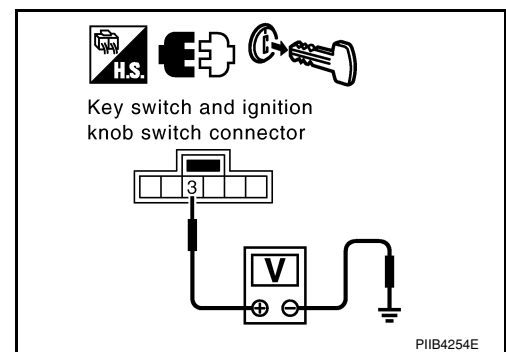
- Remove mechanical key from ignition switch.
- Disconnect key switch and ignition knob switch connector.
- Check voltage between key switch and ignition knob switch harness connector M12 terminal 3 and ground.

**3 - Ground**

**: Battery voltage**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace key switch and ignition knob switch power supply circuit.



#### 3. CHECK KEY SWITCH OPERATION

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# KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

Check continuity between key switch and ignition knob switch terminals 3 and 4.

Component	Terminals		Condition	Continuity
Key switch	3	4	Insert mechanical key into ignition switch.	Yes
			Remove mechanical key from ignition switch.	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace key cylinder assembly (built-in key switch).

## 4. CHECK KEY SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 7 and key switch and ignition knob switch harness connector (B) M12 terminal 4.

**7 - 4 : Continuity should exist.**

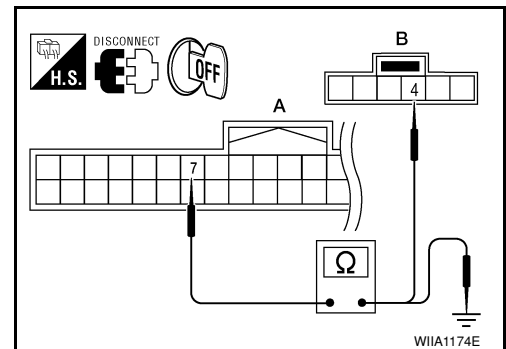
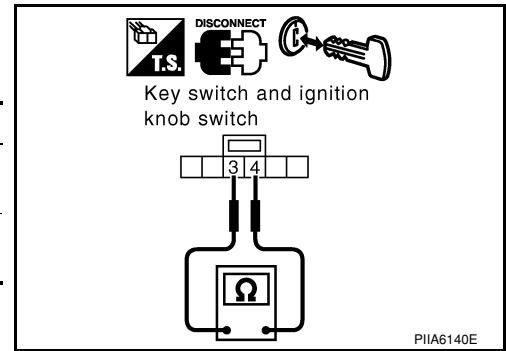
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 7 and ground.

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

Is the inspection result normal?

YES >> Check the condition of harness and harness connector.

NO >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.



# KEY SWITCH (BCM INPUT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY SWITCH (BCM INPUT)

### Diagnosis Procedure

INFOID:000000001337870

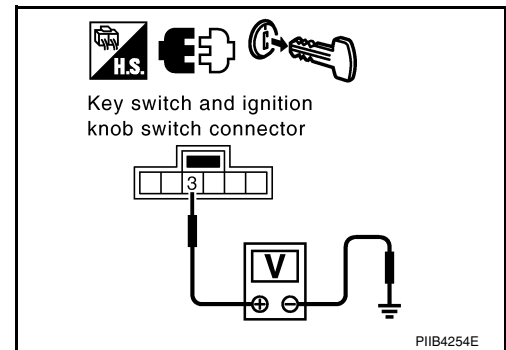
#### 1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M12 terminal 3 and ground.

**3 – Ground : Battery voltage.**

Is the

- OK >> GO TO 2  
 NG >> Check harness between key switch and ignition knob switch and fuse.



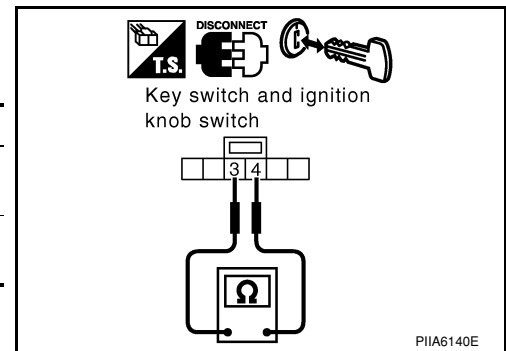
#### 2. CHECK KEY SWITCH

Check continuity between key switch and ignition knob switch terminals 3 and 4.

Component	Terminals		Condition	Continuity
Ignition switch	3	4	Insert mechanical key into ignition switch.	Yes
			Remove mechanical key from ignition switch.	No

OK or NG

- OK >> GO TO 3  
 NG >> Replace key cylinder assembly (built-in key switch).



#### 3. CHECK KEY SWITCH SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch and ignition knob switch harness connector M12 terminal 4.

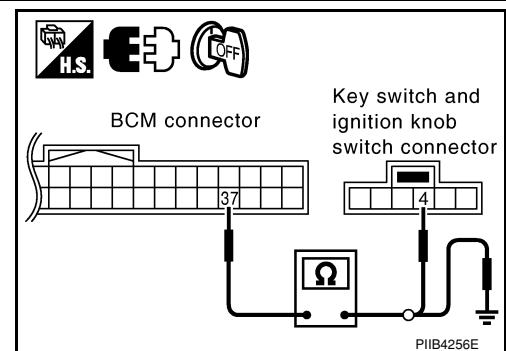
**37 – 4 : Continuity should exist.**

3. Check continuity between BCM harness connector M18 terminal 37 and ground.

**37 – Ground : Continuity should not exist.**

OK or NG

- OK >> Key switch (BCM input) circuit is OK.  
 NG >> Repair or replace harness between key switch and ignition knob switch and BCM.



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# IGNITION KNOB SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## IGNITION KNOB SWITCH

### Ignition Knob Switch Check

INFOID:000000001337872

#### 1. CHECK IGNITION KNOB SWITCH

##### ④ With CONSULT-III

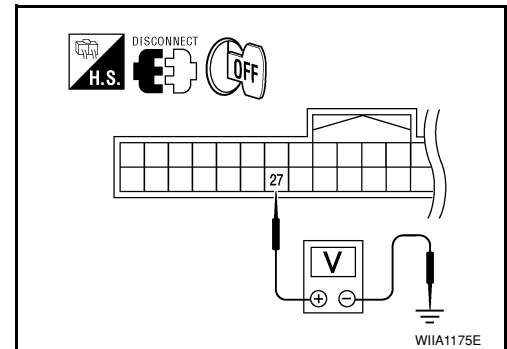
Display "PUSH SW" on DATA MONITOR screen, and check if ON/OFF display is linked to ignition switch operation.

Monitor item	Condition
PUSH SW	Ignition switch is pushed: ON
	Ignition switch is released: OFF

##### ⊗ Without CONSULT-III

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit connector.
- Check voltage between Intelligent Key unit harness connector M70 terminal 27 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	27	Ground	Ignition switch is pushed	Battery voltage
			Ignition switch is released	0



Is the inspection result normal?

- YES >> Ignition knob switch is OK.  
NO >> GO TO 2

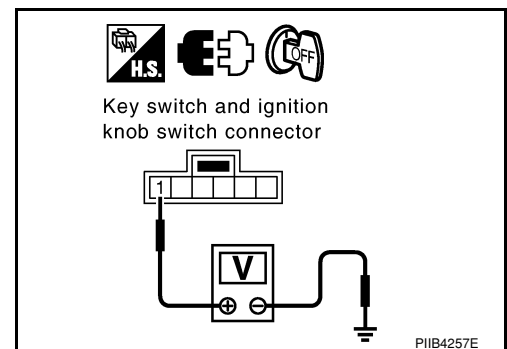
#### 2. CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect key switch and ignition knob switch connector.
- Check voltage between key switch and ignition knob switch harness connector M12 terminal 1 and ground.

**1 - Ground** : **Battery voltage**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace key switch and ignition knob switch power supply circuit.



#### 3. CHECK IGNITION KNOB SWITCH OPERATION

Check continuity between key switch and ignition knob switch terminals 1 and 2.

# IGNITION KNOB SWITCH

< COMPONENT DIAGNOSIS >

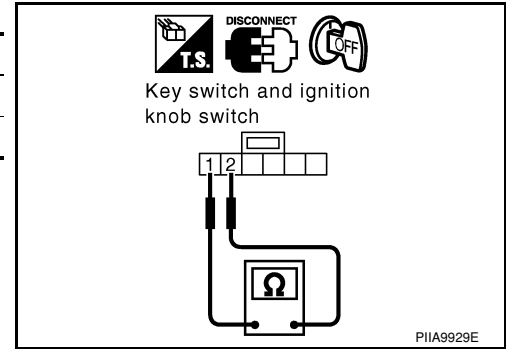
[WITH INTELLIGENT KEY SYSTEM]

Component	Terminals		Condition	Continuity
Ignition knob switch	1	2	Ignition switch is pushed	Yes
			Ignition switch is released	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace key switch and ignition knob switch.



## 4. CHECK IGNITION KNOB SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 27 and key switch and ignition knob switch harness connector (B) M12 terminal 2.

**27 - 2 : Continuity should exist.**

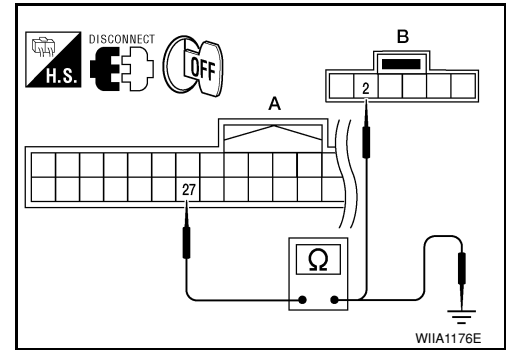
2. Check continuity between Intelligent Key unit harness connector M70 terminal 27 and ground.

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

Is the inspection result normal?

YES >> Check the condition of harness and harness connector.

NO >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.



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# HEADLAMP FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

---

## HEADLAMP FUNCTION

### Diagnosis Procedure

INFOID:000000001337877

#### 1. CHECK HEADLAMP OPERATION

---

Do headlamps operate with headlamp switch?

YES or NO

YES >> Headlamp circuit is OK.

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

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

### Diagnosis Procedure

INFOID:000000001337883

#### 1. CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.

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

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# KEYFOB ID SET UP WITH CONSULT-III

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITH CONSULT-III

### ID Code Entry Procedure

INFOID:000000001337936

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

##### NOTE:

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

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

##### NOTE:

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

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



# KEYFOB ID SET UP WITHOUT CONSULT-III

< COMPONENT DIAGNOSIS >

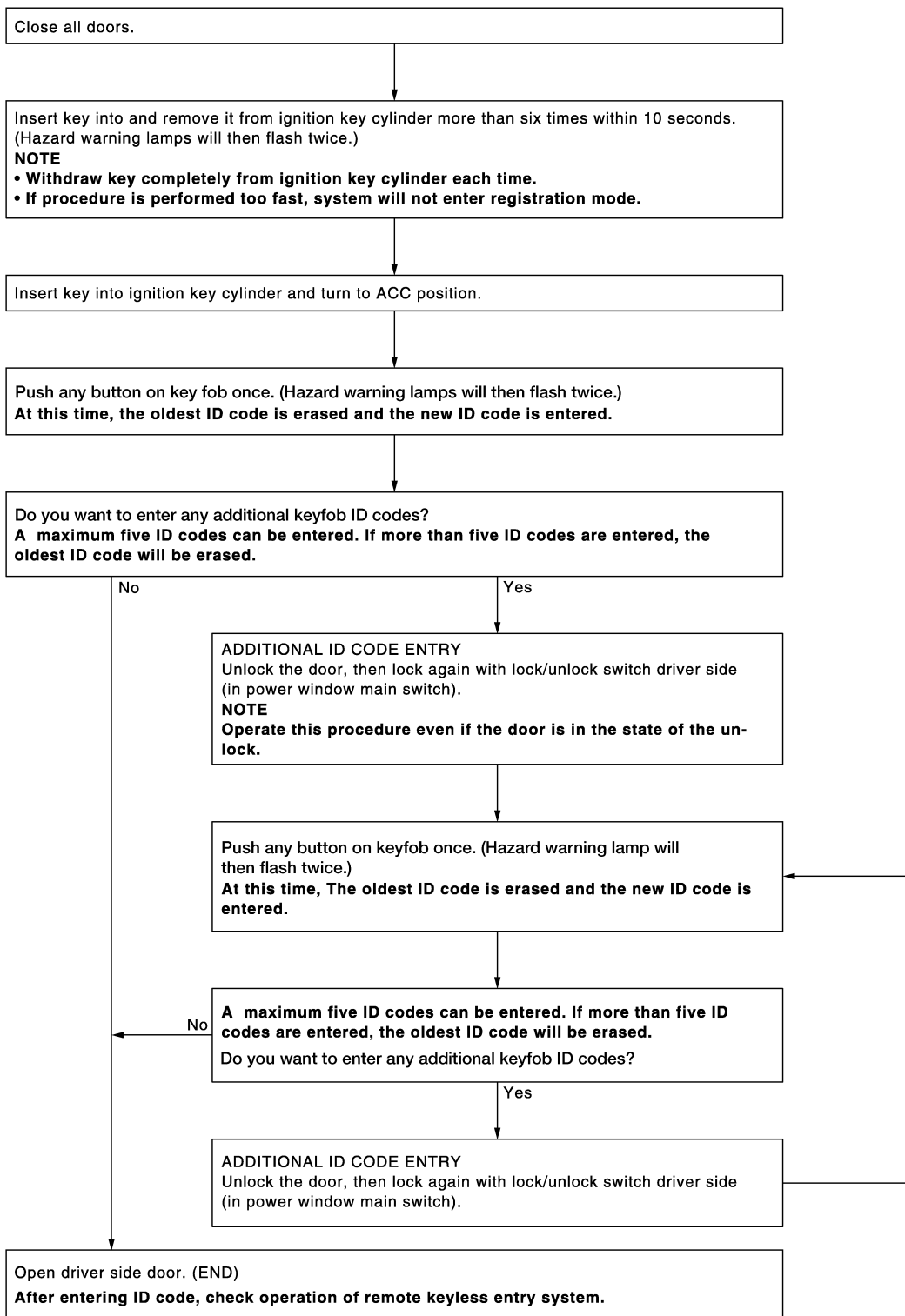
[WITH INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITHOUT CONSULT-III

### ID Code Entry Procedure

INFOID:000000001337937

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



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DLK

#### NOTE:

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

LIA1670E

## KEYFOB ID SET UP WITHOUT CONSULT-III

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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

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

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

# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

### Self-Diagnosis Procedure

INFOID:000000001337938

#### INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the back door control unit.

To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the back door handle switch.
9. Within 8 seconds of the back door warning chime sounding, press and hold the power liftgate switch.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the power liftgate switch.
12. The input signal check mode is now initialized.

The input signal check mode can test the following inputs. The back door warning chime will sound for approximately 0.5 second each time a switch signal input occurs. Use this test when one of these inputs is not responding during normal automatic back door operation.

Switch signal	Operation	Refer to
Power liftgate switch	OFF → ON	<a href="#">DLK-111</a>
Back door close switch (CLOSE)	OFF → ON	<a href="#">DLK-113</a>
Back door close switch (CANCEL)	OFF → ON	<a href="#">DLK-114</a>
Back door handle switch	OFF → ON	<a href="#">DLK-120</a>
A/T device (park switch)	P position → other than P position	<a href="#">DLK-85</a>
Vehicle speed*	Vehicle speed	—
Remote keyless entry signal	Keyfob switch OFF → ON	<a href="#">DLK-87</a>
Door lock/unlock signal	LOCK → UNLOCK	<a href="#">DLK-60</a>
Pinch strip LH signal	OFF → ON	<a href="#">DLK-115</a>
Pinch strip RH signal	OFF → ON	<a href="#">DLK-115</a>

\*Back door warning chime should sound as soon as vehicle moves.

Turn ignition switch OFF to end input signal check mode.

#### OPERATING CHECK MODE

Operating check mode allows self-diagnosis of the automatic back door system.

To activate operating check mode on the automatic back door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 second.
8. Release the back door handle switch.

# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

**[WITH INTELLIGENT KEY SYSTEM]**

**< COMPONENT DIAGNOSIS >**

9. Within 8 seconds of the back door warning chime sounding, press the power liftgate switch 5 times in rapid succession.
  10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
  11. Release the power liftgate switch.
  12. Immediately close the back door manually.
  13. Press and release the power liftgate switch to activate the operating check mode.
- Self-diagnosis results are indicated by the back door warning chime.

Back door warning chime order	Back door warning chime length	
Start self-diagnosis	1.5 seconds	
	OK	NG
1. Operating conditions diagnosis	0.5 second	0.2 second
2. Back door encoder diagnosis	0.5 second	0.2 second
3. Back door clutch diagnosis	0.5 second	0.2 second
4. Back door motor diagnosis	0.5 second	0.2 second
5. Cinch latch motor diagnosis	0.5 second	0.2 second
Restart self-diagnosis	1.5 seconds	

Item	NG Result	Refer to
1. Operating conditions diagnosis result	One of the following operating conditions no longer met: ignition switch ON, back door close switch (CANCEL) ON, A/T selector lever in P position	—
2. Back door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	<a href="#">DLK-209</a>
3. Back door clutch diagnosis result	Back door clutch does not operate	<a href="#">DLK-209</a>
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	<a href="#">DLK-209</a>
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	<a href="#">DLK-209</a>

Turn ignition switch OFF to end input signal check mode.

# POWER LIFTGATE SWITCH FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## POWER LIFTGATE SWITCH FUNCTION

### Diagnosis Procedure

INFOID:000000001337940

#### 1. POWER LIFTGATE SWITCH FUNCTION INSPECTION

Check power liftgate switch using switch operation.

Did the back door respond correctly?

- YES >> Power liftgate switch is OK.
- NO >> GO TO 2

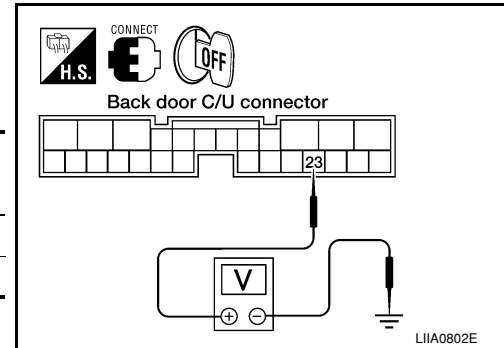
#### 2. POWER LIFTGATE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the power liftgate switch, check voltage between back door control unit connector B55 terminal 23 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
23	Ground	Power liftgate switch ON	0
		Power liftgate switch OFF	Battery voltage

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3



#### 3. POWER LIFTGATE SWITCH CIRCUIT INSPECTION

1. Disconnect back door control unit and power liftgate switch connectors.
2. Check continuity between back door control unit connector (A) B55 terminal 23 and power liftgate switch connector (B) M92 terminal 1.

**23 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 23 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the power liftgate switch and the back door control unit.

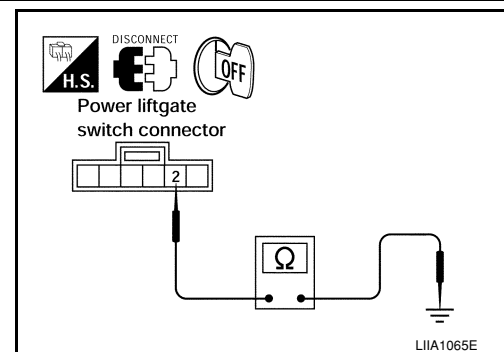
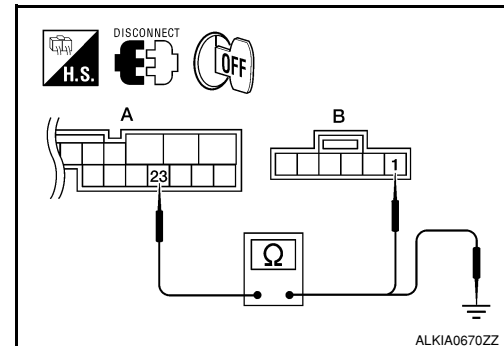
#### 4. POWER LIFTGATE SWITCH GROUND INSPECTION

Check continuity between power liftgate switch connector terminal 2 and ground.

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

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Repair the harness between the power liftgate switch and ground.



#### 5. POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Reconnect back door control unit.
2. Ensure liftgate is closed.

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# POWER LIFTGATE SWITCH FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

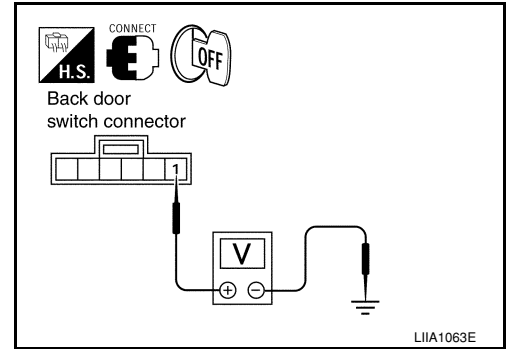
3. Check voltage between power liftgate switch connector M92 terminal 1 and ground.

**1 - Ground**

**:Approx. battery voltage**

Is the inspection result normal?

- YES >> Replace the power liftgate switch.  
NO >> Replace the back door control unit.



# GLASS HATCH AJAR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## GLASS HATCH AJAR SWITCH

### Diagnosis Procedure

INFOID:000000001337941

#### 1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

 With CONSULT-III

Check glass hatch ajar switch ("TRNK OPN MNTR") in DATA MONITOR mode with CONSULT-III.

- When glass hatch is open:

**TRNK OPN MNTR : ON**

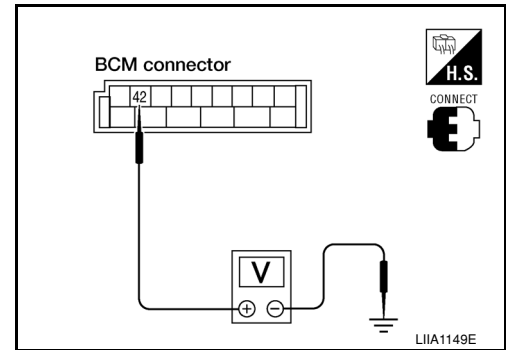
- When glass hatch is closed:

**TRNK OPN MNTR : OFF**

 Without CONSULT-III

Check voltage between BCM connector M19 terminal 42 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M19	BCM	42	Ground	Open ↓ Closed	0 ↓ Battery voltage



Is the inspection result normal?

- YES >> System is OK.
- NO >> GO TO 2

#### 2. CHECK GLASS HATCH AJAR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect glass hatch ajar switch, BCM and back door control unit.
3. Check continuity between BCM connector (A) M19 terminal 42 and glass hatch ajar switch connector (C) D707 terminal 1.

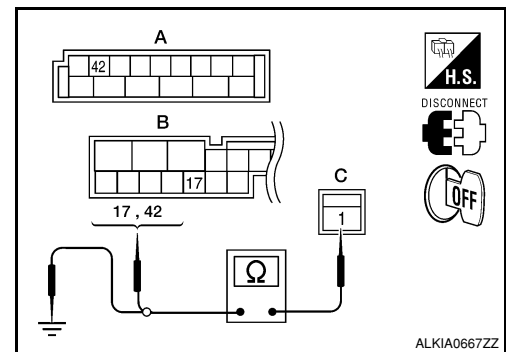
**42 - 1 : Continuity should exist.**

4. Check continuity between back door control unit connector B55 (B) terminal 17 and glass hatch ajar switch connector (C) D707 terminal 1.

**17 - 1 : Continuity should exist.**

5. Check continuity between glass hatch ajar switch connector (C) D707 terminal 1 and ground.

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



Is the inspection result normal?

- YES >> GO TO 3
- NO >> Repair or replace harness.

#### 3. CHECK GLASS HATCH AJAR SWITCH

1. Disconnect glass hatch ajar switch connector.
2. Check continuity between glass hatch ajar switch connector terminal 1 and ground.

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# GLASS HATCH AJAR SWITCH

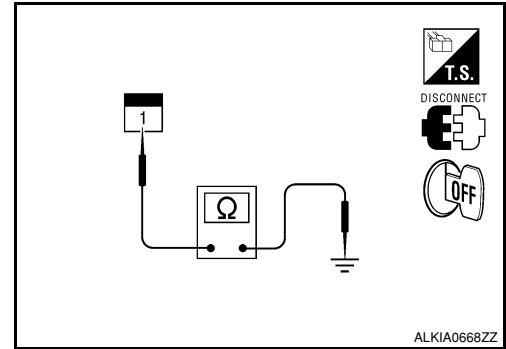
< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	Terminals	Condition	Continuity
Glass hatch ajar switch	1 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Check glass hatch ajar switch case ground condition.
- NO >> Replace glass hatch ajar switch, or repair or replace harness.





# BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001337942

#### 1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (close) switch using switch operation.

Is the inspection result normal?

- YES >> Back door close switch is OK.
- NO >> GO TO 2

#### 2. BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close switch, check voltage between back door control unit connector B55 terminal 8 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
8	Ground	Back door close switch	ON	0
			OFF	Battery voltage

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3

#### 3. BACK DOOR CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 8 and back door close switch connector (B) B63 terminal 1.

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

3. Check continuity between back door control unit connector (A) B55 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the back door close switch and the back door control unit.

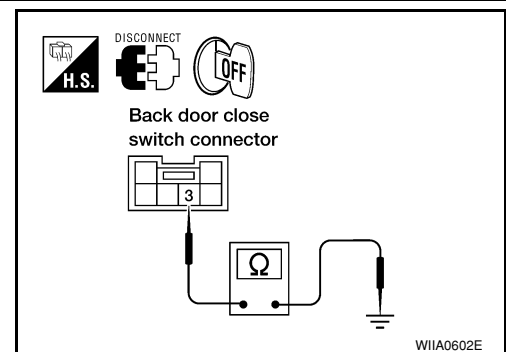
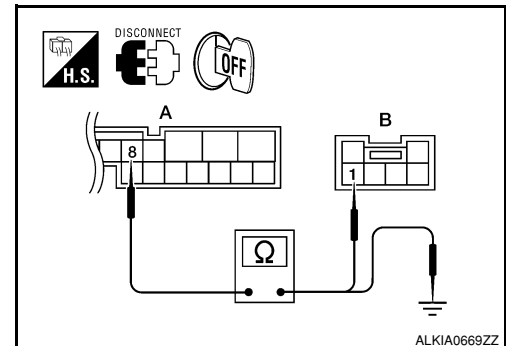
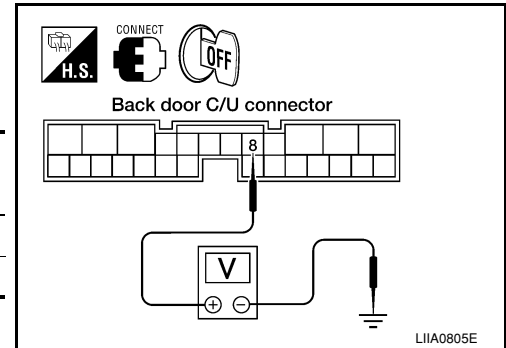
#### 4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

Check continuity between back door close switch connector B63 terminal 3 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door close switch.
- NO >> Repair the harness between the back door close switch and ground.



# BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001337943

#### 1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (cancel) switch using switch operation.

Is the inspection result normal?

- YES >> Back door close switch is OK.
- NO >> GO TO 2

#### 2. BACK DOOR CLOSE (CANCEL) SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close (cancel) switch, check voltage between back door control unit connector B55 terminal 13 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
13	Ground	Back door close switch	ON	0
			OFF	5

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3

#### 3. BACK DOOR CLOSE (CANCEL) SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 13 and back door close switch connector (B) B63 terminal 5.

**13 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 13 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the back door close switch and the back door control unit.

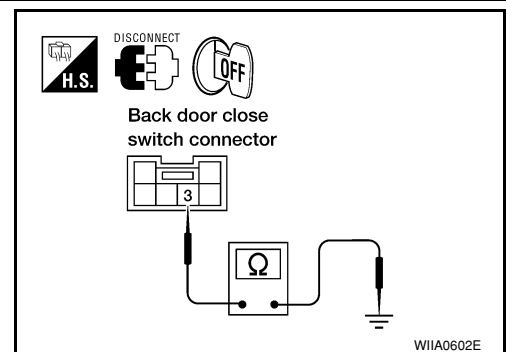
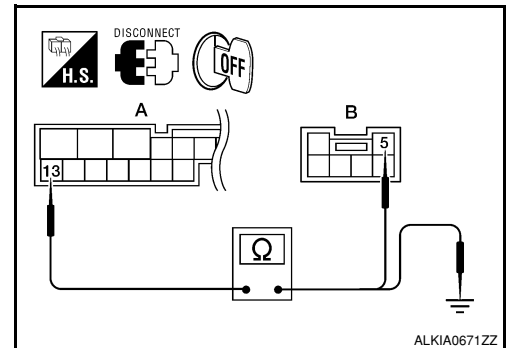
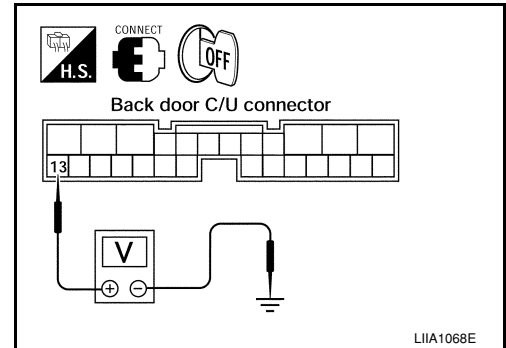
#### 4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

Check continuity between back door close switch connector B63 terminal 3 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door close switch.
- NO >> Repair the harness between the back door close switch and ground.



# PINCH STRIP SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## PINCH STRIP SYSTEM

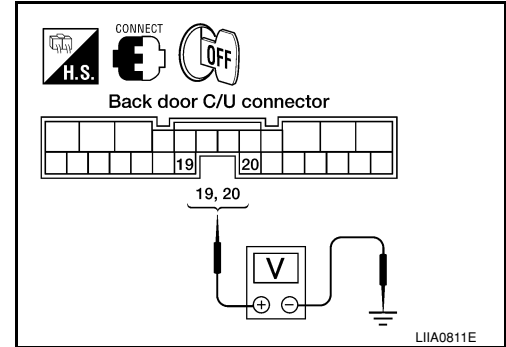
### Diagnosis Procedure

INFOID:000000001337944

#### 1. PINCH STRIP SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the pinch strip, check voltage between back door control unit connector B55 terminals 19, 20 and ground.

Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19	Ground	Pinch strip RH operation	0
		Other	4
20	Ground	Pinch strip LH operation	0
		Other	4



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

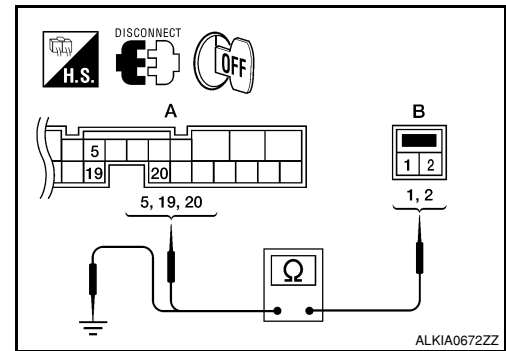
#### 2. PINCH STRIP CIRCUIT INSPECTION

1. Disconnect pinch strip and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 5, 19 (RH) or 5, 20 (LH) and pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2.

- RH: 1 - 19 : Continuity should exist.**  
**LH: 1 - 20 : Continuity should exist.**  
**RH and LH 2 - 5 : Continuity should exist.**

3. Check continuity between pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2 and ground.

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



Is the inspection result normal?

- YES >> Replace the pinch strip.  
NO >> Repair the harness between the pinch strip and the back door control unit.

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# BACK DOOR WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR WARNING CHIME SYSTEM

### Diagnosis Procedure

INFOID:000000001337945

#### 1. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Disconnect back door control unit and back door warning chime.
2. Check continuity between back door control unit connector (A) B55 terminal 6 and back door warning chime connector (B) D514 terminal 1.

**6 - 1 : Continuity should exist.**

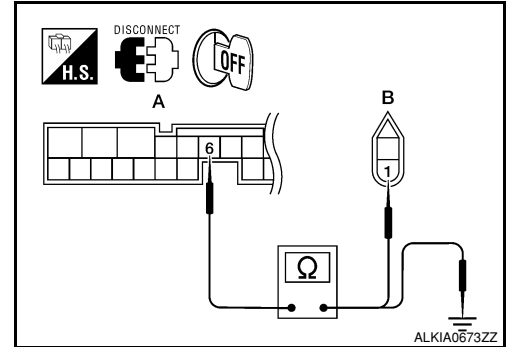
3. Check continuity between back door control unit connector (A) B55 terminal 6 and ground.

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

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the harness between the warning chime and the back door control unit.



#### 2. WARNING CHIME CIRCUIT INSPECTION

1. Check continuity between back door control unit connector (A) B55 terminal 9 and back door warning chime connector (B) D514 terminal 2.

**9 - 2 : Continuity should exist.**

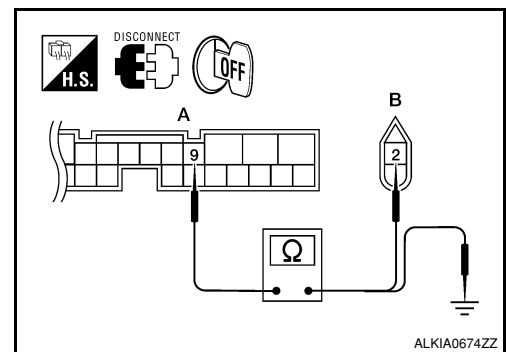
2. Check continuity between back door control unit connector (A) B55 terminal 9 and ground.

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

Is the inspection result normal?

YES >> Replace warning chime.

NO >> Repair or replace the harness between the warning chime and the back door control unit.



# HALF-LATCH SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

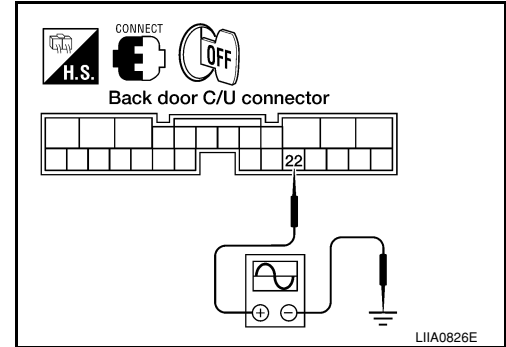
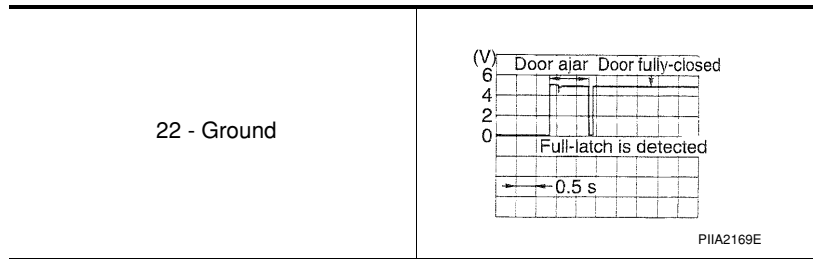
## HALF-LATCH SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001337946

#### 1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 22 and ground.



Is the inspection result normal?

- YES >> Half-latch switch is OK.  
NO >> GO TO 2

#### 2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch switch and back control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 22 and back door latch (half-latch switch) connector (B) D705 terminal 6.

**22 - 6 : Continuity should exist.**

3. Check continuity between back control unit connector (A) B55 terminal 22 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (half-latch switch) and the back door control unit.

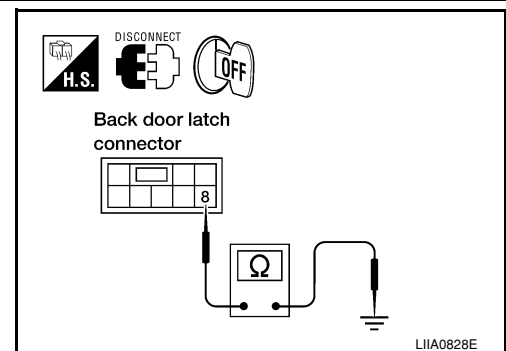
#### 3. HALF-LATCH SWITCH GROUND INSPECTION

Check continuity between back door latch (half-latch switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (half-latch switch) and ground.



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# BACK DOOR OPEN SWITCH SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

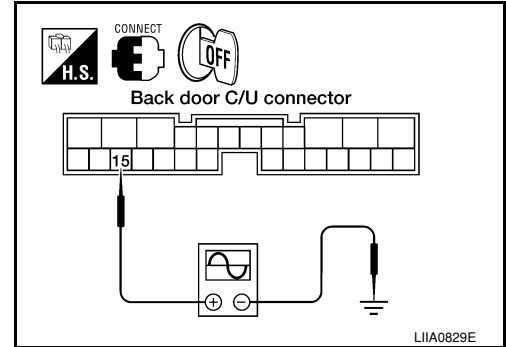
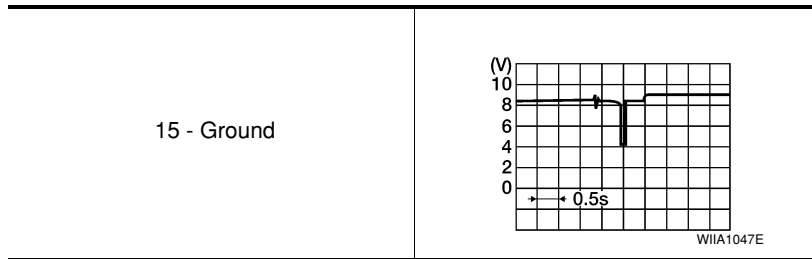
## BACK DOOR OPEN SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001337947

#### 1. OPEN SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the back door, check voltage between back door control unit connector B55 terminal 15 and ground.



Is the inspection result normal?

- YES >> Open switch is OK.  
NO >> GO TO 2

#### 2. OPEN SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 15 and back door latch (open switch) connector (B) D705 terminal 4.

**15 - 4 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 15 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (open switch) and the back door control unit.

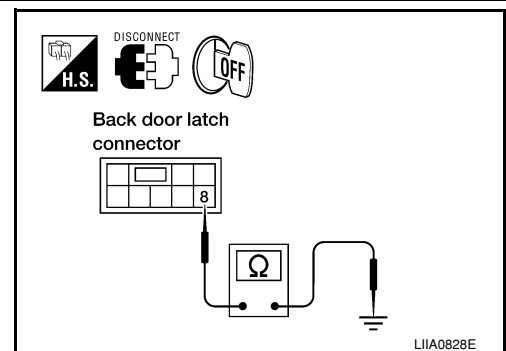
#### 3. OPEN SWITCH GROUND INSPECTION

Check continuity between back door latch (open switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (open switch) and ground.



# BACK DOOR CLOSE SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

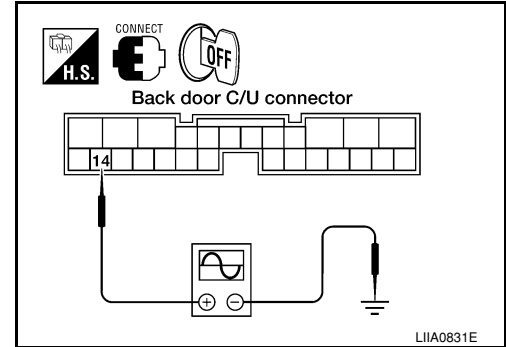
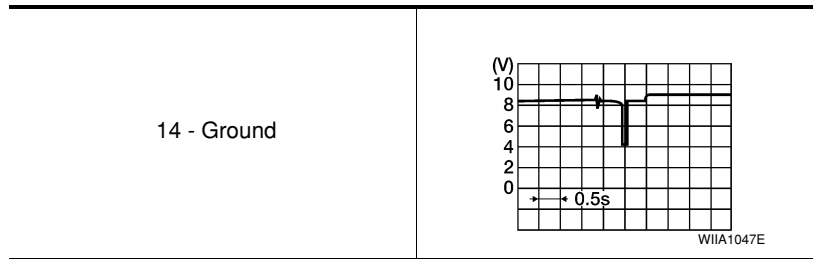
## BACK DOOR CLOSE SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001337948

#### 1. CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 14 and ground.



Is the inspection result normal?

- YES >> Close switch is OK.  
NO >> GO TO 2

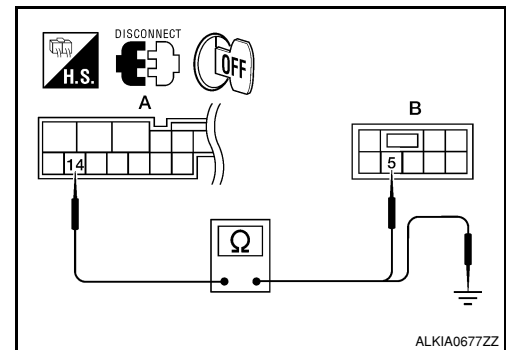
#### 2. CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 14 and back door latch (close switch) connector (B) D705 terminal 5.

**14 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 14 and ground.

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



Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (close switch) and the back door control unit.

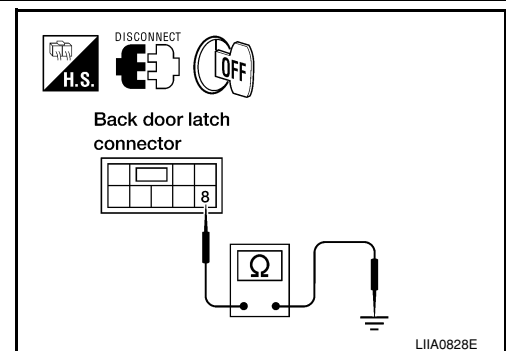
#### 3. CLOSE SWITCH GROUND INSPECTION

Check continuity between back door latch (close switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (close switch) and ground.



# BACK DOOR HANDLE SWITCH SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## BACK DOOR HANDLE SWITCH SYSTEM

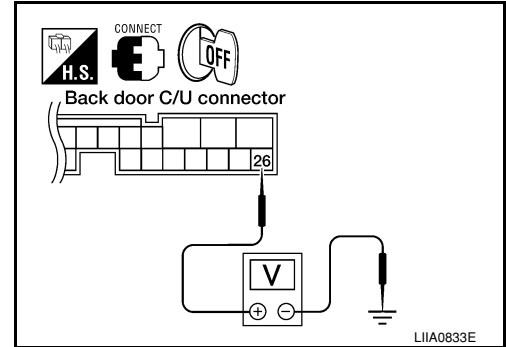
### Diagnosis Procedure

INFOID:000000001337949

#### 1. BACK DOOR HANDLE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door handle switch, check voltage between back door control unit connector B55 terminal 26 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26	Ground	Pull the back door handle switch (ON)	0
		Other (OFF)	Battery voltage



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

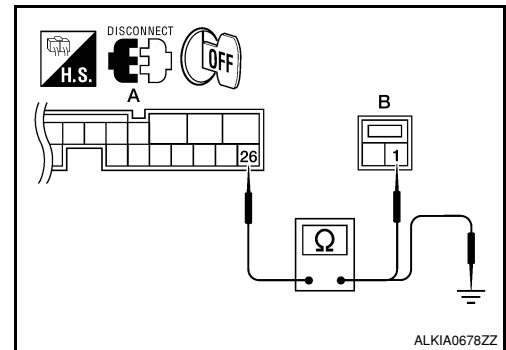
#### 2. BACK DOOR HANDLE SWITCH CIRCUIT INSPECTION

1. Disconnect back door handle switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 26 and back door handle switch connector (B) D706 terminal 1.

**26 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 26 and ground.

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



Is the inspection result normal?

- YES >> GO TO 4  
NO >> Repair the harness between the back door handle switch and the back door control unit.

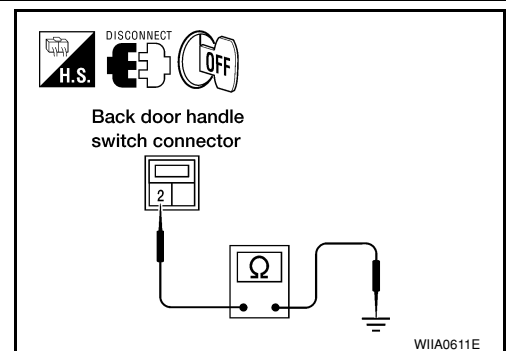
#### 3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

Check continuity between back door handle switch connector D706 terminal 2 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door handle switch.  
NO >> Repair the harness between the back door handle switch and ground.





# CINCH LATCH MOTOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## CINCH LATCH MOTOR SYSTEM

### Diagnosis Procedure

INFOID:000000001337950

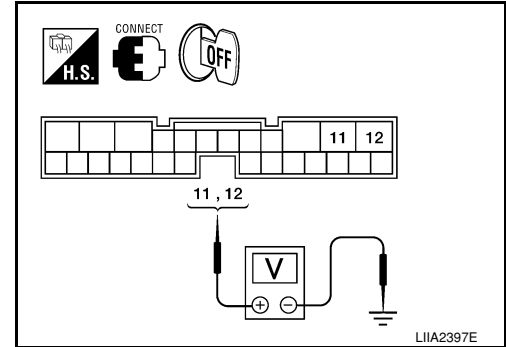
#### 1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminals 11, 12 and ground.

11 - Ground	Battery voltage
12 - Ground	

Is the inspection result normal?

- YES >> GO TO 2  
 NO >> Replace the back door control unit.



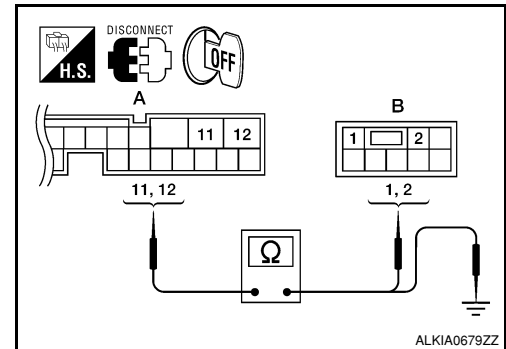
#### 2. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and back door latch (cinch latch motor) connector D705 (B) terminals 1, 2.

- 11 - 2 : Continuity should exist.**  
**12 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and ground.

- 11 - Ground : Continuity should not exist.**  
**12 - Ground : Continuity should not exist.**



Is the inspection result normal?

- YES >> GO TO 3  
 NO >> Repair the harness between the back door latch (cinch latch motor) and the back door control unit.

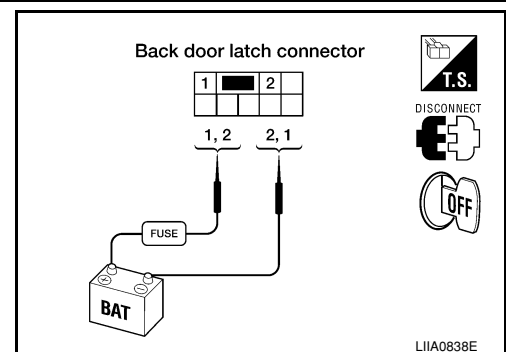
#### 3. CINCH LATCH MOTOR OPERATION INSPECTION

Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

- 1 (+) - 2 (-) : It operates.**  
**1 (-) - 2 (+) : It operates. (Reverse rotation)**

Is the inspection result normal?

- YES >> Motor is OK.  
 NO >> Replace the back door latch.



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# INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

### Description

INFOID:000000001349109

Carrying the Intelligent Key, enables the driver to open the liftgate using the back door handle even when the vehicle is locked. When lifting the handle, the back door handle switch sends this signal to the Intelligent Key unit which treats it as a request switch signal. When the Intelligent Key unit, using the rear bumper antenna, validates the presence of the Intelligent Key, it sends an open signal to the back door control unit regardless whether the vehicle is locked.

Rear bumper antenna is mounted on the rear bumper and is used to allow the back door handle opening of the locked back door when the Intelligent Key is present.

### Diagnosis Procedure

INFOID:000000001349107

#### 1. BACK DOOR HANDLE SWITCH SIGNAL INSPECTION

With all doors unlocked, check the back door handle operation by lifting the handle.

Did the back door respond correctly by opening?

YES >> GO TO 2

NO >> Refer to [DLK-120, "Diagnosis Procedure"](#).

#### 2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob respond correctly?

YES >> GO TO 3

NO >> Refer to [DLK-90, "Diagnosis Procedure"](#).

#### 3. INTELLIGENT KEY UNIT SIGNAL INSPECTION

##### NOTE:

Since the diode is a uni-directional component, pay close attention to the polarity of the ohmmeter being used as the presence of a diode in the circuit will affect the result.

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit, back door handle switch and back door control unit connectors.
3. Check continuity between Intelligent Key unit connector (A) M70 terminal 29 and back door handle switch connector (B) D706 terminal 1.

**29 (+) - 1 (-) : Continuity should exist.**

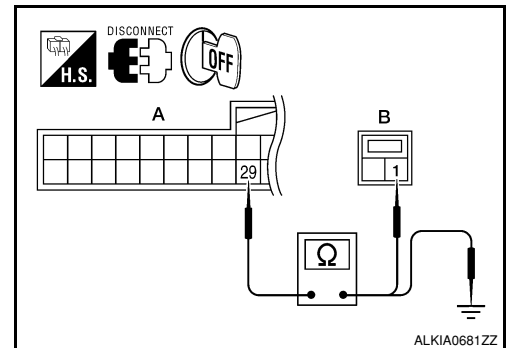
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 29 and ground.

**29 (+) - Ground (-) : Continuity should not exist.**

Is the inspection result normal?

YES >> Replace the Intelligent Key unit.

NO >> Repair or replace the harness or the diode as necessary.



# INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL

### Description

INFOID:000000001349108

The keyfob of the Intelligent Key unit is capable of opening and closing the power back door. The driver can open or close the liftgate by pressing the liftgate button regardless whether the vehicle is locked provided the keyfob is within operating range.

### Diagnosis Procedure

INFOID:000000001349106

#### 1. POWER LIFTGATE SWITCH FUNCTION INSPECTION

Check power liftgate switch using switch operation.

Did the back door respond correctly?

YES >> GO TO 2

NO >> Refer to [DLK-109. "Diagnosis Procedure"](#).

#### 2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob respond correctly?

YES >> GO TO 3

NO >> Refer to [DLK-90. "Diagnosis Procedure"](#).

#### 3. INTELLIGENT KEY UNIT SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit, back door control unit and power liftgate switch connectors.
3. Check continuity between Intelligent Key unit connector (A) M70 terminal 23 and back door control unit connector (B) B55 terminal 23.

**23 - 23 : Continuity should exist.**

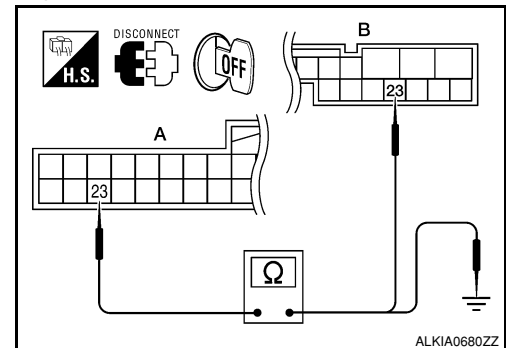
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 23 and ground.

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

Is the inspection result normal?

YES >> Replace Intelligent Key unit.

NO >> Repair or replace the harness as necessary.



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# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Description

INFOID:000000001329183

Homelink universal transceiver can store and transmit a maximum of 3 radio signals. Allows operation of garage doors, gates, home and office lighting, entry door locks and security system, etc. Homelink universal transceiver power supply uses vehicle battery, which enables it to maintain every program in case battery is discharged or removed.

### Component Function Check

INFOID:000000001329184

#### 1. CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

Is the inspection result normal?

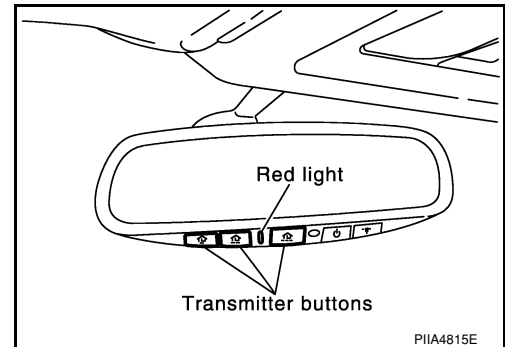
- YES >> GO TO 2
- NO >> Receiver or hand-held transmitter is malfunctioning.

#### 2. CHECK ILLUMINATION

1. Turn ignition switch "OFF".
2. Press each of the transmitter buttons and watch for the red light to illuminate with each button.

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Refer to [DLK-124, "Diagnosis Procedure"](#).



#### 3. CHECK TRANSMITTER

Check transmitter with Tool\*.

\*:For details, refer to Technical Service Bulletin.

Is the inspection result normal?

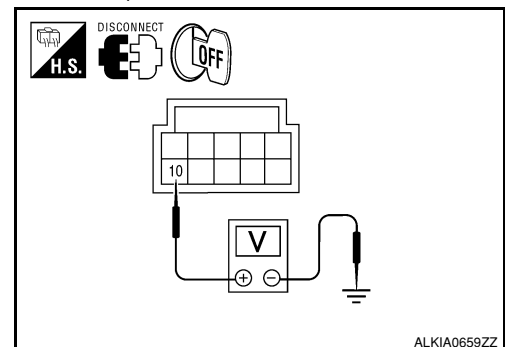
- YES >> Receiver or hand-held transmitter malfunction, not vehicle related.
- NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

### Diagnosis Procedure

INFOID:000000001329185

#### 1. CHECK POWER SUPPLY

1. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
2. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R4	10	Ground	Ignition switch position: LOCK	Battery voltage

Is the inspection result normal?

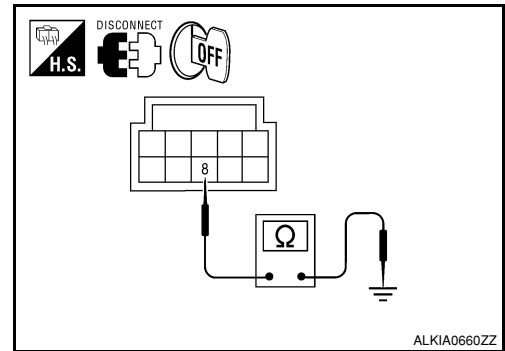
YES >> GO TO 2

NO >> Check the following.

- 10A fuse [No. 19 located in the fuse block (J/B)]
- Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

## 2.CHECK GROUND CIRCUIT

Check continuity between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal	Ground	Continuity
R4	8		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

## 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

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## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000001278151

#### VALUES ON THE DIAGNOSIS TOOL

Refer to [BCS-38, "Reference Value"](#).

#### TERMINAL LAYOUT

Refer to [BCS-41, "Terminal Layout"](#).

# BCM (BODY CONTROL MODULE)

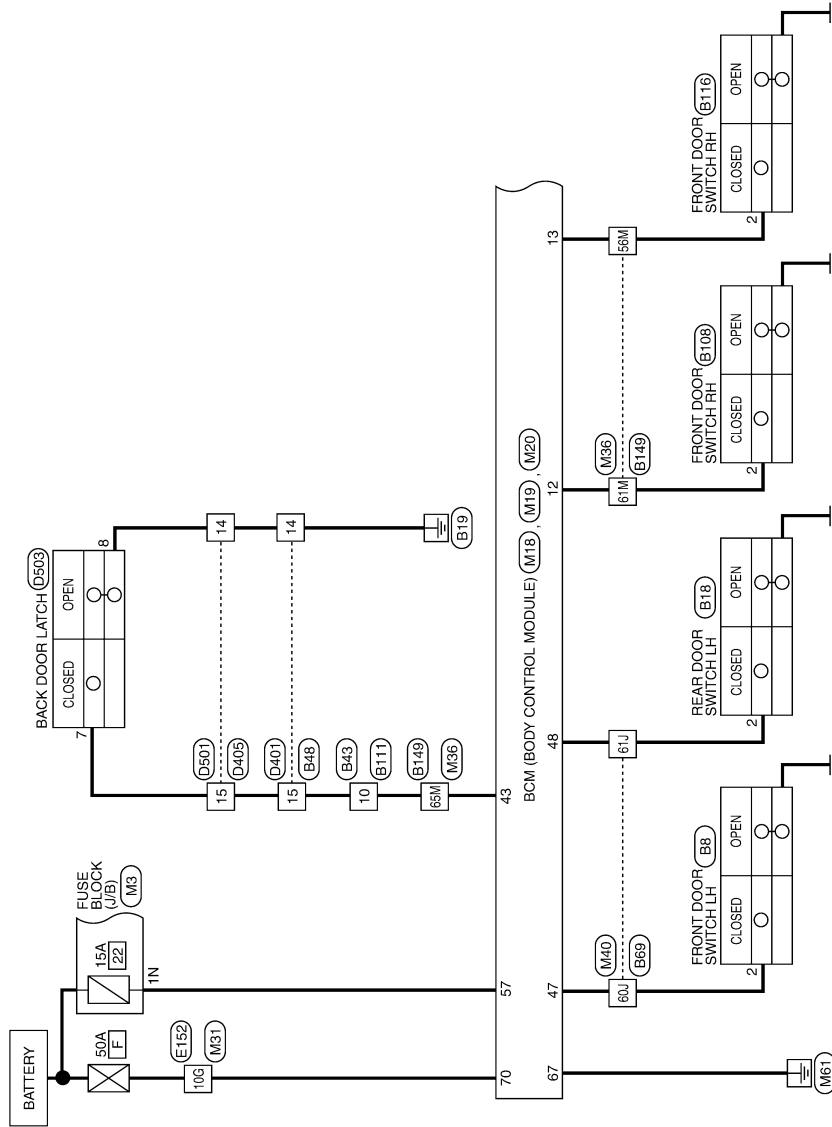
[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## Wiring Diagram — POWER DOOR LOCK SYSTEM —

INFOID:000000001278152

### POWER DOOR LOCK - WITH INTELLIGENT KEY SYSTEM



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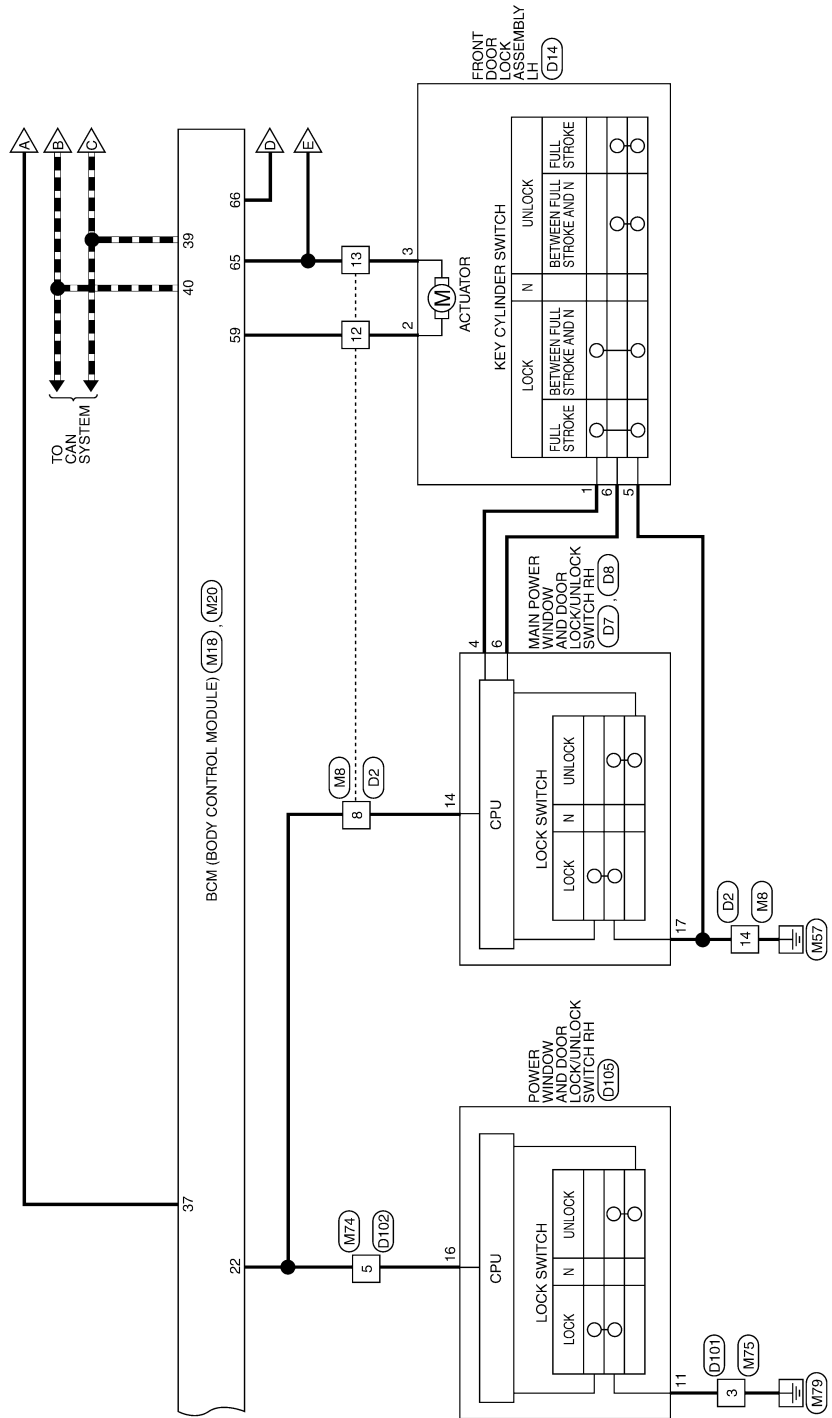
ALKWA0077GE

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

— : DATA LINE



ALKWA0078GE

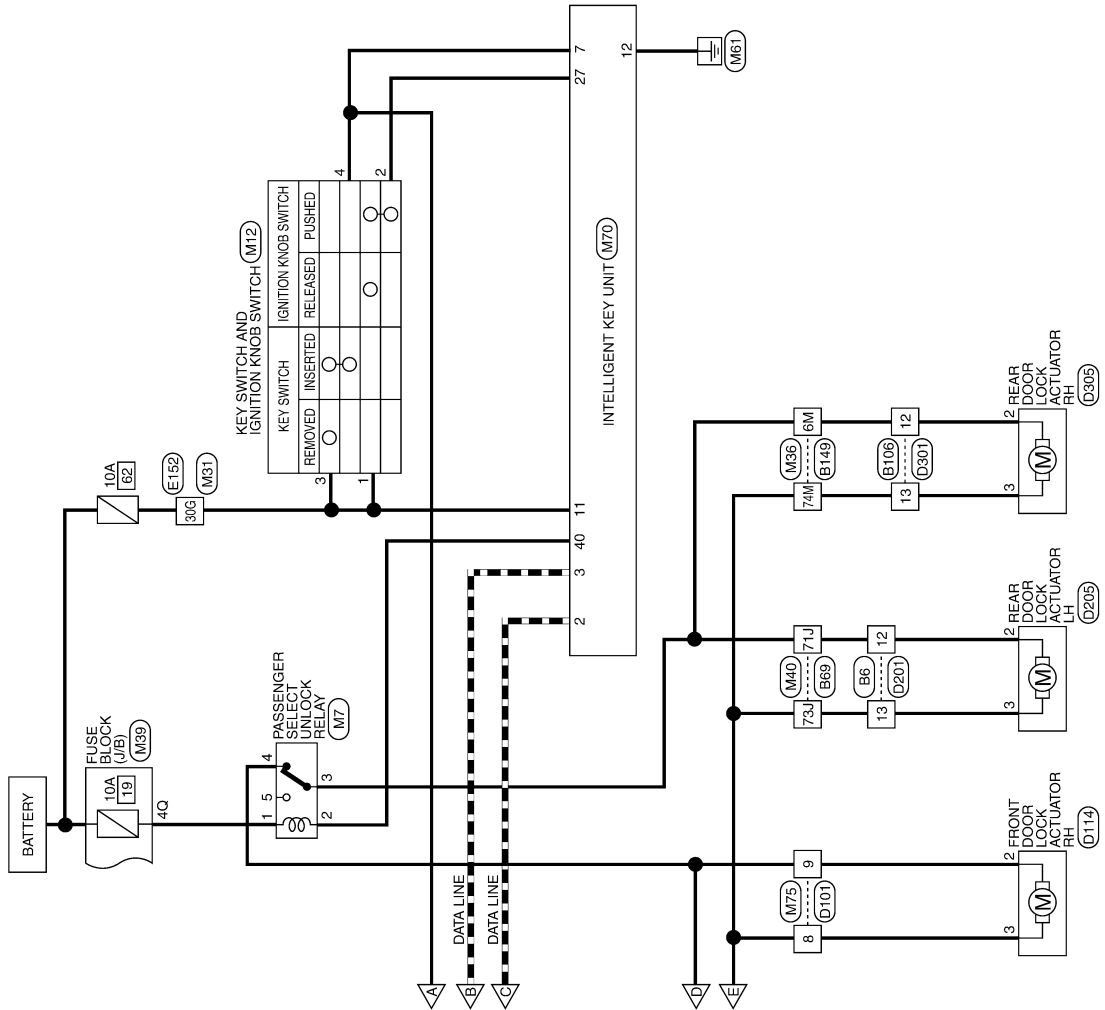


# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

■ : DATA LINE



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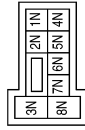
# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## POWER DOOR LOCK CONNECTORS - WITH INTELLIGENT KEY SYSTEM

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



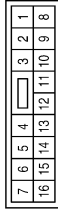
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M7
Connector Name	PASSENGER SELECT UNLOCK RELAY
Connector Color	BLACK



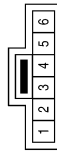
Terminal No.	Color of Wire	Signal Name
1	Y	-
2	V	-
3	G/Y	-
4	G/Y	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	W/V	-
12	G	-
13	V	-
14	B	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	R/B	-
3	Y	-
4	B/R	-

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



Terminal No.	Color of Wire	Signal Name
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)

Terminal No.	Color of Wire	Signal Name
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
37	B/R	KEY SW
39	L	CAN-H
40	P	CAN-L

ALKIA0620GB

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

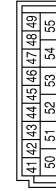
Terminal No.	Color of Wire	Signal Name
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W/B	BATT (F/L)

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



Terminal No.	Color of Wire	Signal Name
57	Y/R	BAT
59	G	DOOR UNLOCK OUTPUT (DR)
65	V	DOOR LOCK OUTPUT (ALL)

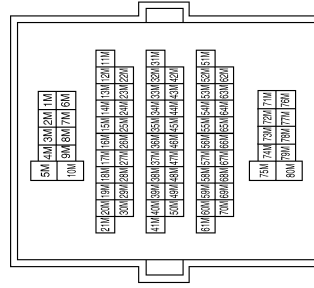
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



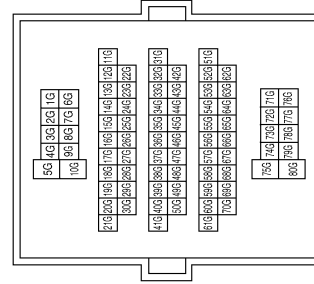
Terminal No.	Color of Wire	Signal Name
43	R/B	BACK_DOOR_SW
47	SB	DOOR_SW (DR)
48	R/Y	DOOR_SW (RL)

Terminal No.	Color of Wire	Signal Name
6M	G/Y	-
56M	GR	-
61M	R/L	-
65M	R/B	-
74M	V	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
30G	Y	-

ALKIA0621GB

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DLK

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

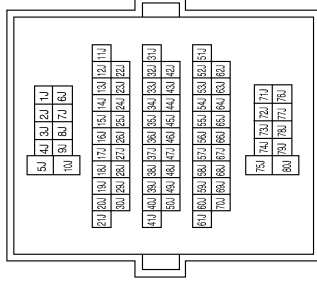
< ECU DIAGNOSIS >

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



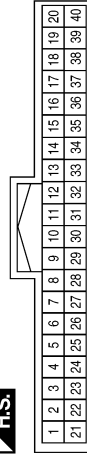
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

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



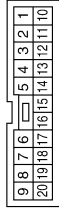
Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/Y	-
71J	G/Y	-
73J	V	-

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE

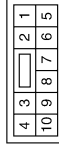


Terminal No.	Color of Wire	Signal Name
2	L	CAN-H
3	P	CAN-L
7	B/R	KEY_SW_INPUT
11	Y	BAT
12	B	GND
27	R/B	PUSH_SW_INPUT
40	V	AS_SEL_UNLOCK_OUT

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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



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

Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

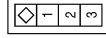
ALKIA0622GB

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

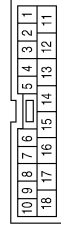
< ECU DIAGNOSIS >

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



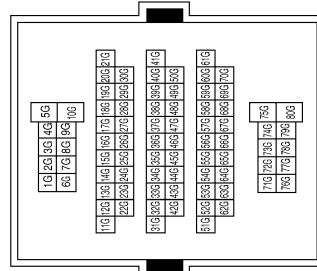
Terminal No.	Color of Wire	Signal Name
2	SB	-

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



Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
30G	Y	-

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



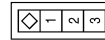
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



Terminal No.	Color of Wire	Signal Name
2	R/Y	-

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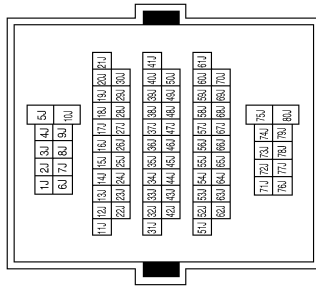
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# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

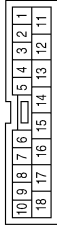
< ECU DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/W	-
71J	G/Y	-
73J	V	-

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



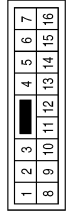
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

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



Terminal No.	Color of Wire	Signal Name
2	R/L	-

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



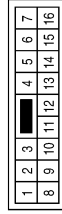
Terminal No.	Color of Wire	Signal Name
2	GR	-

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

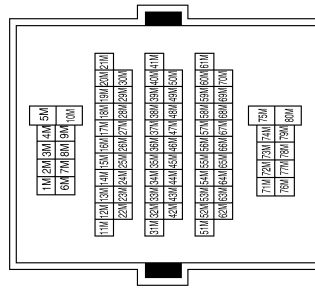
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



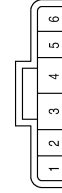
Terminal No.	Color of Wire	Signal Name
8	LG/W	-
12	G	-
13	V	-
14	B	-

Terminal No.	Color of Wire	Signal Name
6M	G/Y	-
56M	GR	-
61M	R/L	-
65M	R/W	-
74M	V	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE

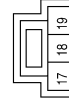


Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



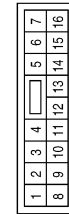
Terminal No.	Color of Wire	Signal Name
1	L	LOCK
2	G	UNLOCK
3	V	LOCK
5	B	GND
6	R	UNLOCK

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
17	B	GND

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



Terminal No.	Color of Wire	Signal Name
4	L	LOCK
6	R	UNLOCK
14	LG/W	ANTI_PINCH_SERIAL_LINK

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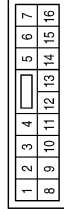
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# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

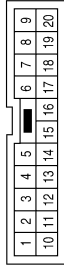
< ECU DIAGNOSIS >

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



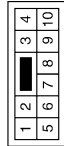
Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	ANTI_PINCH_SERIAL_LINK

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



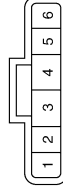
Terminal No.	Color of Wire	Signal Name
5	LG/W	-

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



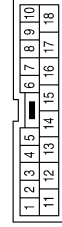
Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

Connector No.	D205
Connector Name	REAR DOOR LOCK ACTUATOR LH
Connector Color	BLACK



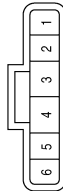
Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	D114
Connector Name	FRONT DOOR LOCK ACTUATOR RH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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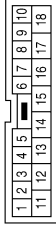


# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

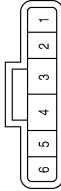
< ECU DIAGNOSIS >

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



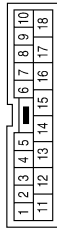
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D305
Connector Name	REAR DOOR LOCK ACTUATOR RH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



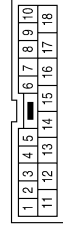
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



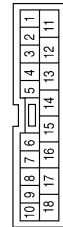
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

## Fail Safe

### Fail-safe index

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

A  
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INFOID:000000001278155

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

## DTC Inspection Priority Chart

INFOID:000000001278156

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

Priority	DTC
1	<ul style="list-style-type: none"><li>U1000: CAN COMM CIRCUIT</li><li>U1010: CONTROL UNIT (CAN)</li></ul>

## DTC Index

INFOID:000000001278157

### NOTE:

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—
U1000: CAN COMM CIRCUIT	—	—	<a href="#">DLK-45</a>
U1010: CONTROL UNIT (CAN)	—	—	<a href="#">DLK-46</a>

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

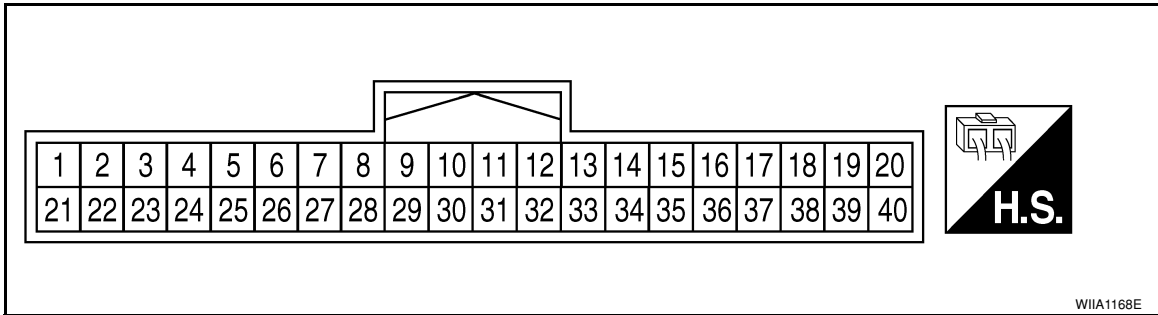
[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT

Reference Value - Intelligent Key Unit

INFOID:000000001348325

### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.	
			Ignition Switch Position	Operation or Conditions		
1	L/Y	Steering lock solenoid power supply	LOCK	—	5	
2	L	CAN-H	—	—	—	
3	P	CAN-L	—	—	—	
4	GR	Intelligent Key warning buzzer (front of vehicle)	LOCK	Operate door request switch.	Buzzer OFF	Battery voltage
					Buzzer ON	0
5	B/W	Front door request switch LH	—	Press front door request switch LH.		0
				Other than above		Battery voltage
6	G/R	Ignition switch (ON)	ON	—	Battery voltage	
7	B/R	Key switch	LOCK	Insert mechanical key into ignition key cylinder.		Battery voltage
				Remove mechanical key from ignition key cylinder.		0
8	G	Remote keyless entry receiver ground	—	—	0	
9	GR	Remote keyless entry receiver signal	—	When remote keyless entry receiver receives signal from keyfob.		
				Stand-by		
11	Y	Power source (Fuse)	—	—	Battery voltage	
12	B	Ground	—	—	0	

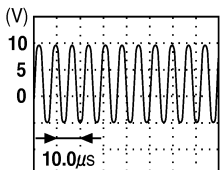
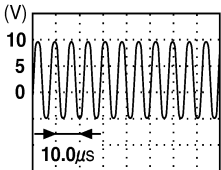
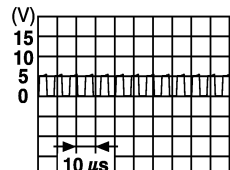
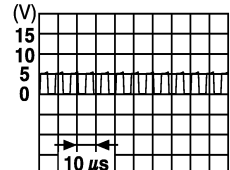
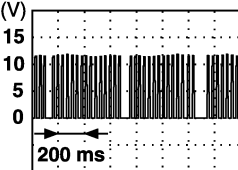
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DLK

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

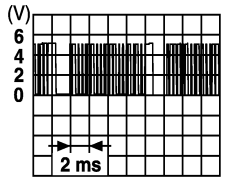
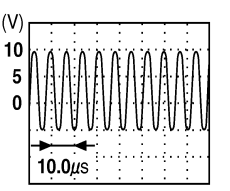
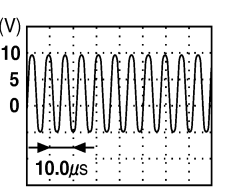
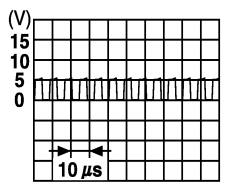
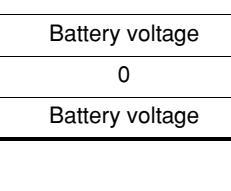


< ECU DIAGNOSIS >

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
13	B/W	Inside key antenna 3 (front of center console) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
14	W/G	Inside key antenna 3 (front of center console) (-) signal			
15	G	Inside key antenna 1 (rear of center console) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
16	L	Inside key antenna 1 (rear of center console) (-) signal			
17	P	Rear bumper antenna (+) signal	LOCK	Lift back door handle (close switch).	 SIIA1910J
18	W/R	Rear bumper antenna (-) signal			
19	P	Front outside antenna LH (+) signal	LOCK	Press front door request switch LH.	 SIIA1910J
20	V	Front outside antenna LH (-) signal			
21	B/W	Remote keyless entry receiver RSSI signal	—	—	 PIIA2344E
23	L/W	Power back door output	—	Power liftgate switch ON.	0
				Power liftgate switch OFF.	Battery voltage
25	P/L	Front door request switch RH	—	Press front door request switch RH.	0
				Other than above	Battery voltage
27	R/B	Ignition knob switch	—	Press ignition switch.	Battery voltage
				Return ignition switch to LOCK position.	0
28	R	Unlock sensor (driver side)	—	Door (driver side) is locked.	5
				Door (driver side) is unlocked.	0
29	LG/W	Back door open switch input	—	Back door handle switch ON.	0
				Back door handle switch OFF.	Battery voltage

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
30	G/B	Remote keyless entry receiver power supply	—	—	5
32	L/O	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	
				Other than above	5
33	W	Rear parcel shelf antenna (+) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	
34	BR	Rear parcel shelf antenna (-) signal			
35	O	Inside key antenna 2 (luggage compartment) (+) signal	LOCK	Back door open → all doors closed	
36	R	Inside key antenna 2 (luggage compartment) (-) signal			
37	LG	Front outside antenna (+) signal RH	LOCK	Press front door request switch RH.	
38	B/Y	Front outside antenna (-) signal RH			
39	L/R	P range switch	—	Selector lever is in "P" position.	0
			—	Other than above	Battery voltage
40	V	AS select unlock output	—	UNLOCK with rear door locks disabled.	0
			—	Other than above	Battery voltage

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DLK

# INTELLIGENT KEY UNIT

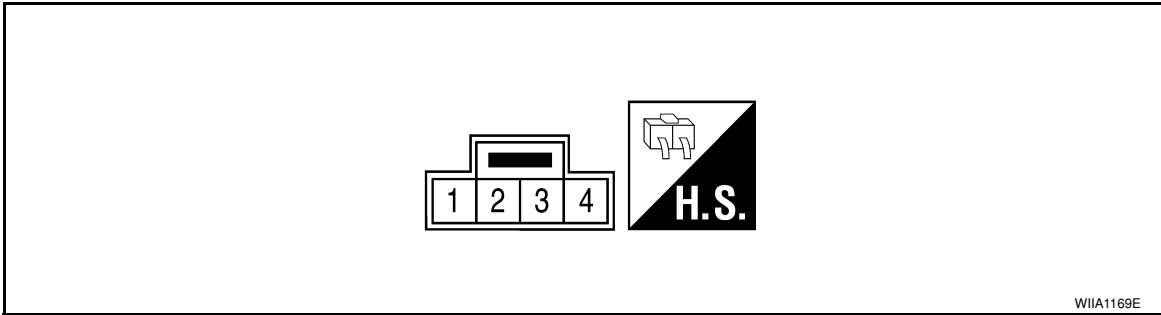
< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Reference Value - Steering Lock Solenoid

INFOID:000000001349100

### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal	Wire Color	Signal Designation	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
1	G/Y	Power source (fuse)	LOCK	—	Battery voltage
2	L/Y	Steering lock solenoid power supply	LOCK	—	5
3	L/O	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	<p style="text-align: right;">SIIA1911J</p>
				Other than the above	5
4	B	Steering lock solenoid ground	—	—	0

# INTELLIGENT KEY UNIT

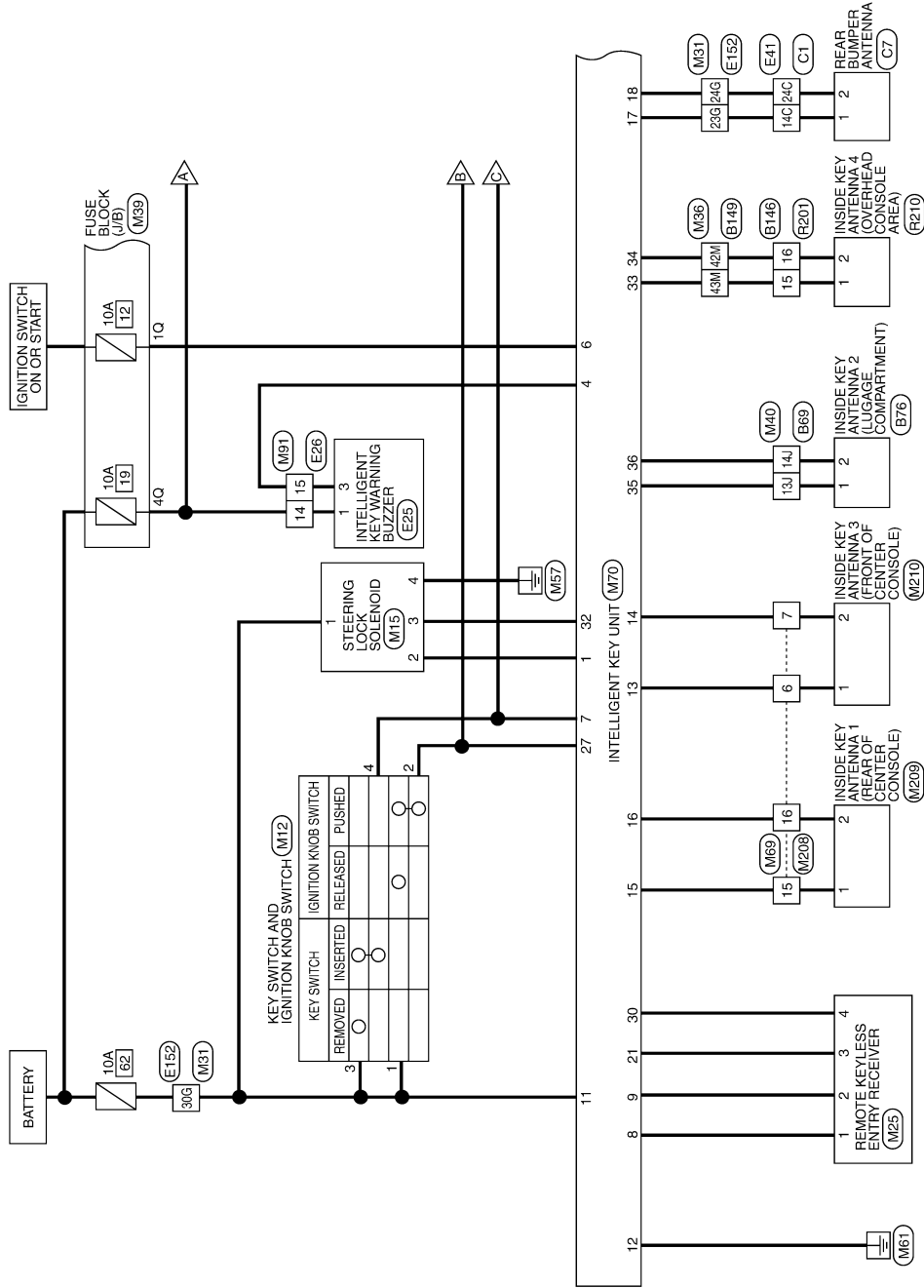
< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Wiring Diagram — INTELLIGENT KEY SYSTEM —

INFOID:000000001348284

### INTELLIGENT KEY SYSTEM



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DLK

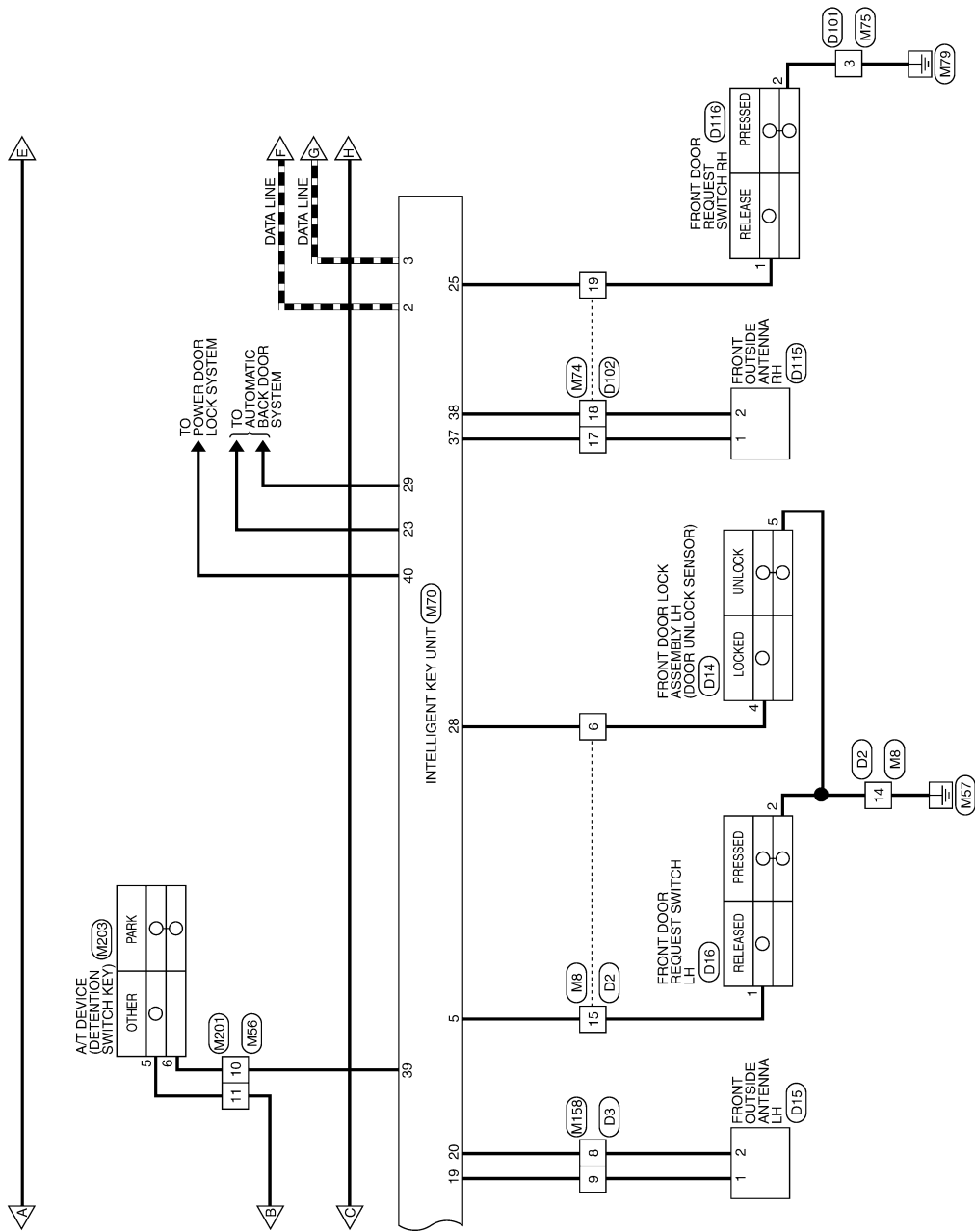
ALKWA0069GE

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

--- : DATA LINE



ALKWA0070GE

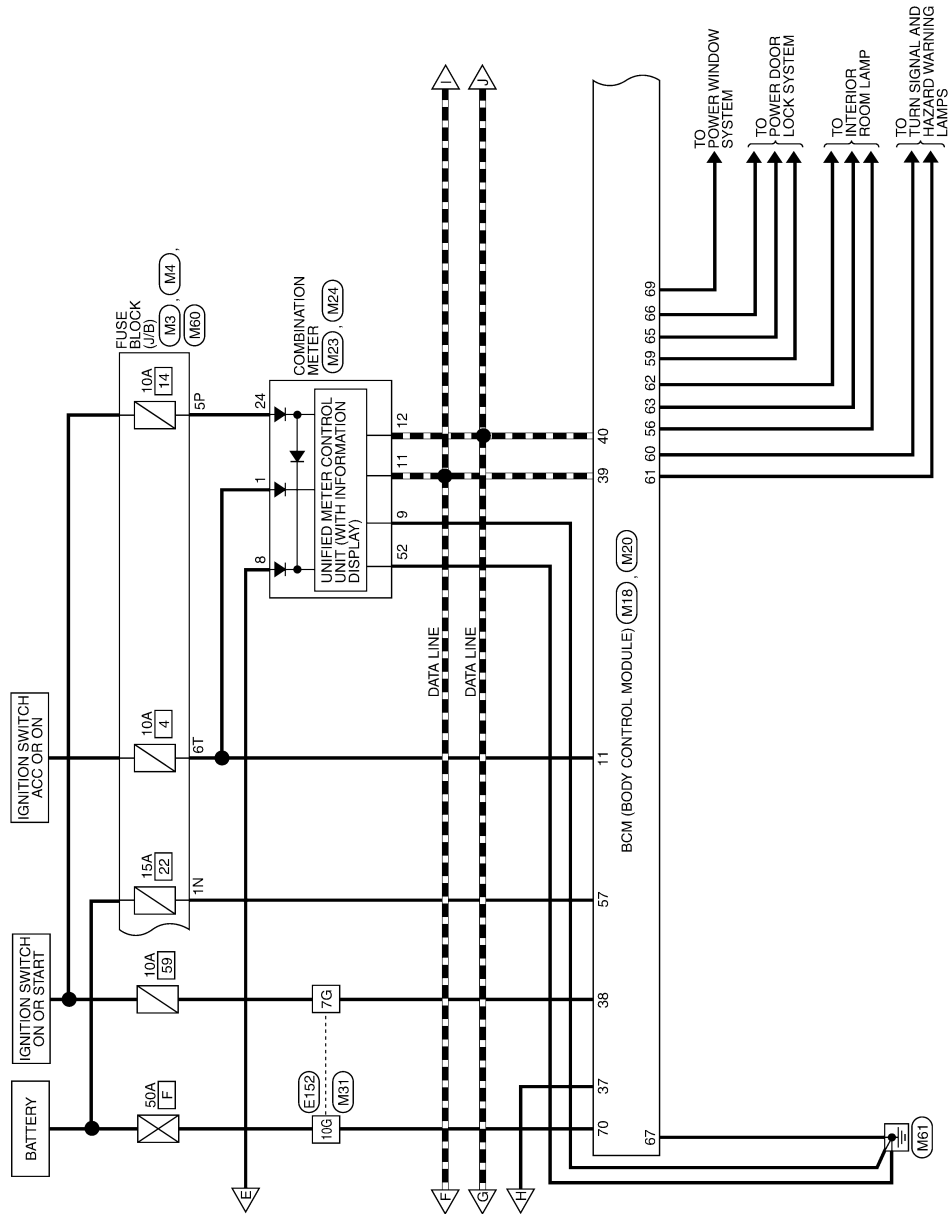


# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

DATA LINE :



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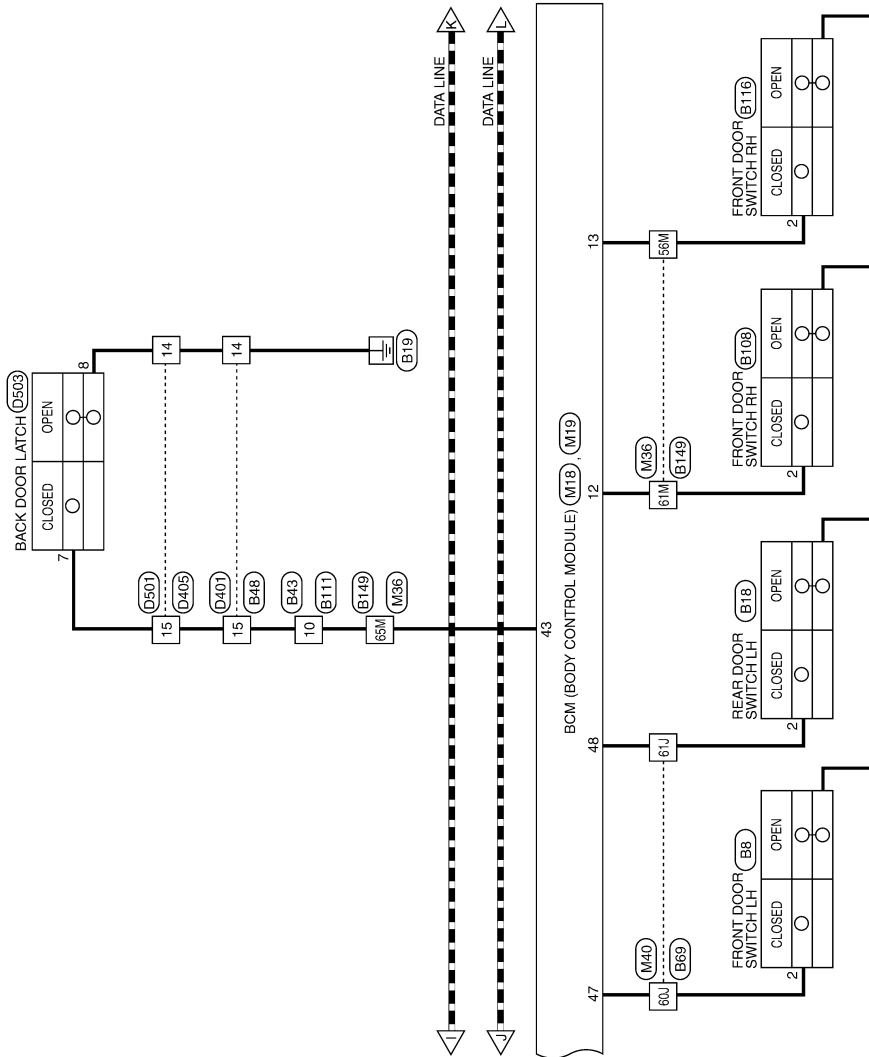
ALKWA0071GE

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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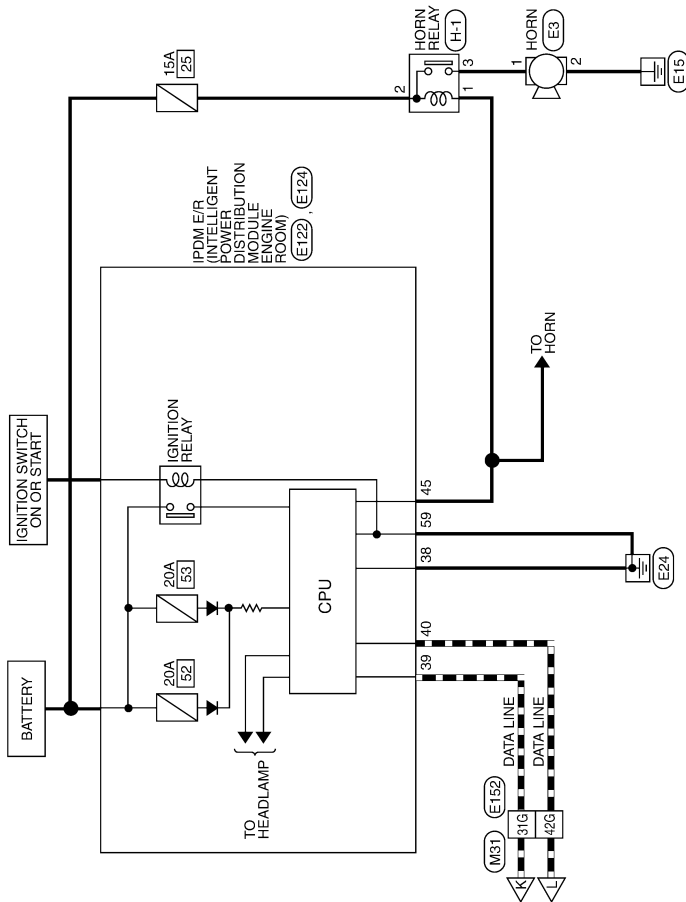
ALKWA0072GE

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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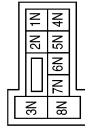
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ALKWA0073GE

### INTELLIGENT KEY SYSTEM CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



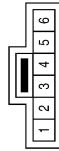
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



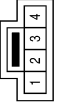
Terminal No.	Color of Wire	Signal Name
6	R	-
14	B	-
15	B/W	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	R/B	-
3	Y	-
4	B/R	-

Connector No.	M15
Connector Name	STEERING LOCK SOLENOID
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/Y	B+
2	L/Y	5V_PWR
3	L/O	SIG
4	B	GND

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

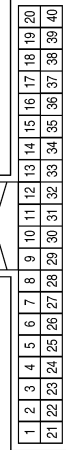
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
43	R/B	BACK_DOOR_SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

Terminal No.	Color of Wire	Signal Name
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

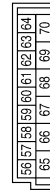
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
69	W/R	POWER WINDOW POWER SUPPLY OUTPUT (BAT)
70	W/B	BATT (F/L)

Terminal No.	Color of Wire	Signal Name
59	G	DOOR UNLOCK OUTPUT (DR)
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
62	R/W	STEP LAMP OUTPUT
63	L	ROOM LAMP OUTPUT
65	V	DOOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)

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



Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT

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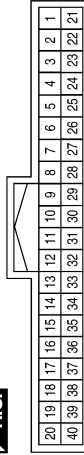
# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

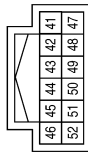
[WITH INTELLIGENT KEY SYSTEM]

Terminal No.	Color of Wire	Signal Name
1	O	—
8	Y/R	—
9	B	—
11	L	CAN-H
12	P	CAN-L
24	O/L	—

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



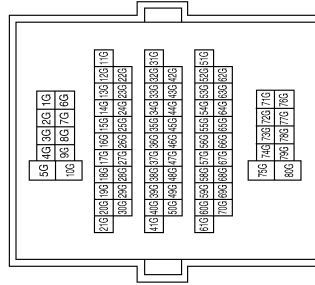
Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE



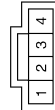
Terminal No.	Color of Wire	Signal Name
52	B	—

Terminal No.	Color of Wire	Signal Name
7G	W/L	—
10G	W/B	—
23G	W/L	—
24G	W/R	—
30G	Y	—
31G	L	—
42G	P	—

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



Connector No.	M25
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	G	GND
2	GR	SIG
3	B/W	RSSI
4	G/B	5V

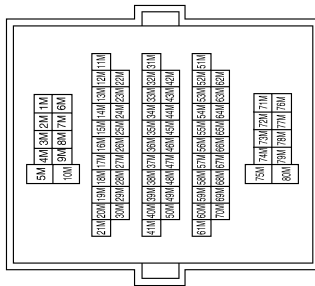
ALKIA0609GB

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

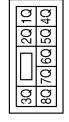
[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



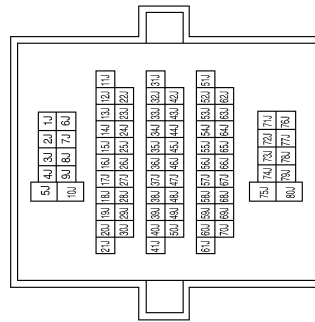
Terminal No.	Color of Wire	Signal Name
42M	BR	-
43M	W	-
56M	GR	-
61M	R/L	-
65M	R/B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1Q	G/R	-
4Q	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
13J	O	-
14J	R	-
60J	SB	-
61J	R/Y	-

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	L/R	-
11	R/B	-

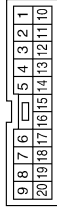
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# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

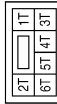
< ECU DIAGNOSIS >

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
6	B/W	-
7	W/G	-
15	G	-
16	L	-

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

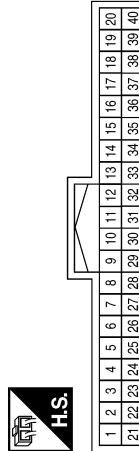


Terminal No.	Color of Wire	Signal Name
6T	O	-

Terminal No.	Color of Wire	Signal Name
29	LG/W	BK_DR_OP_SW_INP
30	G/B	RF_TUNER_5V_OUT
32	L/O	STRG_LOCK_SIG
33	W	RM_ANT_O/H_CNSL+
34	BR	RM_ANT_O/H_CNSL-
35	O	RM_ANT_LUGGAGE+
36	R	RM_ANT_LUGGAGE-
37	LG	AS_ANTENNA_(+)
38	B/Y	AS_ANTENNA_(-)
39	L/R	P_RANGE_SW
40	V	AS_SEL_UNLOCK_OUT

Terminal No.	Color of Wire	Signal Name
8	G	RF_TUNER_GND
9	GR	RF_TUNER_SIG
11	Y	BAT
12	B	GND
13	B/W	RM_ANT_FR_CNSL+
14	W/G	RM_ANT_FR_CNSL-
15	G	RM_ANT_RR_CNSL+
16	L	RM_ANT_RR_CNSL-
17	W/L	BACK_DOOR_ANT+
18	W/R	BACK_DOOR_ANT-
19	P	DR_ANTENNA_(+)
20	V	DR_ANTENNA_(-)
21	B/W	RF_TUNER_RSSI
23	L/W	PBD_OUTPUT
25	P/L	AS_REQUEST_SW
27	R/B	PUSH_SW_INPUT
28	R	DR_STATUS_SW_INPUT

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/Y	STRG_5V_POWER
2	L	CAN-H
3	P	CAN-L
4	GR	OUTSIDE_BUZZER_OUT
5	B/W	DR_REQUEST_SW
6	G/R	IGN_SW_INPUT
7	B/R	KEY_SW_INPUT

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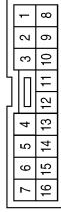


# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

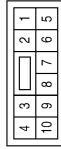
< ECU DIAGNOSIS >

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



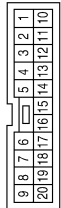
Terminal No.	Color of Wire	Signal Name
14	Y/R	-
15	GR	-

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



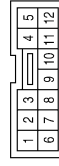
Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



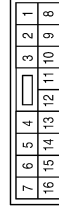
Terminal No.	Color of Wire	Signal Name
17	LG	-
18	B/Y	-
19	P/L	-

Connector No.	M203
Connector Name	A/T DEVICE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R/B	-
6	L/R	-

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	L/R	-
11	R/B	-

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	V	-
9	P	-

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ALKIA0612GB

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M210
Connector Name	INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)
Connector Color	GRAY



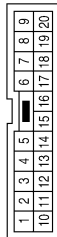
Terminal No.	Color of Wire	Signal Name
1	B/W	-
2	W/G	-

Connector No.	M209
Connector Name	INSIDE KEY ANTENNA 2 (REAR OF CENTER CONSOLE)
Connector Color	WHITE



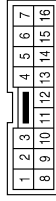
Terminal No.	Color of Wire	Signal Name
1	G	-
2	L	-

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
6	B/W	-
7	W/G	-
15	G	-
16	L	-

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



Terminal No.	Color of Wire	Signal Name
14	Y/R	-
15	GR	-

Connector No.	E25
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y/R	-
3	GR	-

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK



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

ALKIA0613GB

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

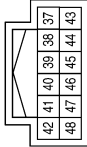
< ECU DIAGNOSIS >

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



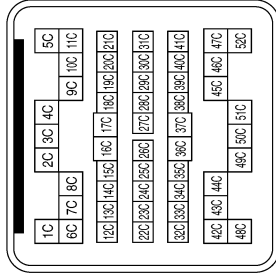
Terminal No.	Color of Wire	Signal Name
59	B	GND (PWR)

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



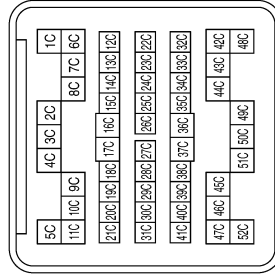
Terminal No.	Color of Wire	Signal Name
38	B	GND (SIG)
39	L	CAN-H
40	P	CAN-L
45	GW	ANTI_THEFT_HORN

Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14C	P	-
24C	W/R	-

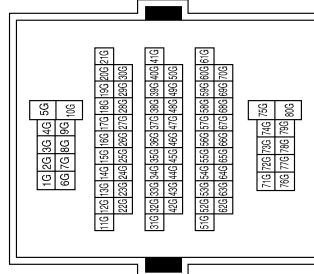
Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
14C	P	-
24C	W/R	-

Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
23G	P	-
24G	W/R	-
30G	Y	-
31G	L	-
42G	P	-

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



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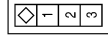
DLK

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

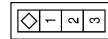
< ECU DIAGNOSIS >

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



Terminal No.	2	Color of Wire	R/Y	Signal Name	-
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Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



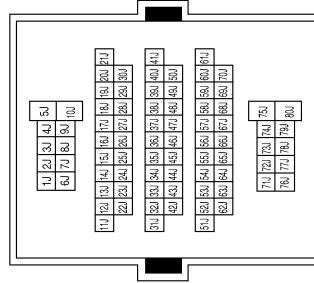
Terminal No.	2	Color of Wire	SB	Signal Name	-
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Connector No.	C7
Connector Name	REAR BUMPER ANTENNA
Connector Color	GRAY

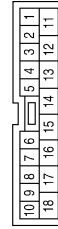


Terminal No.	1	Color of Wire	P	Signal Name	-
2		W/R			-

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

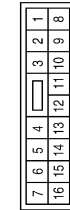


Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	14	Color of Wire	B	Signal Name	-
15		R/W			-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	10	Color of Wire	R/W	Signal Name	-
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Terminal No.	13J	Color of Wire	O	Signal Name	-
14J		R			-
60J		SB			-
61J		R/Y			-

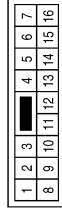
ALKIA0615GB

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

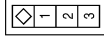
< ECU DIAGNOSIS >

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



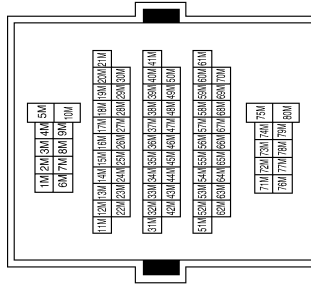
Terminal No.	Color of Wire	Signal Name
2	R/L	-

Connector No.	B76
Connector Name	INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)
Connector Color	GRAY



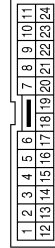
Terminal No.	Color of Wire	Signal Name
1	O	-
2	R	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



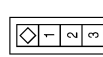
Terminal No.	Color of wire	Signal Name
42M	BR	-
43M	W	-
56M	GR	-
61M	R/L	-
65M	R/W	-

Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
15	W	-
16	BR	-

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



Terminal No.	Color of Wire	Signal Name
2	GR	-

A  
B  
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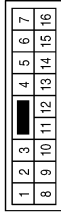
DLK

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



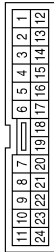
Terminal No.	Color of Wire	Signal Name
6	L/R	-
14	B	-
15	B/W	-

Connector No.	R210
Connector Name	INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	BR	-

Connector No.	R201
Connector Name	WIRE TO WIRE
Connector Color	BROWN



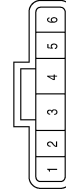
Terminal No.	Color of Wire	Signal Name
15	W	-
16	BR	-

Connector No.	D15
Connector Name	FRONT OUTSIDE ANTENNA
Connector Color	GRAY



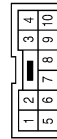
Terminal No.	Color of Wire	Signal Name
1	P	-
2	V	-

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
4	L/R	STATUS SWITCH
5	B	GND

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	V	-
9	P	-

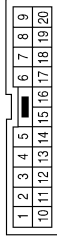
ALKIA0617GB

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
17	LG	-
18	B/Y	-
19	P/L	-

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



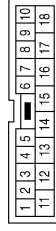
Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D16
Connector Name	FRONT DOOR REQUEST SWITCH LH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	B/W	-
2	B	-

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D116
Connector Name	FRONT DOOR REQUEST SWITCH RH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	P/L	-
2	B	-

Connector No.	D115
Connector Name	FRONT OUTSIDE ANTENNA RH
Connector Color	GRAY



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

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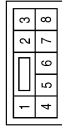
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# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

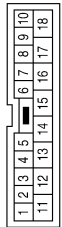
[WITH INTELLIGENT KEY SYSTEM]

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



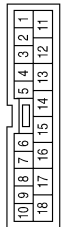
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



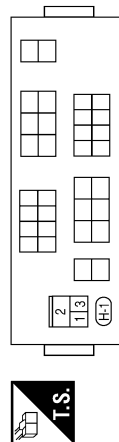
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	FUSE AND FUSIBLE LINK BOX
Connector Name	H-1
Connector Color	-



Terminal No.	Color of Wire	Signal Name
1	R/W	-
2	G/B	-
3	G	-

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INFOID:000000001348286

## Fail Safe

### Fail-safe operation

The Intelligent Key system operation will be interrupted if the Intelligent Key unit loses power or communication with the BCM.



# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

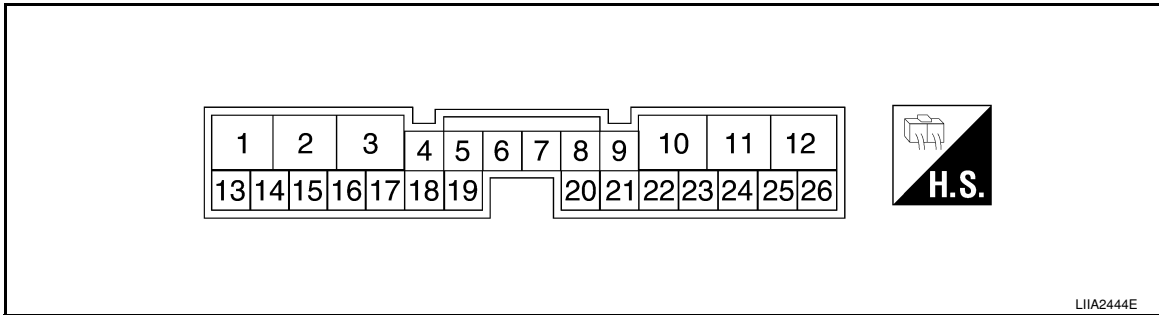
< ECU DIAGNOSIS >

## BACK DOOR CONTROL UNIT

Reference Value

INFOID:000000001348326

### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	B	Ground	—	—
2	B	Ground	—	—
3	Y/R	Battery power supply	—	Battery voltage
4	G	Hazard lamp output	Request to flash hazards	Pulse must be >50ms but less than 250ms 
5	B/P	Pinch strip ground	—	—
6	R	Warning chime output	Back door motor active	Battery voltage
7	G/R	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
8	GR/B	Back door close switch	Close position ON	0
			Neutral position OFF	Battery voltage
9	L	Warning chime ground	—	—
10	L/B	Battery power	—	Battery voltage
11	Y	Cinch latch motor CLOSE output	Back door close operation	Battery voltage
12	L	Closure motor RETURN output	Back door release operation	Battery voltage
13	P/L	Back door close switch	Cancel position	0
			Neutral position	5
14	P	Close switch signal	While fully opening back door	

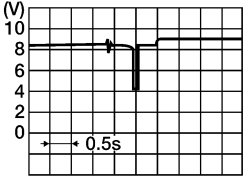
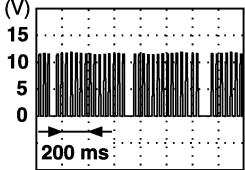
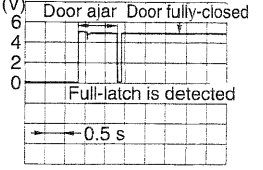
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# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
15	O/L	Open switch signal	While fully closing back door	 <p style="text-align: right; font-size: small;">WIA1047E</p>
17	GR	Glass hatch ajar signal	Glass hatch OPEN	0
			Glass hatch CLOSED	5
18	GR/R	Park switch	P or N position (Ignition is ON)	0
			Other (Ignition is ON)	9
19	BR/B	Pinch strip RH	Detecting obstruction	0
			Other	5
20	GR	Pinch strip LH	Detecting obstruction	0
			Other	5
21	W/V	Power window serial link	—	 <p style="text-align: right; font-size: small;">PIIA2344E</p>
22	BR	Half switch signal	Back door half latch position	 <p style="text-align: right; font-size: small;">PIIA2169E</p>
23	L/W	Power liftgate switch	ON	0
			OFF	Battery voltage
26	V	Outside handle signal	Back door handle switch (at rest)	Battery voltage
			Back door handle switch (open)	0

# BACK DOOR CONTROL UNIT

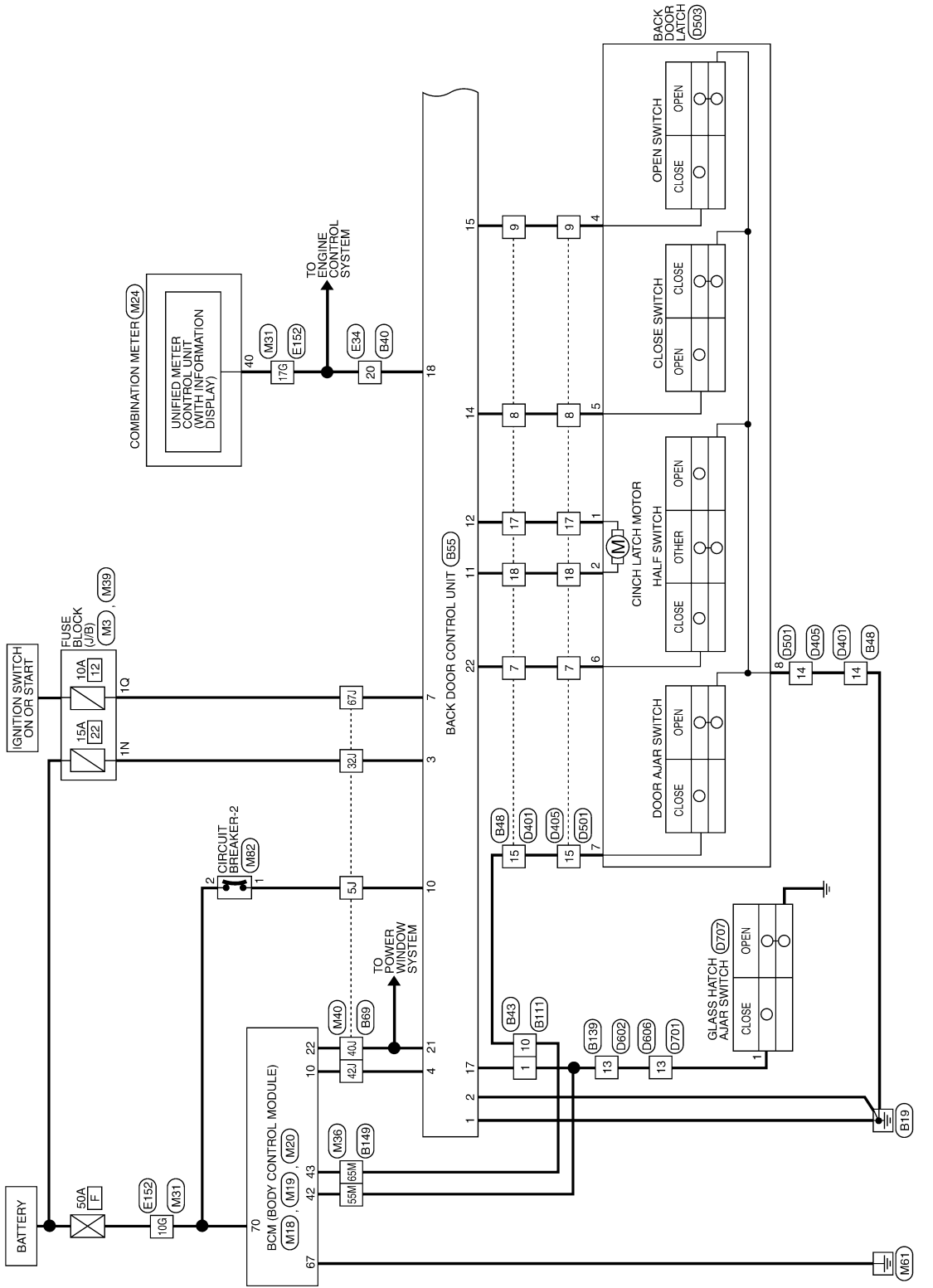
[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## Wiring Diagram—AUTOMATIC BACK DOOR SYSTEM—

INFOID:000000001348292

### AUTOMATIC BACK DOOR SYSTEM - WITH INTELLIGENT KEY SYSTEM



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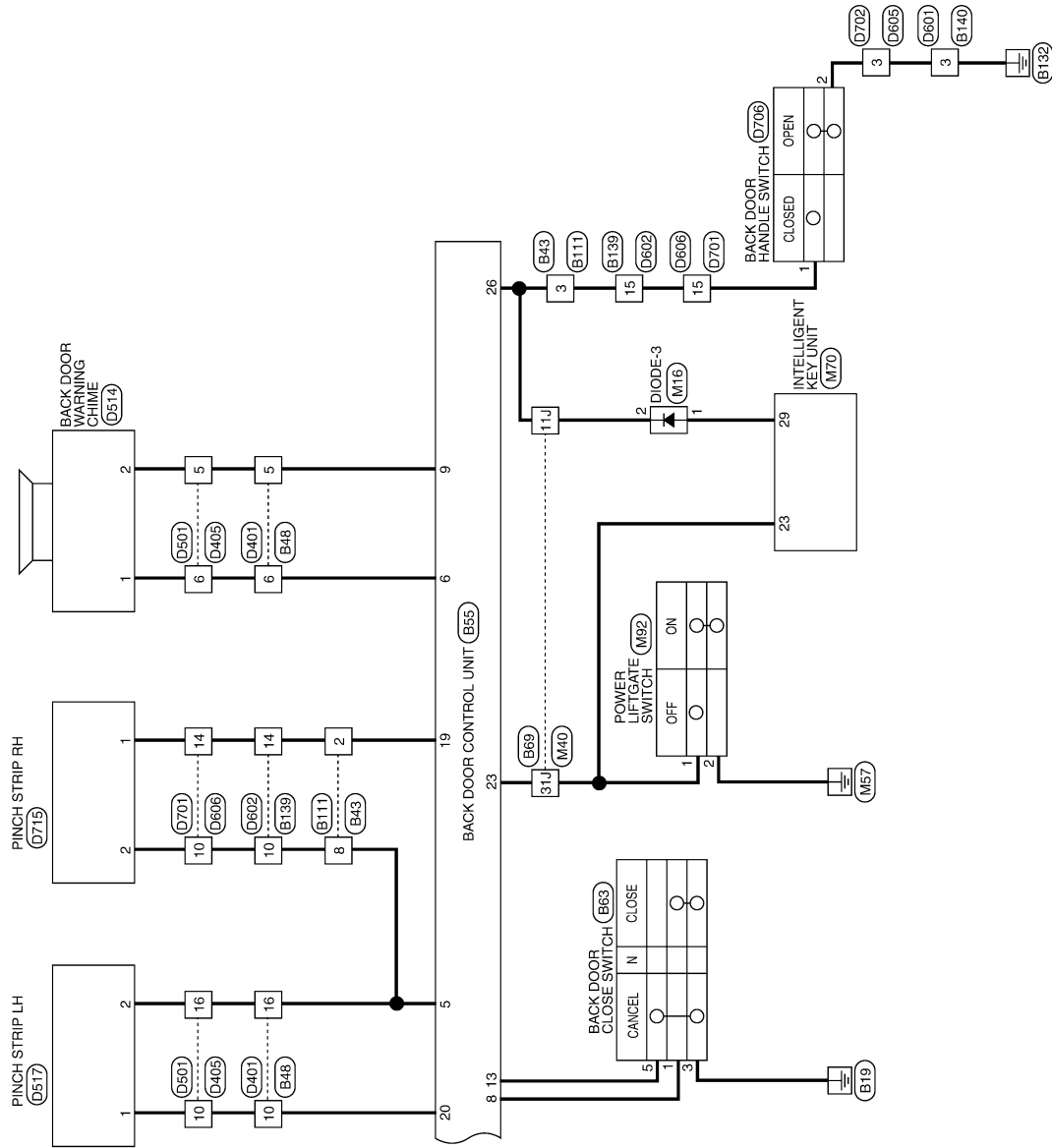
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# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >



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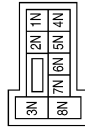
# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## AUTOMATIC BACK DOOR SYSTEM CONNECTORS - WITH INTELLIGENT KEY SYSTEM

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



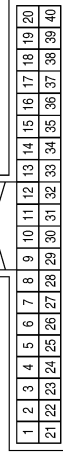
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M16
Connector Name	DIODE-3
Connector Color	-



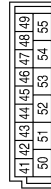
Terminal No.	Color of Wire	Signal Name
1	LG/W	-
2	V	-

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



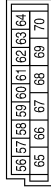
Terminal No.	Color of Wire	Signal Name
10	G	IVCS INPUT
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)

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



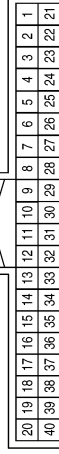
Terminal No.	Color of Wire	Signal Name
42	GR	TRNK/GLASS HATCH SW
43	R/B	BACK DOOR SW/FUEL LID OPEN SW

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



Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
40	GR/R	-

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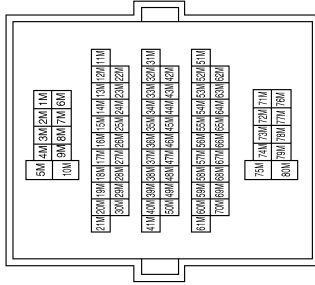
# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

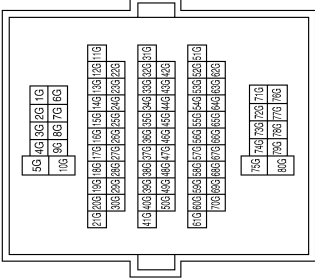
< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
55M	GR	-
65M	R/B	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



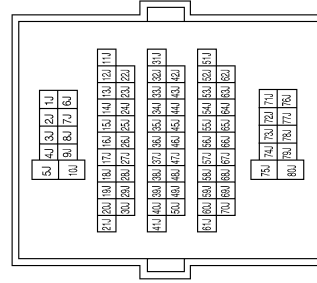
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



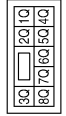
Terminal No.	Color of Wire	Signal Name
10G	W/B	-
17G	GR/R	-

Terminal No.	Color of Wire	Signal Name
5J	L/B	-
11J	V	-
31J	L/W	-
32J	Y/R	-
40J	W/V	-
42J	G	-
67J	G/R	-

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



Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1Q	G/R	-

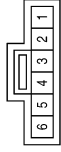
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# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	M82
Connector Name	POWER LIFTGATE SWITCH
Connector Color	GRAY



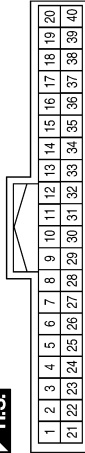
Terminal No.	Color of Wire	Signal Name
1	L/W	-
2	B	-

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	GRAY



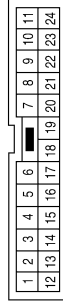
Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



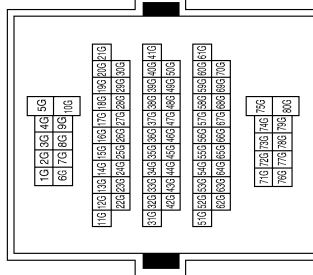
Terminal No.	Color of Wire	Signal Name
23	L/W	PBD_OUTPUT
29	LG/W	BK_DR_OP_SW_INP

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



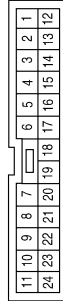
Terminal No.	Color of Wire	Signal Name
20	GR/R	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
17G	GR/R	-

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

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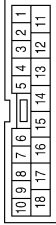
# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

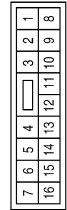
Terminal No.	Color of Wire	Signal Name
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



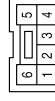
Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
7	BR	-
8	P	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Connector No.	B63
Connector Name	BACK DOOR CLOSE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR/B	CLOSE
3	B	GND
5	P/L	DISABLE

Terminal No.	Color of Wire	Signal Name
9	L	SP(-)
10	L/B	B+(MOTOR)
11	Y	MTR+
12	L	MTR-
13	P/L	PBD_DISABLE_SW
14	P	CLOSE_SW
15	O/L	OPEN_SW
17	GR	GLASS_HATCH_AJAR
18	GR/R	PARK_SW
19	BR/B	RH_PINCH_STRIP
20	V/G	LH_PINCH_STRIP
21	W/V	ANTI_PINCH_SERIAL_LINK
22	BR	HALF_SW
23	L/W	P-LIFTGATE_SW
26	V	OUTSIDE_HANDLE

Connector No.	B55
Connector Name	BACK DOOR CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	B	GND
3	Y/R	B+
4	G	FLASH_LAMP_IVCS
5	B/P	-
6	R	SP(+)
7	G/R	IGN
8	GR/B	PBD_CLOSE_SW

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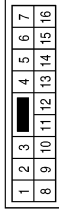


# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

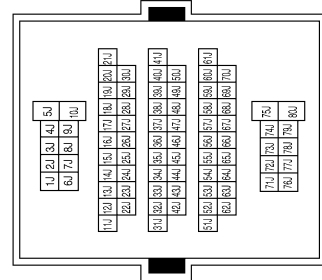
Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



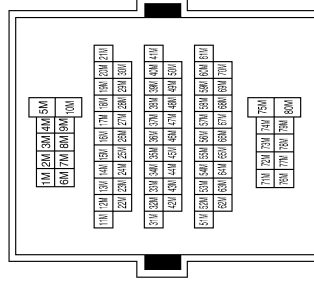
Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Terminal No.	Color of Wire	Signal Name
5J	L/B	-
11J	V	-
31J	L/W	-
32J	Y/R	-
40J	W/V	-
42J	G	-
67J	G/R	-

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

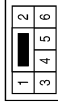


Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



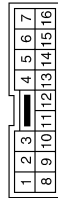
Terminal No.	Color of Wire	Signal Name
55M	GR	-
65M	R/W	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

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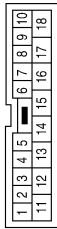
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# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

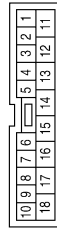
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

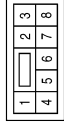
ALKIA0647GB

# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

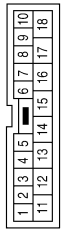
Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
4	O/L	-
5	P	-
6	BR	-
7	R/W	-
8	B	-

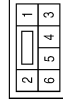
Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



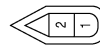
Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D517
Connector Name	PINCH STRIP LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	V/G	-
2	B/P	-

Connector No.	D514
Connector Name	BACK DOOR WARNING CHIME
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	R	-
2	L	-

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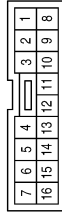
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# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



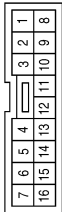
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



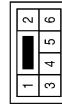
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D706
Connector Name	BACK DOOR HANDLE SWITCH
Connector Color	GRAY



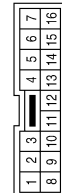
Terminal No.	Color of Wire	Signal Name
1	V	-
2	B	-

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

ALKIA0649GB

INFOID:000000001348327

## Fail Safe

### Fail-safe operation

The automatic back door system operation will be interrupted if the back door control unit loses power, switch input signals or communication with the BCM.

# HOMELINK UNIVERSAL TRANSCEIVER

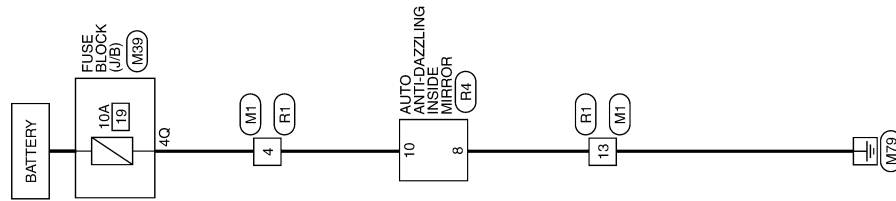
[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## HOMELINK UNIVERSAL TRANSCEIVER

### Wiring Diagram

INFOID:000000001278158



INTEGRATED HOMELINK TRANSMITTER


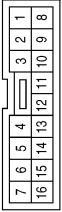
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### INTEGRATED HOMELINK TRANSMITTER CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE


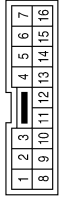
Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE


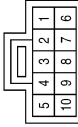
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	R4
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
8	B	GND
10	Y/R	B+

# INTELLIGENT KEY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SYMPTOM DIAGNOSIS

### INTELLIGENT KEY SYSTEM SYMPTOMS

#### Symptom Table

INFOID:000000001278159

#### ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE

##### NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8. "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

##### Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” and “LOCK/UNLOCK BY I-KEY” are ON when setting on CONSULT-III.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All doors and ignition switch do not respond to Intelligent Key comand.	1. Check Intelligent Key function and battery inspection.	<a href="#">DLK-90</a>
	2. Check Intelligent Key unit power supply and ground circuit.	<a href="#">DLK-55</a>
	3. Check remote keyless entry receiver.	<a href="#">DLK-87</a>
	4. Check BCM power supply and ground circuit.	<a href="#">DLK-55</a>
	5. Replace Intelligent Key unit.	<a href="#">DLK-90</a>

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# DOOR LOCK FUNCTION SYMPTOMS

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

## DOOR LOCK FUNCTION SYMPTOMS

### DOOR LOCK AND UNLOCK SWITCH

### DOOR LOCK AND UNLOCK SWITCH : Symptom Table

INFOID:000000001278160

#### DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8, "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Power door lock does not operate with door lock and unlock switch.	1. Check BCM Power supply and ground circuit.	<a href="#">BCS-32</a>
	2. Check door lock and unlock switch.	<a href="#">DLK-60</a>
	3. Check door lock actuator (driver side)	<a href="#">DLK-71</a>
	4. Check Intermittent Incident.	<a href="#">GI-39</a>
Power door lock does not operate with door key cylinder operation. (Power door lock operate properly with door lock and unlock switch.)	1. Check key cylinder switch.	<a href="#">DLK-64</a>
	2. Replace power window main switch.	<a href="#">PWC-94</a>
Specific door lock actuator does not operate.	1a. Check driver side door lock actuator.	<a href="#">DLK-71</a>
	1b. Check passenger side door lock actuator.	<a href="#">DLK-72</a>
	1c. Check rear LH side door lock actuator.	<a href="#">DLK-73</a>
	1d. Check rear RH side door lock actuator.	<a href="#">DLK-75</a>
	1e. Check back door lock actuator (without power back door).	<a href="#">DLK-76</a>
	2. Check Intermittent Incident.	<a href="#">GI-39</a>
Door lock/unlock do not operate by request switch.	1. Door switch check.	<a href="#">DLK-57</a>
	2. Ignition knob switch check.	<a href="#">DLK-100</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Door lock/unlock does not operate by request switch (LH side).	1. Front door request switch LH check.	<a href="#">DLK-68</a>
	2. Front outside antenna LH check.	<a href="#">DLK-81</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Door lock/unlock does not operate by request switch (RH side).	1. Front door request switch RH check.	<a href="#">DLK-68</a>
	2. Front outside antenna RH check.	<a href="#">DLK-81</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Selective unlock function does not operate by front door request switch LH (other door lock functions operate properly).	1. Check “SELECT UNLOCK FUNCTION” setting in “WORK SUPPORT”.	<a href="#">DLK-37</a>
	2. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	<a href="#">DLK-37</a>
	2. Key switch check (BCM).	<a href="#">DLK-99</a>
	3. Ignition knob switch check.	<a href="#">DLK-100</a>
	4. Door switch check.	<a href="#">DLK-57</a>
	5. Replace Intelligent Key unit.	<a href="#">SEC-91</a>



# DOOR LOCK FUNCTION SYMPTOMS

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

Symptom	Diagnosis/service procedure	Reference page
Key reminder function does not operate properly.	1. Check "ANTI KEY LOCK IN FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Door switch check.	<a href="#">DLK-57</a>
	3a. Inside key antenna 1 (rear of center console) check.	<a href="#">DLK-47</a>
	3b. Inside key antenna 2 (luggage compartment) check.	<a href="#">DLK-49</a>
	3c. Inside key antenna 3 (front of center console) check.	<a href="#">DLK-51</a>
	3d. Inside key antenna 4 (overhead console area) check.	<a href="#">DLK-53</a>
	4. Front door lock actuator LH (door unlock sensor) check.	<a href="#">DLK-66</a>
	5. Intelligent Key battery and function inspection.	<a href="#">DLK-90</a>
	6. Replace Intelligent Key unit.	<a href="#">SEC-91</a>

## INTELLIGENT KEY

### INTELLIGENT KEY : Symptom Table

INFOID:000000001278162

#### REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to [DLK-8, "Work Flow"](#).
- Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All of the remote keyless entry functions do not operate.	1. Intelligent Key battery and function inspection.	<a href="#">DLK-90</a>
	2. Remote Keyless Entry function check.	<a href="#">DLK-87</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Selective unlock function does not operate by Intelligent Key remote control button.	1. Check "SELECT UNLOCK FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-90</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
Auto lock function does not operate properly.	1. Check "AUTO RELOCK TIMER" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Key switch check (BCM).	<a href="#">DLK-99</a>
	3. Ignition knob switch check.	<a href="#">DLK-100</a>
	4. Door switch check.	<a href="#">DLK-57</a>
	5. Replace Intelligent Key unit.	<a href="#">SEC-91</a>

## DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure	Reference page
Key reminder function does not operate properly.	1. Check "ANTI KEY LOCK IN FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Door switch check.	<a href="#">DLK-57</a>
	3a. Inside key antenna 1 (rear of center console) check.	<a href="#">DLK-47</a>
	3b. Inside key antenna 2 (luggage compartment) check.	<a href="#">DLK-49</a>
	3c. Inside key antenna 3 (front of center console) check.	<a href="#">DLK-51</a>
	3d. Inside key antenna 4 (overhead console area) check.	<a href="#">DLK-53</a>
	4. Front door lock actuator LH (door unlock sensor) check.	<a href="#">DLK-66</a>
	5. Intelligent Key battery inspection.	<a href="#">DLK-90</a>
Panic alarm function does not operate properly.	6. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
	1. Check "PANIC ALARM DELAY" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Theft warning operation check.	<a href="#">SEC-16</a>
	3. Intelligent Key battery inspection.	<a href="#">DLK-90</a>
	4. Key switch check (BCM).	<a href="#">DLK-99</a>
	5. Ignition knob switch check.	<a href="#">DLK-100</a>
Back door open function does not operate properly.	6. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
	1. Back door diagnosis.	<a href="#">DLK-107</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-90</a>
Power window down function does not operate.	3. Replace Intelligent Key unit.	<a href="#">SEC-91</a>
	1. Check "PW DOWN SET" setting in "WORK SUPPORT".	<a href="#">DLK-37</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-90</a>

# BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

## BACK DOOR OPENER FUNCTION

### BACK DOOR OPENER SWITCH

#### BACK DOOR OPENER SWITCH : Symptom Table

INFOID:000000001278163

#### TRUNK OPEN FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8. "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Vehicle is in park.

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the back door fully closed or fully open position. (Auto closure operates normally).	Power liftgate switch system inspection	<a href="#">DLK-123</a>
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-115</a>
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	<a href="#">DLK-123</a>
	Back door close switch system inspection	<a href="#">DLK-119</a>
	Auto back door power supply and ground circuit system inspection.	<a href="#">DLK-55</a>
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	<a href="#">DLK-115</a>
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	<a href="#">DLK-107</a>
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	<a href="#">DLK-122</a>
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	<a href="#">DLK-87</a>
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-115</a>
Auto closure does not operate.	Half-latch switch system	<a href="#">DLK-117</a>
	Cinch latch motor system	<a href="#">DLK-121</a>
	Handle switch system	<a href="#">DLK-122</a>
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	<a href="#">DLK-118</a>
	Handle switch system	<a href="#">DLK-122</a>
Warning chime does not sound.	Back door warning chime system	<a href="#">DLK-116</a>
Auto closure operation works, but the back door is not fully closed	Close switch system	<a href="#">DLK-119</a>
	Handle switch system	<a href="#">DLK-122</a>
	Cinch latch motor system	<a href="#">DLK-121</a>
	Back door latch assembly mechanism damaged or worn.	<a href="#">DLK-107</a>

## BACK DOOR HANDLE

#### BACK DOOR HANDLE : Symptom Table

INFOID:000000001278164

#### BACK DOOR OPEN FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8. "Work Flow"](#).

# BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

## < SYMPTOM DIAGNOSIS >

- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

### Conditions of Vehicle (Operating Conditions)

- Vehicle is in park.

Symptom	Diagnosis/service procedure	Reference page
Back door open function does not operate by back door handle switch (doors unlocked).	1. Refer to diagnosis chart.	<a href="#">DLK-179</a>
	2. Check Intermittent Incident.	<a href="#">GI-39</a>
Back door open function does not operate by back door handle switch only. (doors locked but Intelligent Key present).	1. Intelligent Key unit power back door input signal.	<a href="#">DLK-122</a>
	2. Intelligent Key unit power back door output signal.	<a href="#">DLK-123</a>
	3. Intelligent Key battery and function check.	<a href="#">DLK-90</a>

## INTELLIGENT KEY

### INTELLIGENT KEY : Symptom Table

INFOID:000000001278165

### BACK DOOR OPEN FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8. "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

### Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure	Reference page
Back door open function does not operate by Intelligent Key.	1. Check Intelligent Key battery inspection.	<a href="#">DLK-90</a>
	2. Intelligent Key unit power and ground check.	<a href="#">DLK-55</a>
	3. Check intermittent incident.	----

# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING FUNCTION SYMPTOMS

### Symptom Table

INFOID:000000001278166

#### WARNING FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-8, "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

**Conditions of Vehicle (Operating Conditions)**

Warning chime functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation.

Symptom		Diagnosis/service procedure	Reference page
OFF position warning does not operate.	For internal	1. Check ignition knob switch.	<a href="#">DLK-100</a>
		2. Check door switch.	<a href="#">DLK-57</a>
		3. Check warning chime function.	<a href="#">DLK-95</a>
		4. Check Intermittent Incident.	—
	For external	1. Check ignition knob switch.	<a href="#">DLK-100</a>
		2. Check door switch.	<a href="#">DLK-57</a>
		3. Check Intelligent Key warning buzzer.	<a href="#">DLK-79</a>
		4. Check Intermittent Incident.	—
P position warning does not operate.	1. Check Park position switch.		
	2. Check door switch.		
	3. Check Intelligent Key warning buzzer.	<a href="#">DLK-79</a>	
	4. Check warning chime function.	<a href="#">DLK-95</a>	
	5. Check combination meter display function.	<a href="#">DLK-94</a>	
	6. Check Intermittent Incident.	—	
ACC warning does not operate	1. Check ignition knob switch.	<a href="#">DLK-100</a>	
	2. Check warning chime function.	<a href="#">DLK-95</a>	
	3. Check combination meter display function.	<a href="#">DLK-94</a>	
	4. Check Intermittent Incident.	—	

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# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure		Reference page	
Take away warning does not operate.	Door open to close	1. Check door switch.	<a href="#">DLK-57</a>	
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-47</a>
			Luggage compartment	<a href="#">DLK-49</a>
			Front of center console	<a href="#">DLK-51</a>
			Overhead console area	<a href="#">DLK-53</a>
		3. Check Intelligent Key warning buzzer.		<a href="#">DLK-79</a>
		4. Check warning chime function.		<a href="#">DLK-95</a>
		5. Check ignition knob switch.		<a href="#">DLK-100</a>
	6. Check combination meter display function.		<a href="#">DLK-94</a>	
	7. Check Intermittent Incident.		—	
	Push-button ignition switch operation	1. Check ignition knob switch.		<a href="#">DLK-100</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-47</a>
			Luggage compartment	<a href="#">DLK-49</a>
			Front of center console	<a href="#">DLK-51</a>
			Overhead console area	<a href="#">DLK-53</a>
		3. Check warning chime function.		<a href="#">DLK-95</a>
	4. Check combination meter display function.		<a href="#">DLK-94</a>	
	5. Check Intermittent Incident.		—	
	Door is open	1. Check ignition knob switch.		<a href="#">DLK-100</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-47</a>
			Luggage compartment	<a href="#">DLK-49</a>
			Front of center console	<a href="#">DLK-51</a>
			Overhead console area	<a href="#">DLK-53</a>
	3. Check combination meter display function.		<a href="#">DLK-94</a>	
	4. Check Intermittent Incident.		—	
	Take away through window	1. Check "TAKE OUT FROM WIN WARN" setting in "WORK SUPPORT".		<a href="#">DLK-40</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-47</a>
			Luggage compartment	<a href="#">DLK-49</a>
Front of center console			<a href="#">DLK-51</a>	
Overhead console area			<a href="#">DLK-53</a>	
3. Check warning chime function.			<a href="#">DLK-95</a>	
4. Check ignition knob switch.			<a href="#">DLK-100</a>	
5. Check combination meter display function.		<a href="#">DLK-94</a>		
6. Check Intermittent Incident.		—		
Key warning chime does not operate.	1. Check door switch.		<a href="#">DLK-57</a>	
	2. Check warning chime function.		<a href="#">DLK-95</a>	
	3. Check ignition knob switch.		<a href="#">DLK-100</a>	
	4. Check combination meter display function.		<a href="#">DLK-94</a>	
	5. Check Intermittent Incident.		—	

# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure	Reference page	
Door lock operation warning chime does not operate.	1. Check door switch.	<a href="#">DLK-57</a>	
	2. Check ignition knob switch.	<a href="#">DLK-100</a>	
	3. Check Intelligent Key warning buzzer.	<a href="#">DLK-79</a>	
	4. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-47</a>
		Luggage compartment	<a href="#">DLK-49</a>
		Front of center console	<a href="#">DLK-51</a>
		Overhead console area	<a href="#">DLK-53</a>
5. Check Intermittent Incident.	—		

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# KEY REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY REMINDER FUNCTION SYMPTOMS

### Symptom Table

INFOID:000000001278167

#### KEY REMINDER FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-8, "Work Flow"](#).
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure	Reference page	
Key reminder function does not operate.	1. Check “ANTI KEY LOCK IN FUNCTI”setting in “WORK SUP-PORT”.	<a href="#">DLK-40</a>	
	2. Check door switch.	<a href="#">DLK-57</a>	
	3. Check inside key antennas (1, 2, 3, 4)	Rear of center console	<a href="#">DLK-47</a>
		Luggage compartment	<a href="#">DLK-49</a>
		Front of center console	<a href="#">DLK-51</a>
		Overhead console area	<a href="#">DLK-53</a>
	4. Check unlock sensor.	<a href="#">DLK-66</a>	
	5. Check Intelligent Key battery inspection.	<a href="#">DLK-90</a>	
6. Check Intermittent Incident.	—		



# HAZARD FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

## HAZARD FUNCTION

### Symptom Table

INFOID:000000001278168

#### HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-8, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check hazard function.	<a href="#">DLK-96</a>
	3. Check Intermittent incident.	—
Hazard reminder does not operate by Intelligent Key. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check hazard function.	<a href="#">DLK-96</a>
	3. Check Intelligent Key battery inspection.	<a href="#">DLK-90</a>
Buzzer reminder does not operate by request switch. (Hazard reminder operate.)	1. Check “ANS BACK I-KEY LOCK” or “ANS BACK I-KEY UNLOCK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check Intelligent Key warning buzzer.	<a href="#">DLK-79</a>
	3. Check Intermittent incident.	—

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# HORN FUNCTION

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Symptom Table

INFOID:000000001278169

#### HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-8, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">GI-39</a>
	2. Check hazard function.	<a href="#">DLK-96</a>
	3. Check Intermittent Incident.	<a href="#">GI-39</a>
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check hazard function.	<a href="#">DLK-96</a>
	3. Check Intelligent Key battery inspection.	<a href="#">DLK-90</a>
Horn reminder does not operate by request switch. (Hazard reminder operate.)	1. Check “ANSWER BACK WITH I-KEY LOCK” or “ANSWER BACK WITH I-KEY UNLOCK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check Intelligent Key warning buzzer.	<a href="#">DLK-79</a>
	3. Check Intermittent Incident.	<a href="#">GI-39</a>
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	<a href="#">DLK-40</a>
	2. Check horn function.	<a href="#">DLK-92</a>
	3. Check Intermittent Incident.	<a href="#">GI-39</a>

# HOMELINK UNIVERSAL TRANSCEIVER

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Symptom Table

INFOID:000000001278170

### HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	<a href="#">DLK-124</a>
	2. Check Intermittent Incident.	<a href="#">GI-39</a>

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

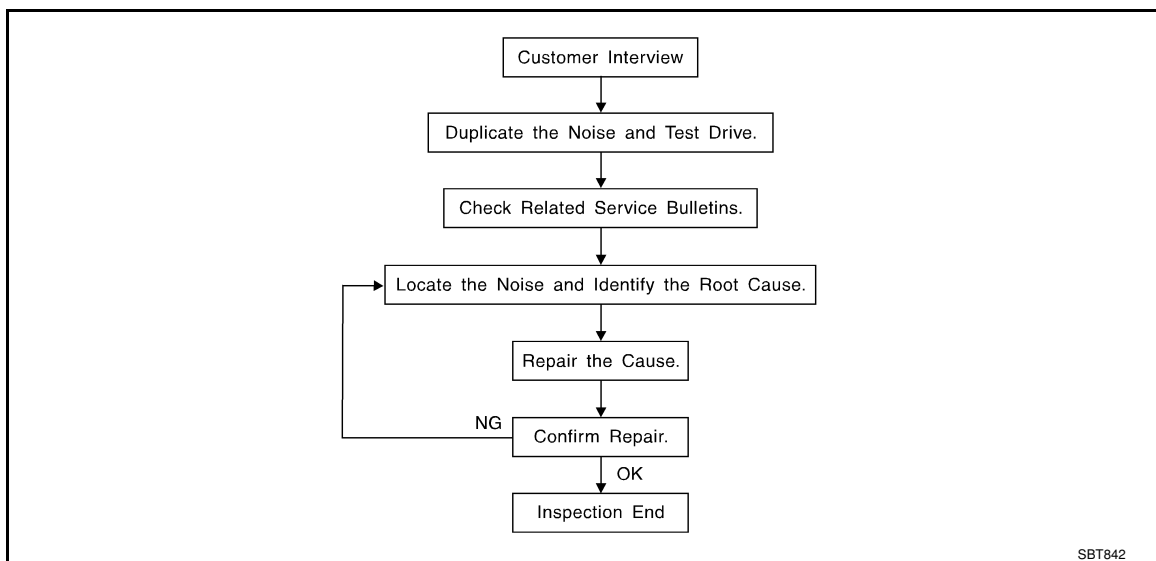
< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

### Work Flow

INFOID:000000001278171



### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [DLK-192, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

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

### DUPLICATE THE NOISE AND TEST DRIVE

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

[WITH INTELLIGENT KEY SYSTEM]

## < SYMPTOM DIAGNOSIS >

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

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

## CHECK RELATED SERVICE BULLETINS

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

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

## LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear 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 you suspect the noise is coming from.  
Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
  - tapping or pushing/pulling the component that you suspect is causing the noise.  
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks.  
Refer to [DLK-190. "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 your authorized Nissan Parts Department.

### **CAUTION:**

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

### **NOTE:**

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

INSULATOR (Foam blocks)

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

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

50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

INSULATOR (Light foam block)

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

FELT CLOTHTAPE

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

68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

UHMW (TEFLON) TAPE

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

[WITH INTELLIGENT KEY SYSTEM]

## < SYMPTOM DIAGNOSIS >

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

### SILICONE GREASE

Used in place of UHMW tape that will be visible or not fit. Will only last a few months.

### SILICONE SPRAY

Use when grease cannot be applied.

### DUCT TAPE

Use to eliminate movement.

## CONFIRM THE REPAIR

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

## Inspection Procedure

INFOID:000000001278172

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

## INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

### **CAUTION:**

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

## CENTER CONSOLE

Components to pay attention to include:

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

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

## DOORS

Pay attention to the:

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

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

## TRUNK

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

In addition look for:

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

[WITH INTELLIGENT KEY SYSTEM]

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

Cause of seat noise include:

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

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

### UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Diagnostic Worksheet

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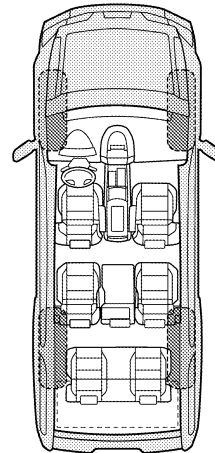
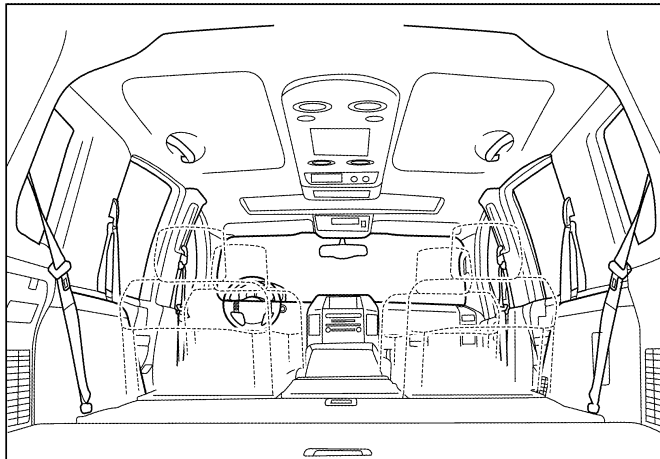
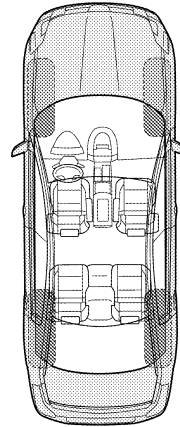
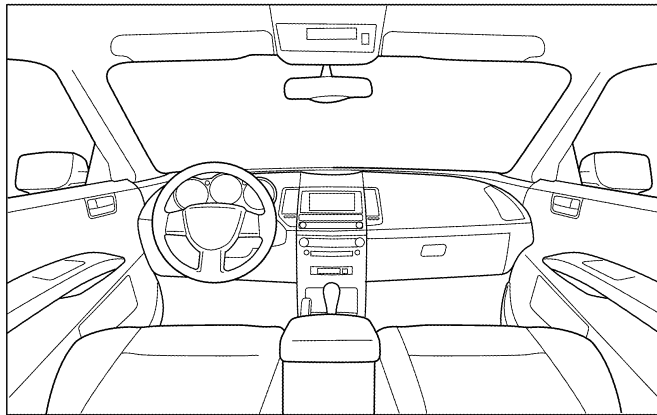
Dear Customer:

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

### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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



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



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

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

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

### III. WHEN DRIVING:

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

### IV. WHAT TYPE OF NOISE

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

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

#### Test Drive Notes:

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

VIN: \_\_\_\_\_ Customer Name \_\_\_\_\_

W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

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## PRECAUTION

### PRECAUTIONS

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

INFOID:000000001539319

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

#### **WARNING:**

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

#### Precaution for work

INFOID:000000001277939

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

# PREPARATION

< PREPARATION >

[WITH INTELLIGENT KEY SYSTEM]

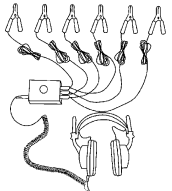
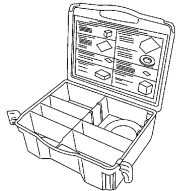
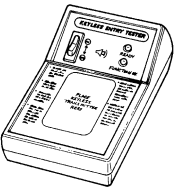
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:000000001277940

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

Tool number (Kent-Moore No.) Tool name	Description
<p>— (J-39570) Chassis ear</p>  <p>SIA0993E</p>	<p>Locating the noise</p>
<p>— (J-43980) NISSAN Squeak and Rattle Kit</p>  <p>SIA0994E</p>	<p>Repairing the cause of noise</p>
<p>— (J-43241) Remote Keyless Entry Tester</p>  <p>LEL946A</p>	<p>Used to test keyfobs</p>

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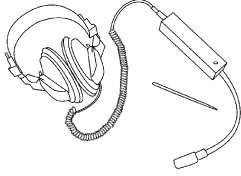
# PREPARATION

< PREPARATION >

[WITH INTELLIGENT KEY SYSTEM]

## Commercial Service Tool

INFOID:000000001277941

(Kent-Moore No.) Tool name	Description
<p>(J-39565) Engine ear</p>  <p>SIA0995E</p>	<p>Locating the noise</p>

# HOOD

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

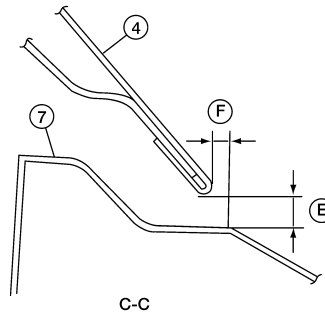
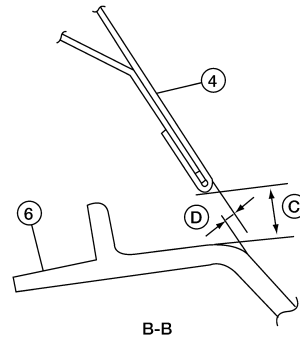
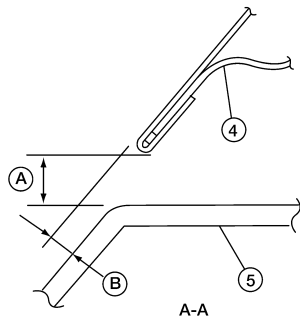
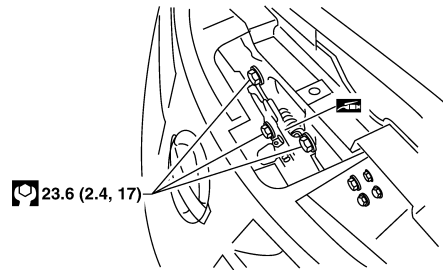
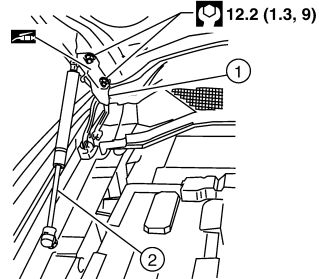
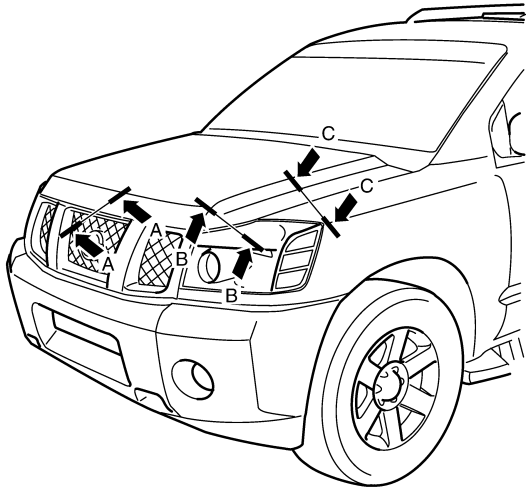
## ON-VEHICLE REPAIR

### HOOD

#### Fitting Adjustment

INFOID:000000001366844

SEC. 650



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DLK

WIA0883E

# HOOD

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

- |                     |                      |                       |
|---------------------|----------------------|-----------------------|
| 1. Hood hinge       | 2. Hood stay         | 3. Hood lock assembly |
| 4. Hood assembly    | 5. Front grille      | 6. Headlamp           |
| 7. Front fender     | A. 8.0 mm (0.315 in) | B. 2.0 mm (0.079 in)  |
| C. 8.0mm (0.315 in) | D. 0.8 mm (0.031 in) | E. 5.0 mm (0.197 in)  |
| F. 0.0 mm (0.00 in) |                      |                       |

## CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-16. "Removal and Installation"](#).
2. Remove the hood lock assembly and adjust the height by rotating the bumper rubber until the hood clearance of hood and fender becomes 1 mm (0.04 in) lower than fitting standard dimension.
3. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the lock bolt to the specified torque.
4. Adjust the clearance and surface height of hood and fender according to the fitting standard dimension by rotating right and left bumper rubbers.

### CAUTION:

**Adjust right/left gap between hood and each part to the following specification.**

**Hood and headlamp (B-B) : Less than 8.0 mm**

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

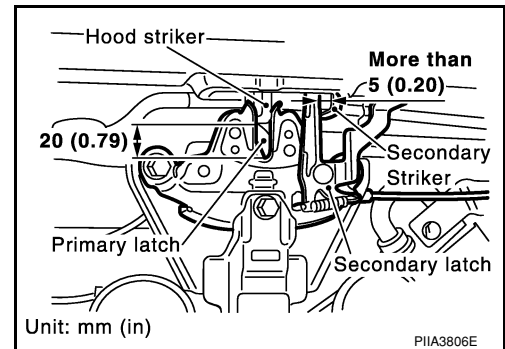
## HOOD LOCK ADJUSTMENT

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

### CAUTION:

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

4. After adjusting hood lock, tighten the lock bolts to the specified torque.
5. Install the front grille. Refer to [EXT-16. "Removal and Installation"](#).



## Removal and Installation of Hood Assembly

INFOID:000000001366845

1. Support the hood with a suitable tool.

### WARNING:

**Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.**

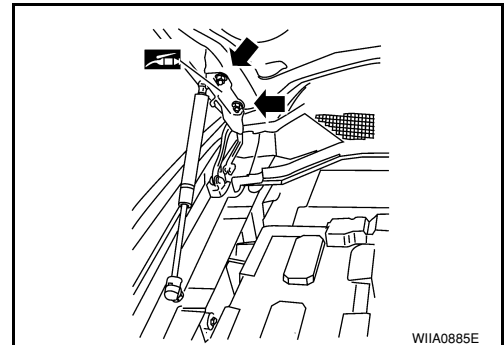
2. Remove the hinge nuts from the hood to remove the hood assembly.

### CAUTION:

**Operate with two workers, because of its heavy weight.**

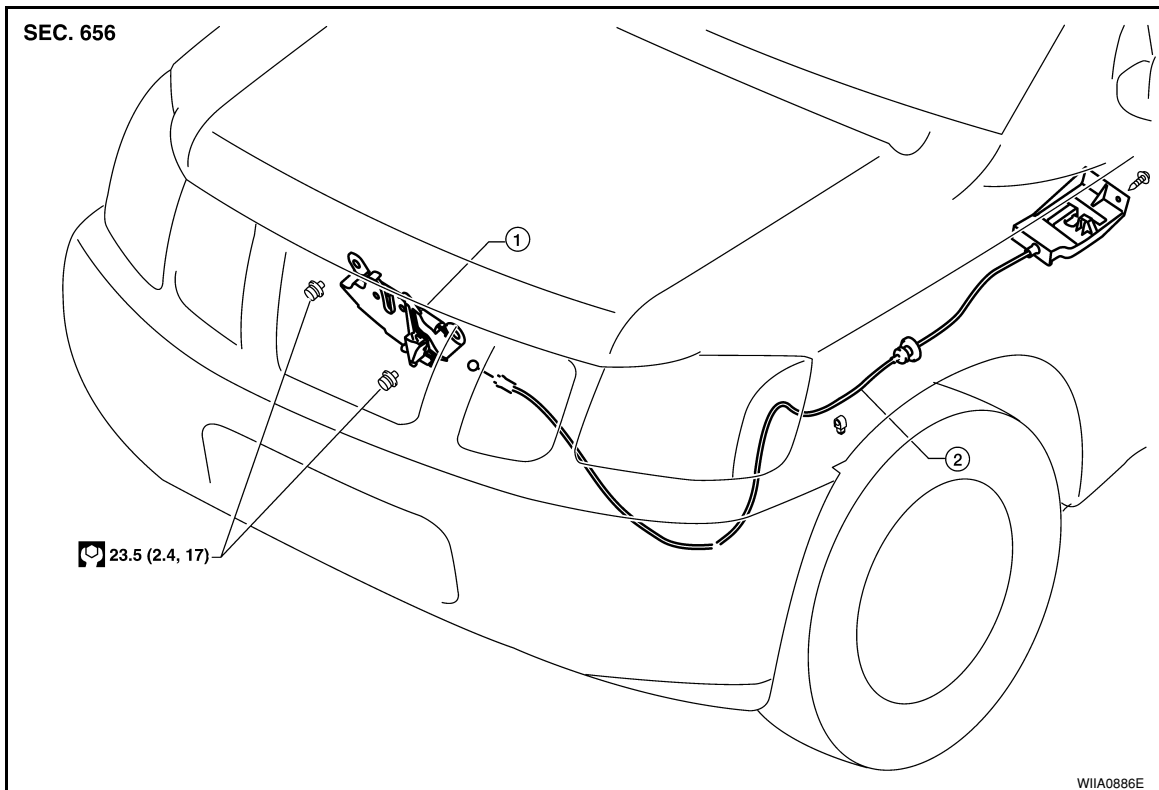
Installation is in the reverse order of removal.

- Adjust the hood. Refer to [DLK-197. "Fitting Adjustment"](#).
- Adjust the hood lock. Refer to [DLK-197. "Fitting Adjustment"](#).



## Removal and Installation of Hood Lock Control

INFOID:000000001366846



1. Hood lock assembly                      2. Hood lock cable

## REMOVAL

1. Remove the front grill. Refer to [EXT-16, "Removal and Installation"](#).
2. Remove the front fender protector (LH). Refer to [EXT-20, "Removal and Installation"](#).
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolt and the hood opener.
5. Remove the grommet from the dash lower, and pull the hood lock cable toward the passenger room.

**CAUTION:**

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

## INSTALLATION

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

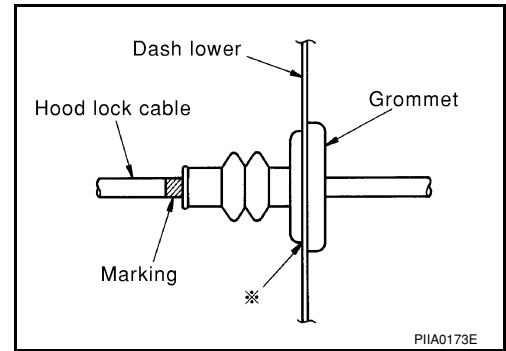
# HOOD

## < ON-VEHICLE REPAIR >

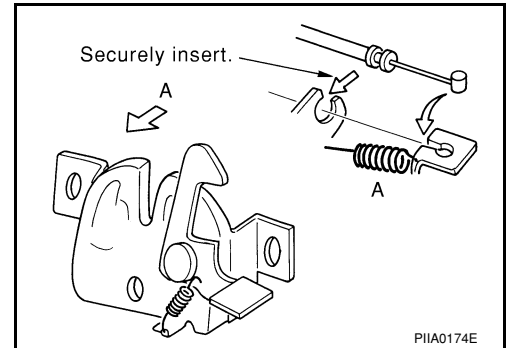
## [WITH INTELLIGENT KEY SYSTEM]

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

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



4. Install the cable securely to the lock.
5. After installing, check the hood lock adjustment and hood opener operation.



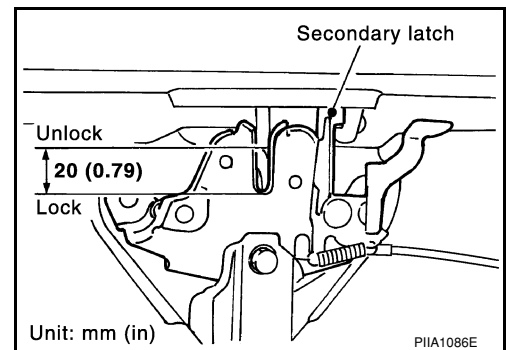
## Hood Lock Control Inspection

INFOID:000000001366847

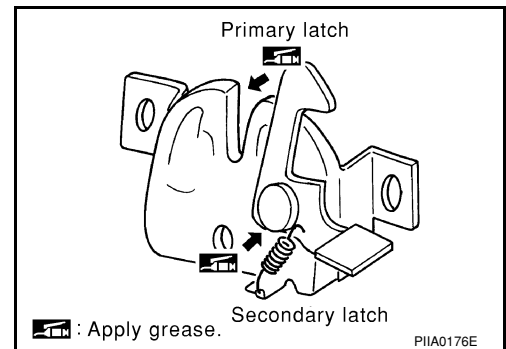
### CAUTION:

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

1. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
2. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



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





# DOOR

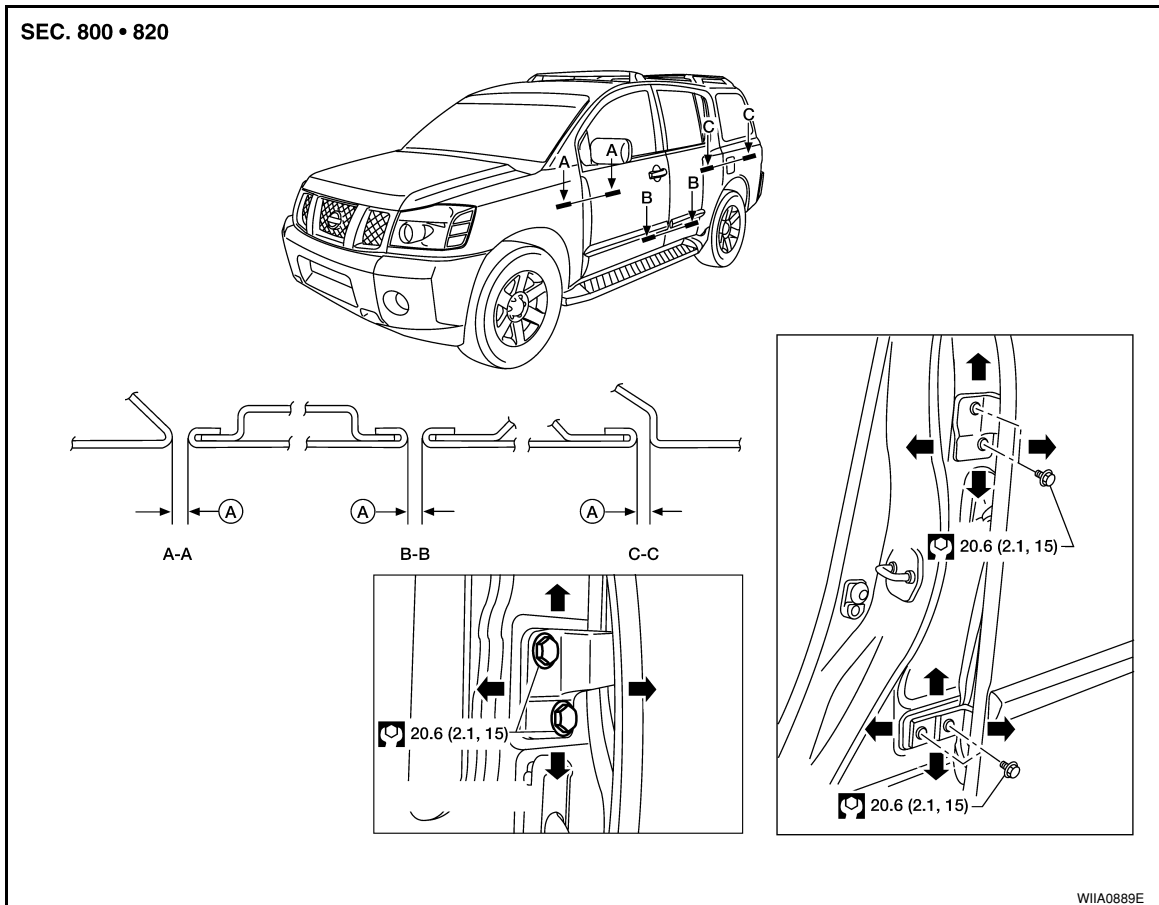
< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR

### Fitting Adjustment

INFOID:000000001366848



A.  $4.5 \pm 1.0$  mm ( $0.177 \pm 0.039$  in)

#### Front door

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to [EXT-19, "Removal and Installation"](#).
2. Loosen the hinge bolts. Raise the front door at rear end to adjust.
3. Install the front fender. Refer to [EXT-19, "Removal and Installation"](#).

#### Rear door

Longitudinal clearance and surface height adjustment at front end

1. Loosen the bolts. Open the rear door, and raise the rear door at rear end to adjust.

#### Striker adjustment

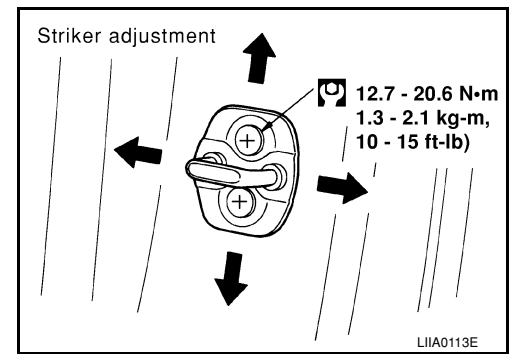
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# DOOR

## < ON-VEHICLE REPAIR >

## [WITH INTELLIGENT KEY SYSTEM]

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



## Removal and Installation

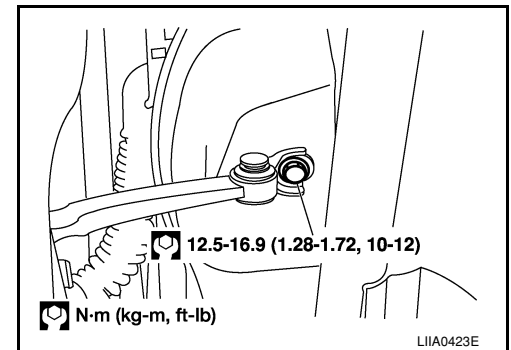
INFOID:000000001366849

### FRONT DOOR

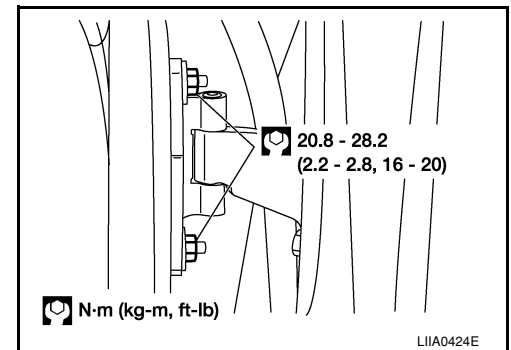
#### Removal

#### **CAUTION:**

- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
  - When removing and installing door assembly, be sure to carry out the fitting adjustment.
  - Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
1. Remove the door window and module assembly. Refer to [GW-14, "Removal and Installation"](#).
  2. Remove the door harness.
  3. Remove the check link cover.
  4. Remove the check link bolt from the hinge pillar.



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



#### Installation

Installation is in the reverse order of removal.

### REAR DOOR

#### Removal

#### **CAUTION:**

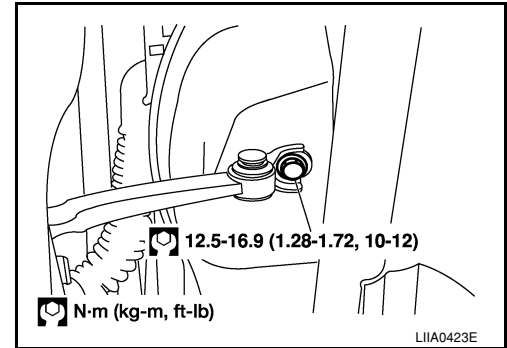
- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

# DOOR

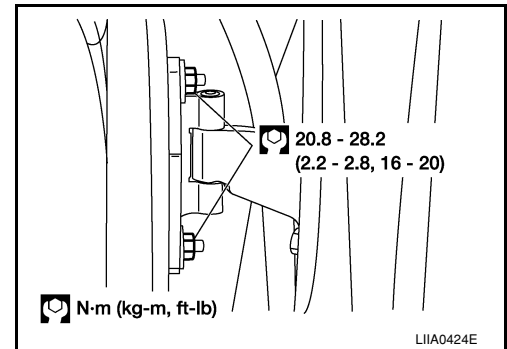
[WITH INTELLIGENT KEY SYSTEM]

< ON-VEHICLE REPAIR >

1. Remove the door window and module assembly. Refer to [GW-17. "Removal and Installation"](#).
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



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



Installation

Installation is in the reverse order of removal.

## BACK DOOR

Removal

### WARNING:

**Always support back door when removing or replacing back door stays. Power back door opener will not support back door with back door stays removed.**

1. Remove the back door glass. Refer to [GW-12. "Removal and Installation"](#).
2. Remove the back door lock assembly. Refer to [DLK-210. "Door Lock Assembly"](#).
3. Remove the rear wiper motor. Refer to [WW-53. "Rear Wiper Motor"](#).
4. Remove the back door wire harness.
5. Remove the rear washer nozzle and hose from the back door. Refer to [WW-55. "Rear Washer Nozzle"](#).

### CAUTION:

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

6. Support the back door.
7. Disconnect the power back door lift arm from the door.
8. Remove the back door stays.

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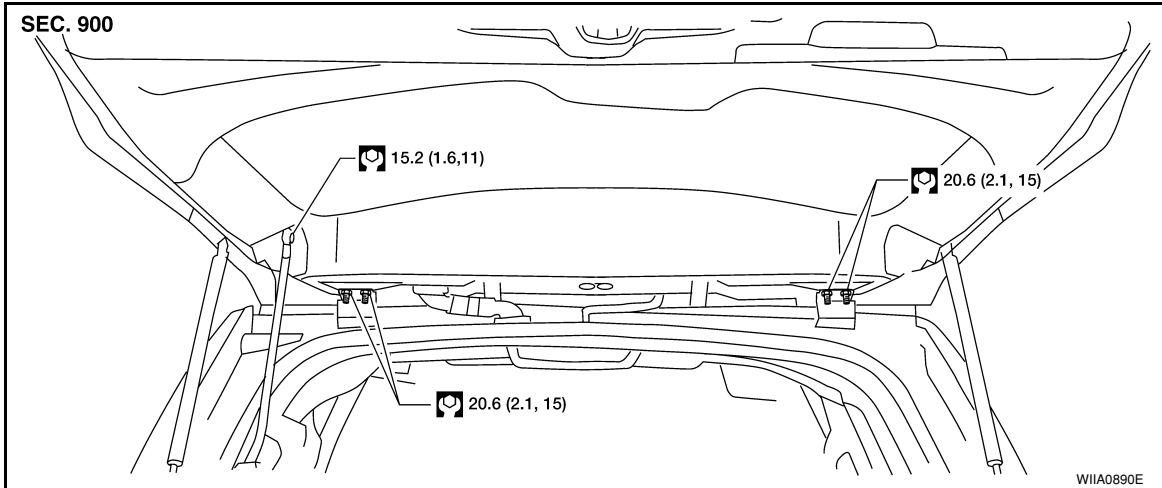
DLK

# DOOR

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

9. Remove the door side nuts and the back door assembly.



Installation

Installation is in the reverse order of removal.

# FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

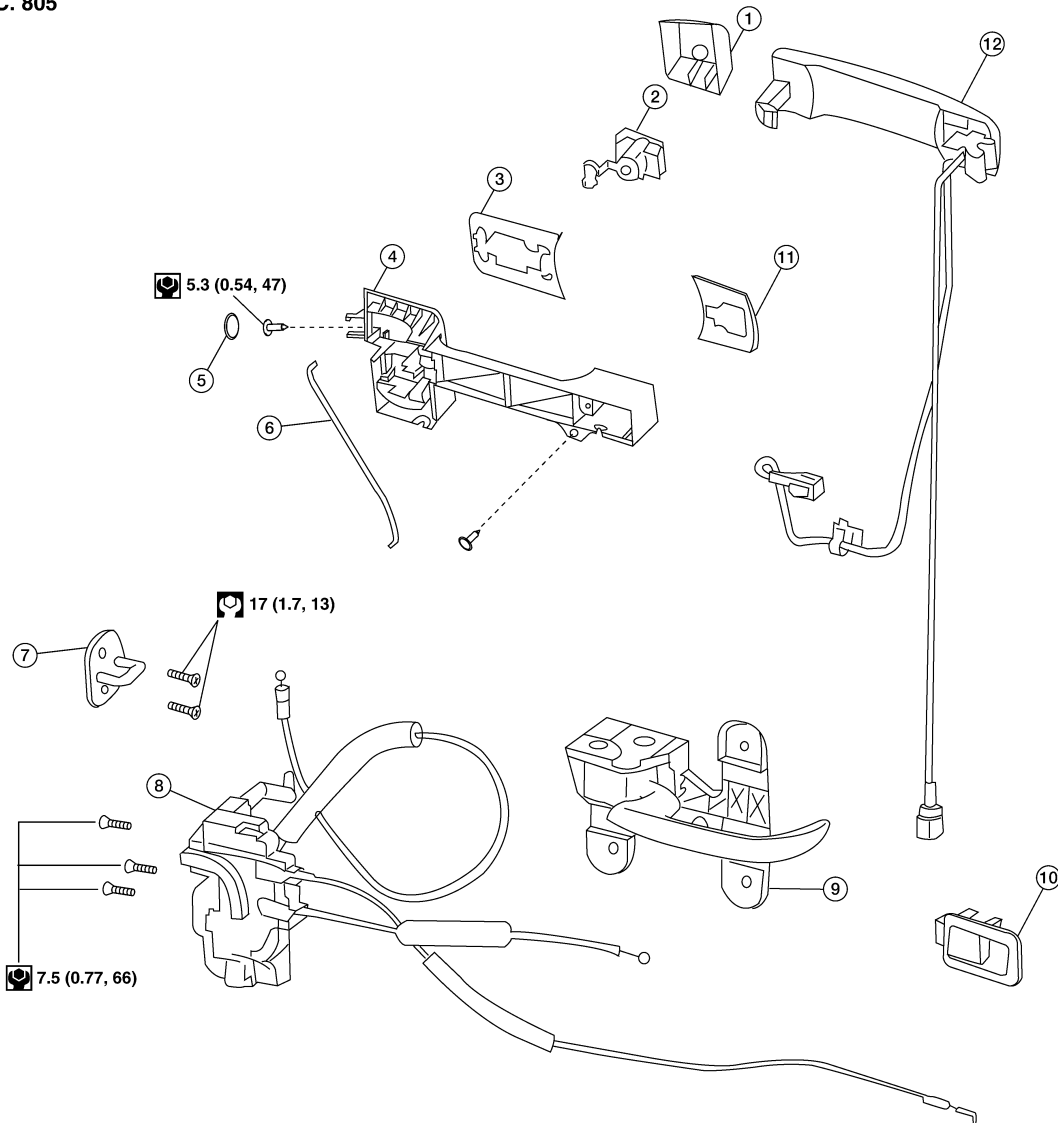
[WITH INTELLIGENT KEY SYSTEM]

## FRONT DOOR LOCK

### Component Structure

INFOID:000000001278671

SEC. 805



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DLK

- |  |   |  |
|--|---|--|
| 1. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side) | 2. Key cylinder assembly (Driver side only) | 3. Rear gasket                         |
| 4. Outside handle bracket  | 5. Grommet                                  | 6. Key cylinder rod (Driver side only) |
| 7. Front door striker  | 8. Door lock assembly                       | 9. Inside handle assembly              |
| 10. Inside door lock lever   | 11. Front gasket                            | 12. Outside handle assembly            |

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### Removal and Installation

INFOID:000000001278672

#### REMOVAL

1. Remove the front door window regulator. Refer to [GW-14, "Removal and Installation"](#).
2. Remove the front door window rear glass run.

# FRONT DOOR LOCK

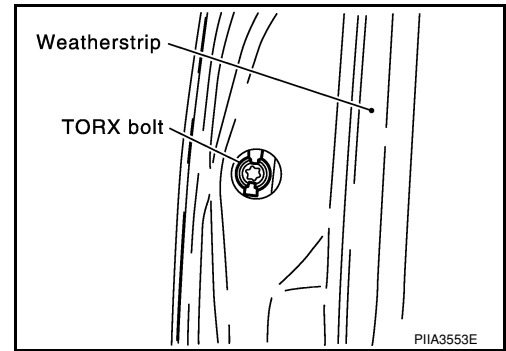
< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

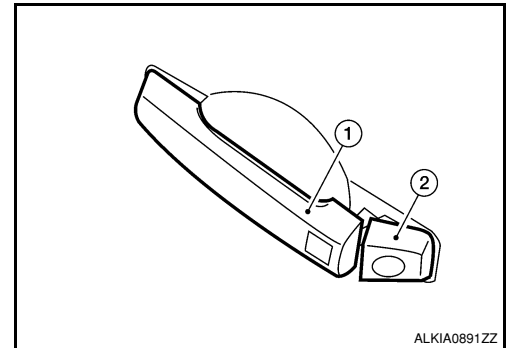
3. Remove the door side grommet, and the bolt (TORX T30) from the grommet hole.

**Torx bolt**

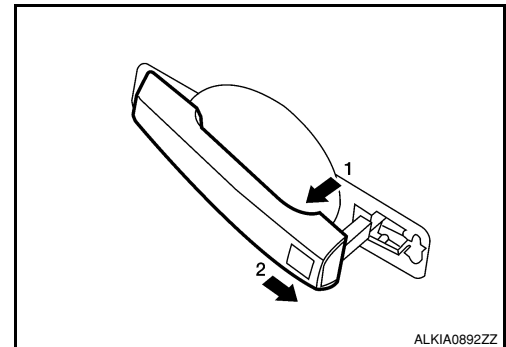
**5.3 N·m (0.54 kg-m, 47 in-lb)**



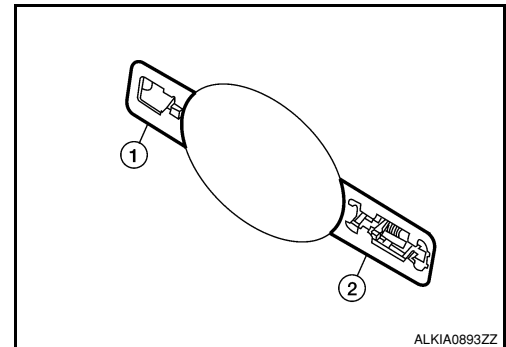
4. While pulling the outside handle (1), remove the door key cylinder assembly or outside handle escutcheon (2).



5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling the outside handle, slide it toward rear of vehicle to remove as shown.
7. Disconnect the I-key request switch electrical connector.



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



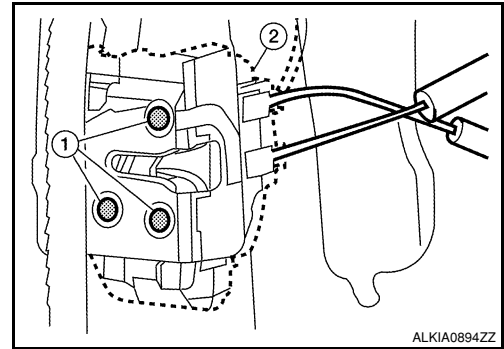
# FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

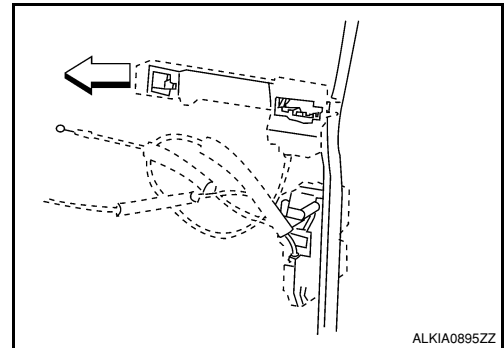
[WITH INTELLIGENT KEY SYSTEM]

9. Remove the TORX bolts (T30) (1), and separate the door lock assembly (2) from the door.

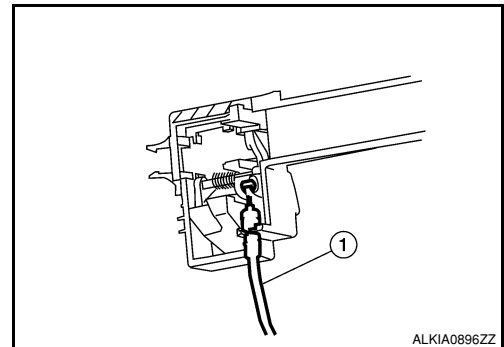
**Door lock assembly bolts 7.5 N·m (0.77 kg·m, 66 in·lb)**



10. While pulling the outside handle bracket, slide it toward the front of the vehicle to remove it and the door lock assembly as shown.



11. Disconnect the door lock actuator electrical connector.  
12. Separate the outside handle cable connection (1) from the outside handle bracket.



## INSTALLATION

Installation is in the reverse order of removal.

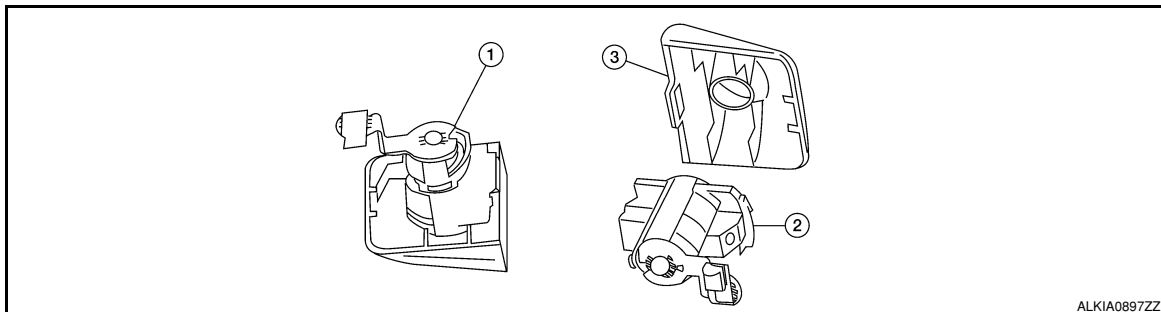
### CAUTION:

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

## Disassembly and Assembly

INFOID:000000001278673

## DOOR KEY CYLINDER ASSEMBLY



1. Door key cylinder assembly      2. Key cylinder assembly      3. Door key cylinder escutcheon

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

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# REAR DOOR LOCK

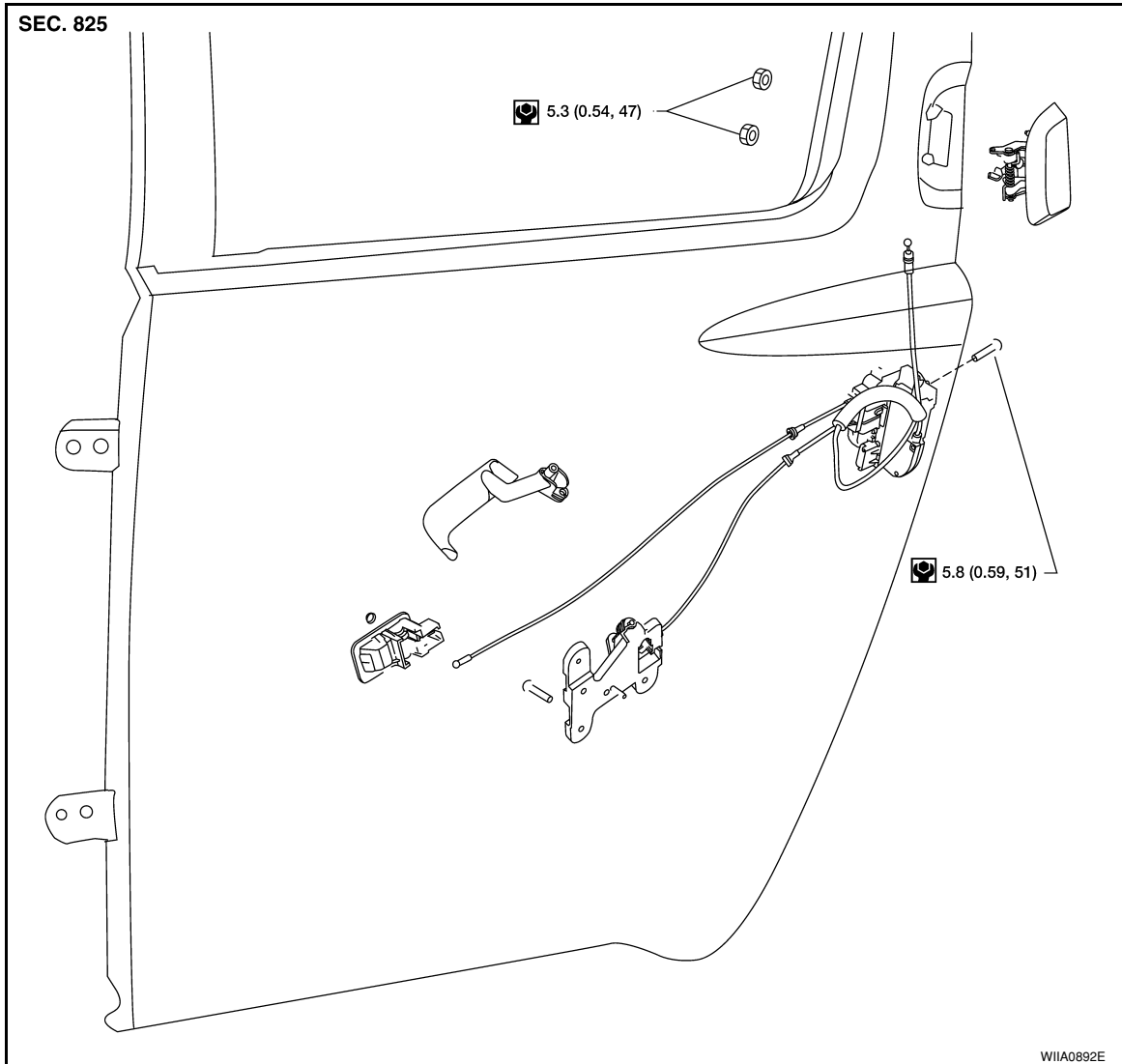
< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

## REAR DOOR LOCK

### Component Structure

INFOID:000000001366850



### Removal and Installation

INFOID:000000001366851

#### REMOVAL

1. Remove the rear door window and rear door module assembly. Refer to [GW-17. "Removal and Installation"](#).
2. Remove door grommets, and remove outside handle nuts from grommet hole.
3. Remove outside handle.
4. Disconnect the door lock actuator connector.
5. Reach to separate outside handle rod connection.

#### INSTALLATION

Installation is in the reverse order of removal.



# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

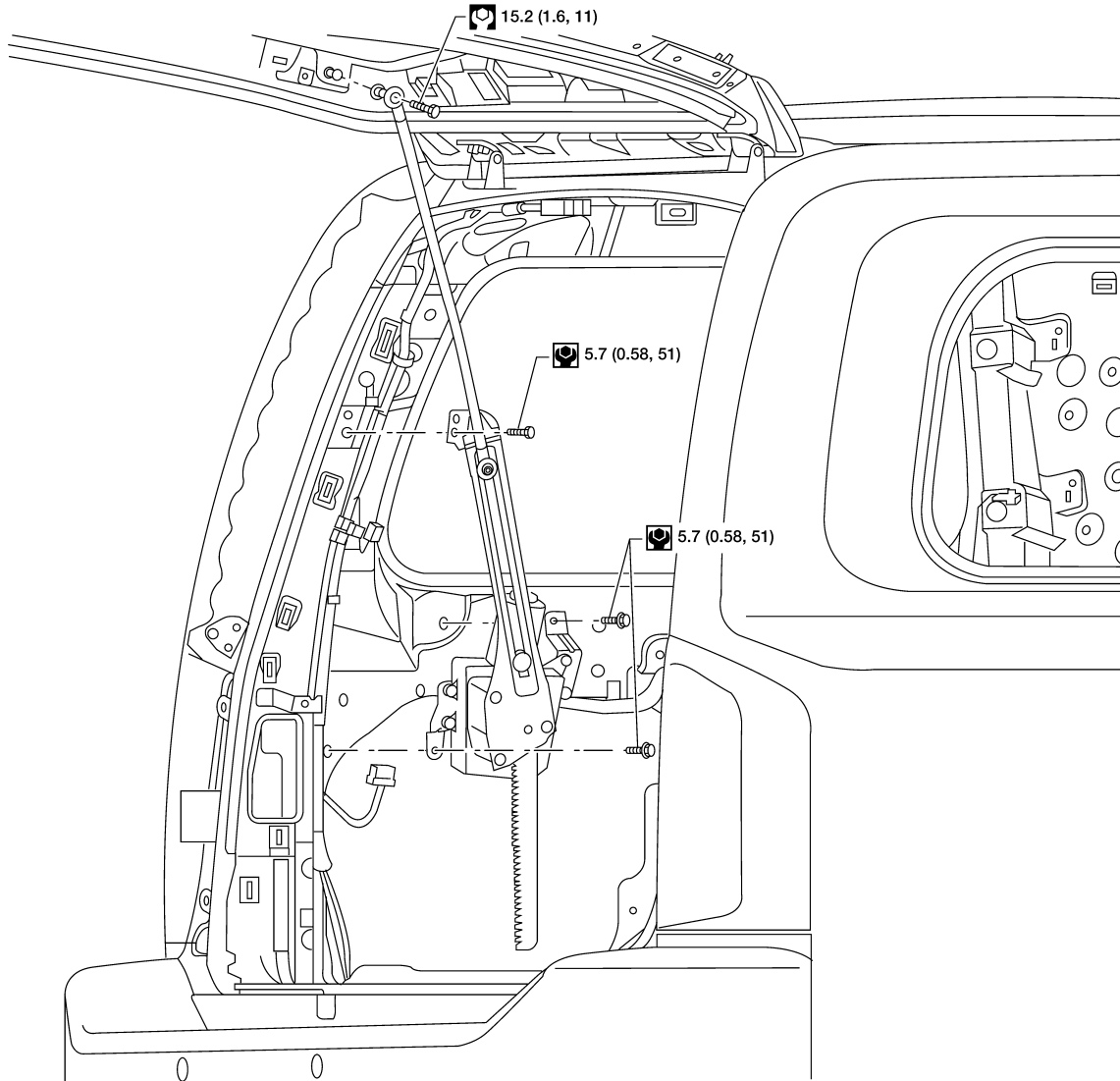
## BACK DOOR LOCK

### Power Back Door Opener

INFOID:000000001366852

#### Removal

SEC. 905



1. Remove the LH luggage side upper. Refer to [INT-18, "Removal and Installation"](#).
2. Disconnect the power back door motor electrical connector.
3. Disconnect the ball socket from the back door.
4. Remove the power back door motor assembly.

#### Installation

Installation is in the reverse order of removal.

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# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

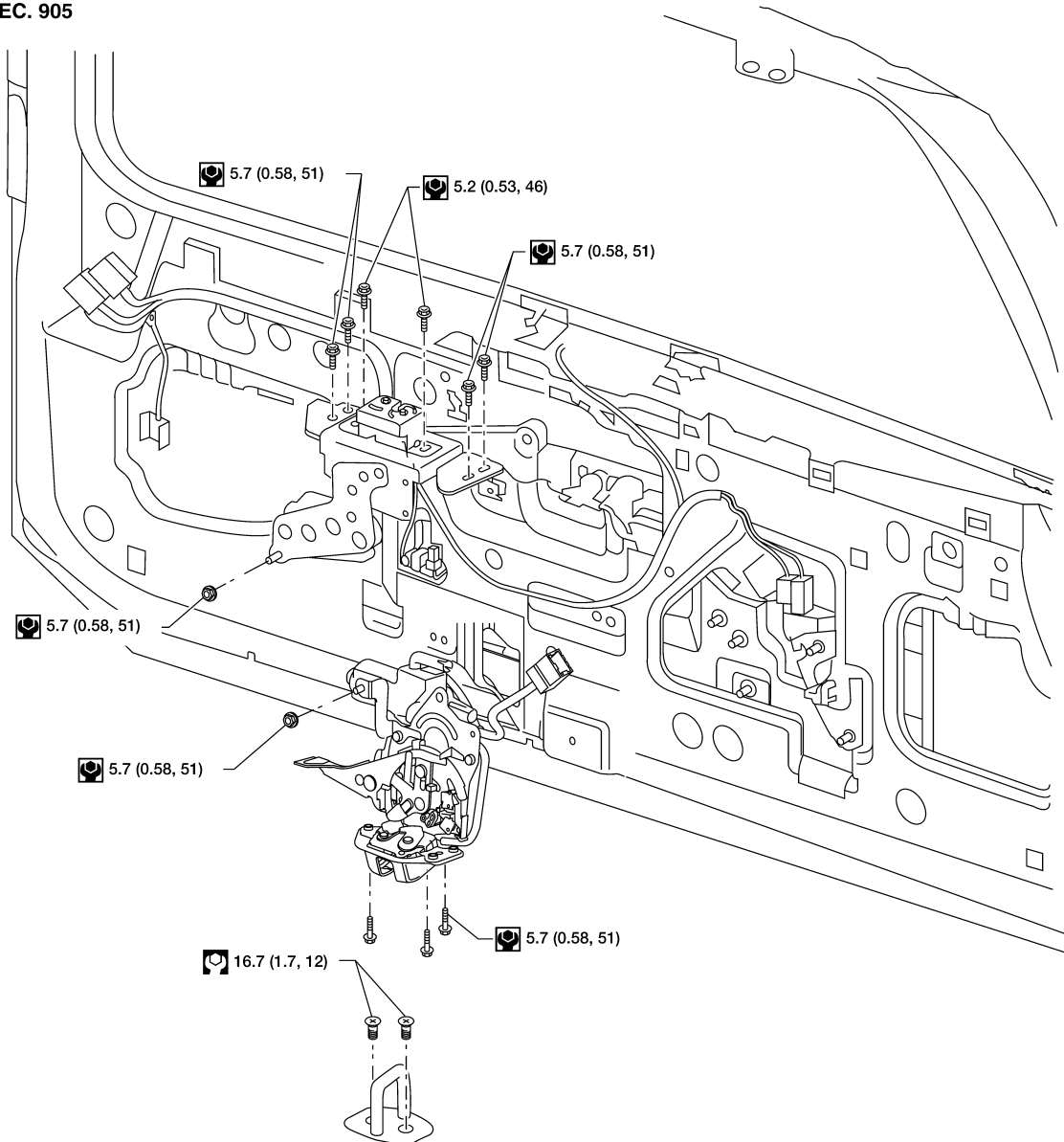
[WITH INTELLIGENT KEY SYSTEM]

## Door Lock Assembly

INFOID:000000001366853

### Removal

SEC. 905



WIIA0894E

1. Remove the lower back door trim panel. Refer to [INT-20, "Removal and Installation"](#).
2. Remove the weathershields.
3. Disconnect the back door lock electrical connectors.
4. Remove the back door lock assembly.
5. Disconnect the back door glass lock electrical connector.
6. Remove the back door glass lock.

### Installation

Installation is in the reverse order of removal.

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

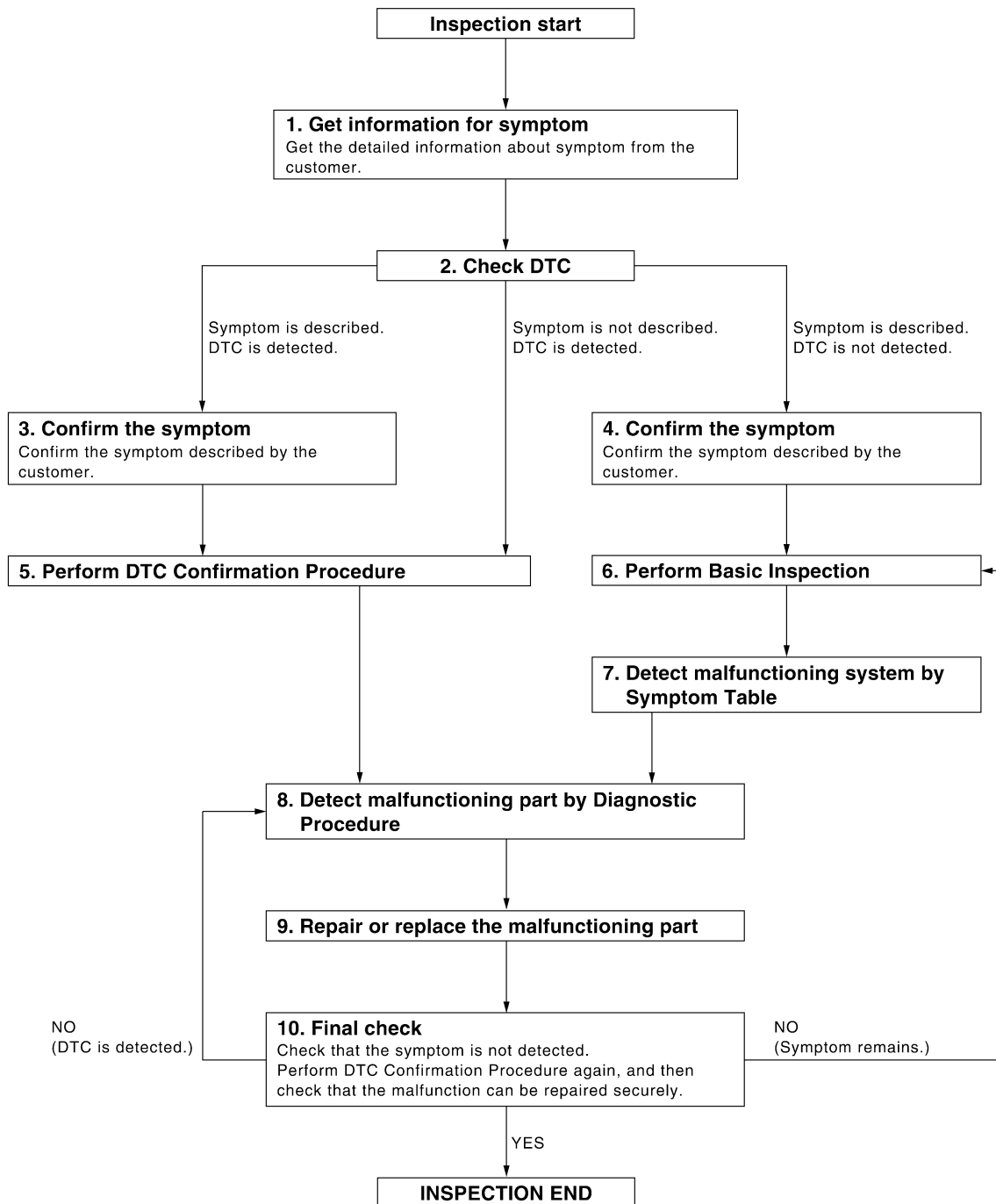
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001350516

OVERALL SEQUENCE



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DETAILED FLOW

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

## 1.GET INFORMATION FOR SYMPTOM

---

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

>> GO TO 2.

---

## 2.CHECK DTC

---

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

Is any symptom described and any DTC detected?

- Symptom is described, DTC is displayed>>GO TO 3.
- Symptom is described, DTC is not displayed>>GO TO 4.
- Symptom is not described, DTC is displayed>>GO TO 5.

---

## 3.CONFIRM THE SYMPTOM

---

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

>> GO TO 5.

---

## 4.CONFIRM THE SYMPTOM

---

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

>> GO TO 6.

---

## 5.PERFORM DTC CONFIRMATION PROCEDURE

---

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.  
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.  
If two or more DTCs are detected, refer to [DLK-303. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

**NOTE:**

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

Is DTC detected?

- Yes >> GO TO 8.
- No >> Refer to [GI-39. "Intermittent Incident"](#).

---

## 6.PERFORM BASIC INSPECTION

---

Perform [DLK-211. "Work Flow"](#).

Inspection End>>GO TO 7.

---

## 7.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

---

Detect malfunctioning system according to [DLK-318. "Symptom Table"](#) based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

>> GO TO 8.

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

## 8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

### NOTE:

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

### Is malfunctioning part detected?

Yes >> GO TO 9.

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

## 9. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10.

## 10. FINAL CHECK

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

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

### OK or NG

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

NG (Symptom remains)>>GO TO 6.

OK >> **INSPECTION END**

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## INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

### INSPECTION AND ADJUSTMENT

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000001350517

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

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000001350518

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

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

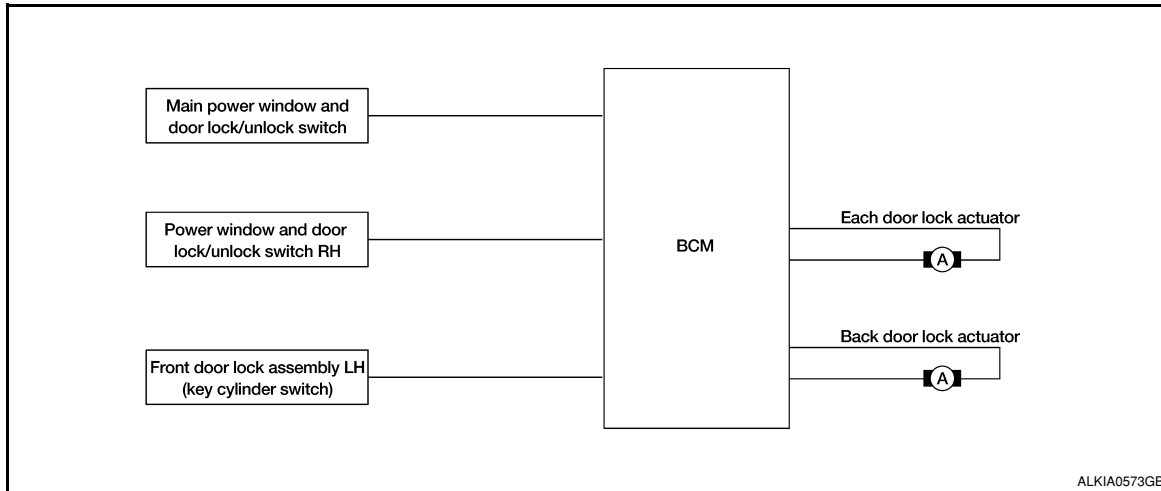
## FUNCTION DIAGNOSIS

### DOOR LOCK FUNCTION

#### DOOR LOCK AND UNLOCK SWITCH

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

INFOID:000000001350519



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

INFOID:000000001350520

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

### DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

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

Selective Unlock Operation

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

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-228, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

Refer to [DLK-259, "Diagnosis Procedure"](#).

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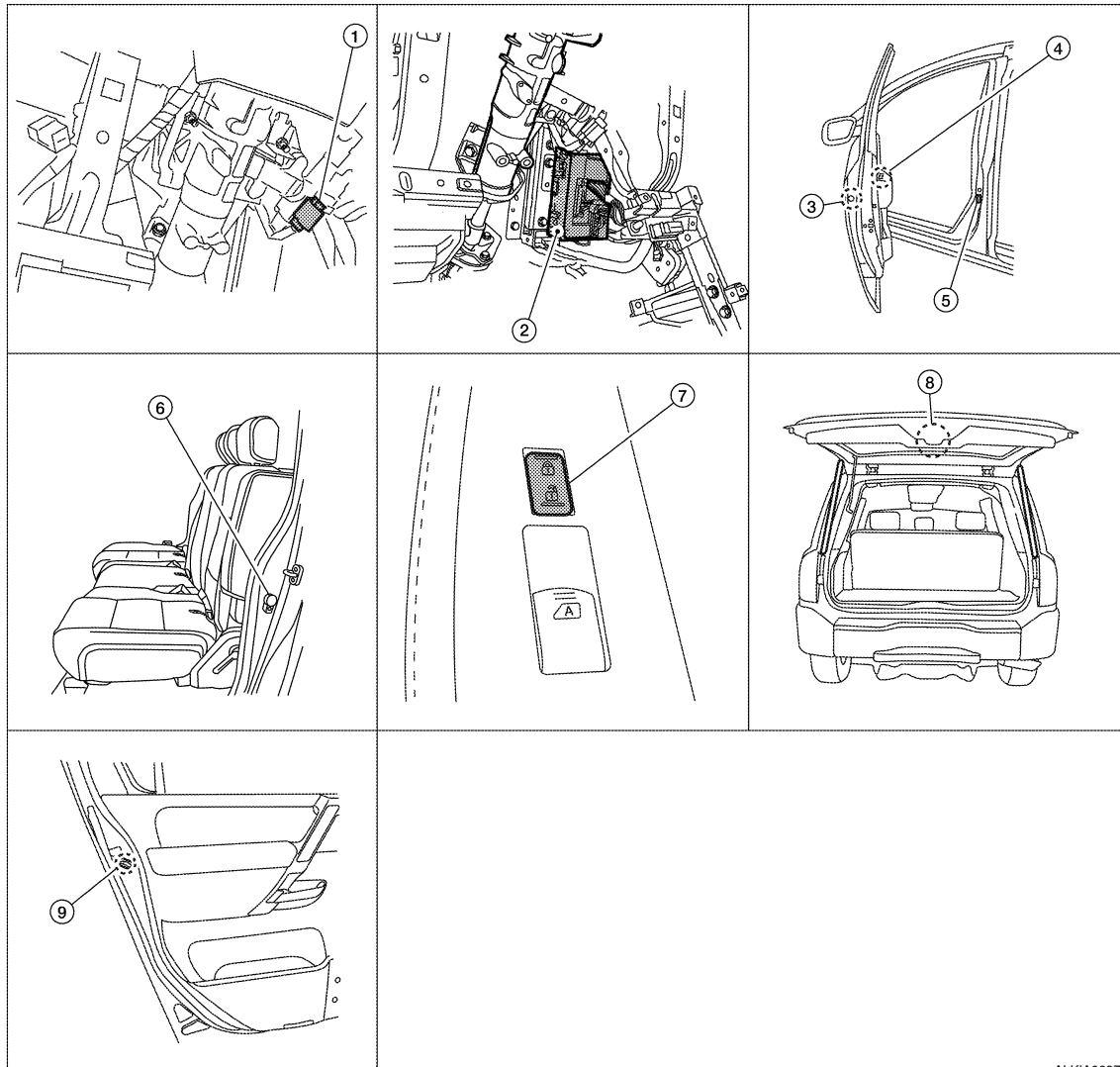
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000001350521



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- |   |  |  |
|---|--|--|
| 1. Key switch and key lock solenoid M27                 | 2. BCM M18, M19, M20<br>(view with instrument panel LH removed)  | 3. Front door lock assembly LH (key cylinder switch) D14<br>Front door lock actuator RH D114 |
| 4. Main power window and door lock/unlock switch D7, D8 | 5. Front door switch<br>LH B8<br>RH B108   | 6. Rear door switch<br>LH B18<br>RH B116   |
| 7. Power window and door lock/unlock switch RH D105     | 8. Back door switch (without power back door) D502<br>Back door latch (door ajar switch) (with power back door) D503<br>Back door lock actuator D703 | 9. Rear door lock actuator<br>LH D205<br>RH D305   |

## DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000001350522

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



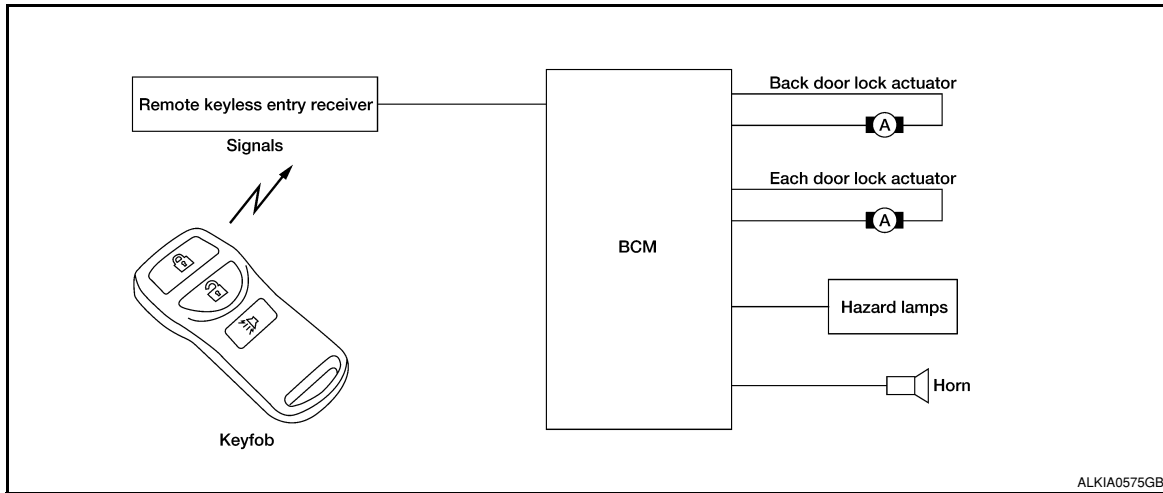
# DOOR LOCK FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

## REMOTE KEYLESS ENTRY

### REMOTE KEYLESS ENTRY : System Diagram



### REMOTE KEYLESS ENTRY : System Description

INFOID:000000001350524

#### OPERATED PROCEDURE

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

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#### REMOTE CONTROL ENTRY FUNCTIONS

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

#### REMOTE CONTROL ENTRY OPERATION CONDITIONS

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

#### AUTO LOCK FUNCTION

##### Operation Description

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

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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

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

## REMOTE CONTROL AUTOMATIC BACK DOOR FUNCTION

(Vehicles With Automatic Back Door System)

Switching from all closed to all open

- When a button on the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM uses power window serial link communication to send the back door open signal to the back door control unit
- When the back door control unit receives the back door open signal for 0.5 continuous seconds, if the remote control automatic back door operation enable conditions are met, the warning chime is sounded and the back door unlock signal is sent to the back door latch using communication.
- When the back door latch receives the back door unlock signal, it operates the release actuator and releases to back door latch.
- The back door control unit operates the back door motor to open the back door. (At this time, speed control, input reverse, and overload reverse control are executed.)
- When the back door is opened to the fully open position, the full-open position is detected with the rotation sensor, the back door motor is stopped.
- The door held by the back door stays at the full open position.

Full open → full closed operation

- When a button of the keyfob is operated, the signal is sent from the keyfob and received by the remote keyless entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM uses communication to send the back door close request signal to the back door control unit.
- When the back door control unit receives the back door close request signal for 0.5 continuous seconds, if the remote control automatic back door operation enable conditions are met, the warning chime is sounded and the back door motor begins closing the back door.
- The back door control unit operates the magnetic clutch and the back door motor to close the back door. (At this time, the back door control unit executes speed control, input reverse, and overload reverse control.)
- When the back door comes to the half-latch state, the back door latch detects the half-latch state through half-latch switch operation. The back door latch latches the back door.

For the automatic back door system operation enable conditions, refer to [DLK-265, "Self-Diagnosis Procedure"](#).

## ACTIVE CHECK FUNCTION

Operation Description

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

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

Operating function of hazard and horn reminder

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

## HAZARD AND HORN REMINDER

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

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

**How to change hazard and horn reminder mode**

# DOOR LOCK FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

Ⓜ With CONSULT-III

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

ⓧ Without CONSULT-III

Refer to Owner's Manual for instructions.

## INTERIOR LAMP OPERATION

When the following input signals are both supplied:

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

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

## PANIC ALARM OPERATION

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

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

## KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

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

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

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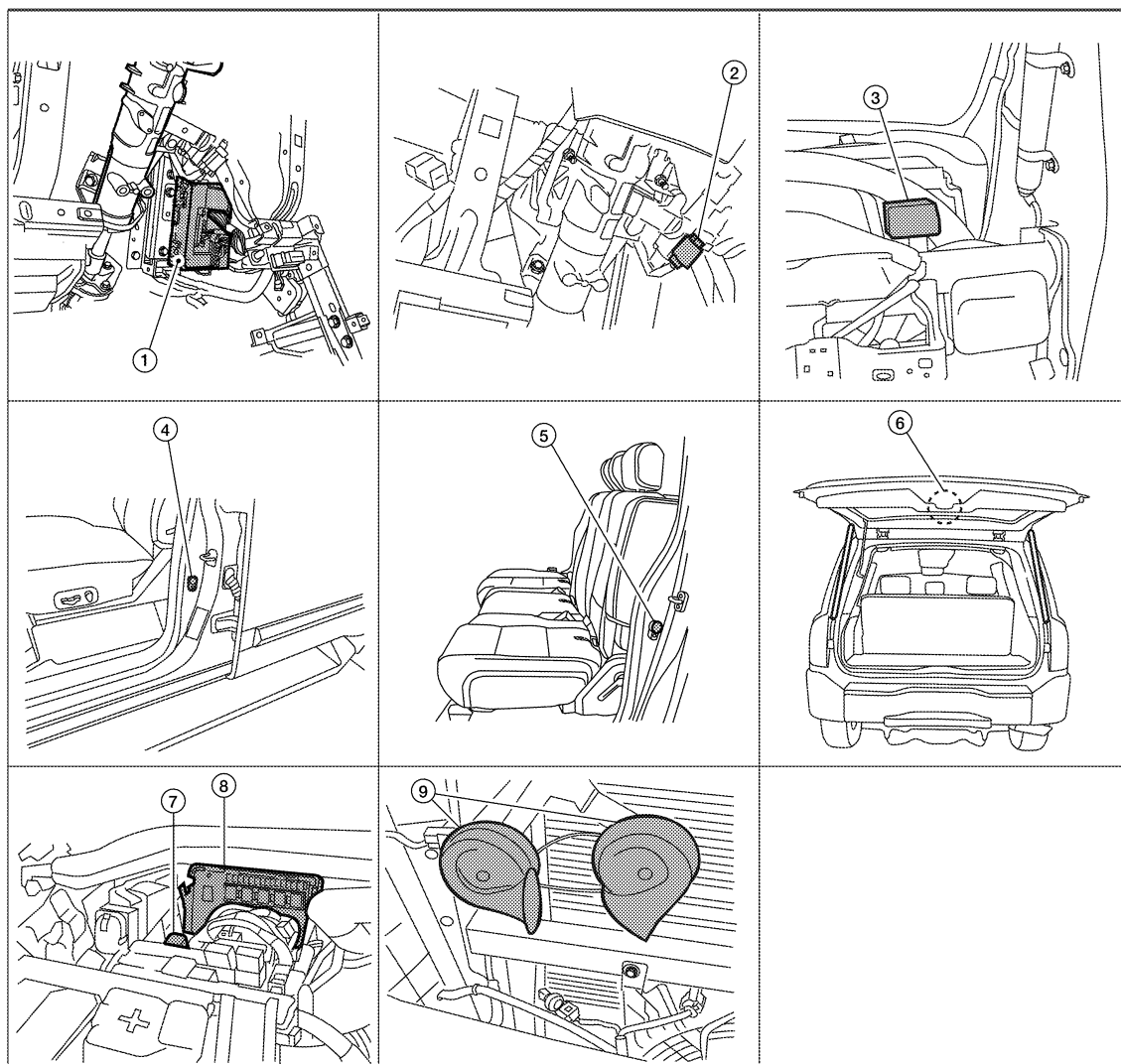
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## REMOTE KEYLESS ENTRY : Component Parts Location

INFOID:000000001350525



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- |   |  |  |
|---|--|--|
| 1. BCM M18, M19, M20<br>(view with instrument panel LH removed) | 2. Key switch and key lock solenoid M27<br>(view with instrument panel LH removed) | 3. Remote keyless entry receiver M120<br>(view with instrument panel RH removed)                                     |
| 4. Front door switch LH B8<br>RH B108                           | 5. Rear door switch LH B18<br>RH B116  | 6. Back door switch (without power back door) D502<br>Back door latch (door ajar switch) (with power back door) D503 |
| 7. Horn relay H-1<br>(view with cover removed)                  | 8. IPDM E/R E122, E124   | 9. Horn E3<br>(view with grille removed)   |

## REMOTE KEYLESS ENTRY : Component Description

INFOID:000000001350526

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

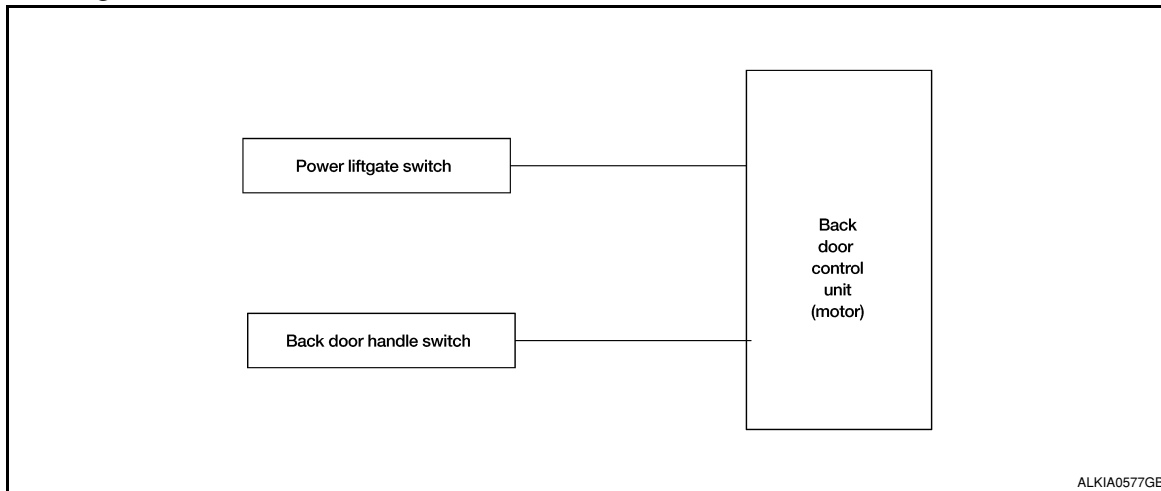
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER FUNCTION

### System Diagram



### System Description

INFOID:000000001350532

#### BACK DOOR OPENER OPERATION

##### NOTE:

**The automatic back door system must be initialized by fully closing the back door anytime the battery power is lost to the back door control unit.**

The automatic back door system consists of a one piece unit that combines the back door control unit along with the back door motor, back door clutch and the back door encoder. The back door latch contains a lock function that can control the two functions of automatic back door latch closure and electrical opener with a single motor when you close the back door to the halfway-state.

- Back door auto closure

When the back door is closed to the halfway state (half-latch) position, the motor automatically drives to rotate the latch lever and pull it in from half latched to full latched.

- Power back door

With the back door closed, if you press the power liftgate switch or press the keyfob button, or pull the back door handle with the back door unlocked, the back door latch motor drives the open the locking plate and releases the latch. The back door motor then raises the door to the full open position.

With the back door fully open, if you press the power liftgate switch, keyfob button or the back door close switch, the back door motor closes the door to the half-latch state. The back door latch motor then drives the latch to the full close position.

At the onset of each power open or power close application, the hazard lamps will flash 3 times and the warning chime will sound 3 dings lasting a total of 2 seconds.

#### OPERATION DESCRIPTION

##### Power Liftgate Switch Operation (Fully Closed → Fully Open Operation)

- When the power liftgate switch is pressed, back door control unit terminal 23 receives the signal.
- The back door control unit checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

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# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Remote Keyless Entry Operation (Fully Closed → Fully Open Operation)

- When the keyfob button is pressed for at least 0.5 seconds, back door control unit terminal 21 receives the signal.
- The back door control unit checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

Back Door Handle Switch Operation (Fully Closed → Fully Open Operation)

- When the back door handle is pulled, back door control unit terminal 26 receives the signal.
- The back door control unit checks that the back door is unlocked and checks the A/T selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed, battery voltage and back door close switch position through terminal 13.
- When the back door control unit receives the signal, if all auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

Power Liftgate Switch Operation (Fully Open → Fully Closed Operation)

- When the power liftgate switch is pressed, the back door control unit terminal 23 receives the signal.
- The back door control units checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

Remote Keyless Entry Operation (Fully Open → Fully Closed Operation)

- When the remote keyless entry switch is pressed for at least 0.5 seconds, the back door control unit terminal 21 receives the signal.
- The back door control units checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)

# BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

### Back Door Close Switch Operation (Fully Open → Fully Closed Operation)

- When the back door close switch is pressed, the back door control unit terminal 8 receives the signal.
- The back door control units checks back door close switch (terminal 13) status and door position (must be fully opened), through rotary encoder and battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

### Reversal

The door will reverse direction during power open or close operation if the automatic door main switch, keyfob or back door close switch is operated. A chime will sound to announce the reversal.

### Anti-Pinch Function

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

### Gas Stay Check

- During each power open operation, the back door control unit monitors motor current draw to determine if the gas stays are functioning properly.
- If a malfunction of the gas stays is detected, the back door control unit will close the back door while sounding the warning chime. The back door cannot be opened using the switches until the gas stay malfunction is repaired.

### Warning Functions

- The hazard warning lamps flash and a warning chime is sounded according to the back door operating state, operations, and conditions.

### Auto Back Door Operation Enable Conditions

Operation	Power liftgate switch		Remote keyless entry		Back door handle switch		Back door close switch
	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully open → closed
Close switch	CANCEL or NEUTRAL				NEUTRAL		NEUTRAL
Vehicle stop condition	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	—

# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Operation	Power liftgate switch		Remote keyless entry		Back door handle switch		Back door close switch
Operating direction	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully open → closed
Battery voltage	Approx. 11V or more						
Back door lock status	—	—	—	—	Unlocked	—	—
Glass hatch	Closed						

## Control When Operating Enable Conditions Not Met During Power Open/Close

Items	Operation condition	Not met case	Control
A/T selector lever P position	P or N position with ignition ON or any position with ignition OFF	Other	Continue power open or close, but sounds warning chime.
Back door close switch	NEUTRAL	CANCEL	Cancels power open/close operation or door will release to manual mode.
Voltage drop	11V or more	11 > V > 9	
		9 > V > reset voltage	
		Reset voltage > V	No power function available
Handle switch	Normal (GND)	Error (OPEN)	No operation. Cancel power open/close release to manual.
Glass hatch	Closed	OFF	Cancels power door open operation, door will release to manual mode.

## Control When Operating Enable Conditions No Longer Met

Description	Operation	Control
Back door close switch turned to CANCEL	Warning chime active → Shift to manual mode after full open or close operation is complete (Recovery to power mode when main switch turned OFF or door fully closed)	→ Shift to manual mode
A/T selector lever P or N position with ignition switch ON	Warning chime active and one-way operation continuous (Warning chime inactive and door fully open or fully closed or operating conditions recovered)	Full open: power close operation allowed Full close: operating conditions not met → no power open function.
Voltage drop 11 - 9V	One-way operation continued (equivalent to the case of starting voltage ← 11V for handle operation with warning chime active)	Not allowed
Voltage drop less than 9V (Microcomputer reset voltage - clutch hold voltage)	<ul style="list-style-type: none"> <li>• Motor stopped</li> <li>• Clutch may slip</li> <li>• Control not possible because microcomputer being reset</li> </ul>	Control not possible because microcomputer being reset

## Warning Chime Active Conditions

The warning chime uses two types of audio warnings, a friendly chime and a warning chime. The friendly chime consists of dings lasting 0.66 seconds each immediately followed by the next ding. The warning chime consists of beeps lasting 0.33 seconds with a pause of 0.33 seconds between each beep.

Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Power liftgate switch operation	Friendly chime 2 seconds, 3 dings
	Remote keyless entry operation	
	Back door handle switch operation	
	Back door close switch operation	



# BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

Operation status	Operation or conditions	Warning chime pattern
When reverse operation starts	When reverse request is detected from power liftgate switch, remote keyless entry or back door close switch	Friendly chime 1.3 seconds, 2 dings
	When obstacle is detected	Warning chime 2 seconds, 3 beeps
Operating at low voltage	While opening or closing	Warning chime 2 seconds, 3 beeps
A/T selector lever not in P position	Back door close operation	Friendly chime Continuously dings
	Back door open operation	Warning chime Continuously beeps (until close operation is started)

## Reverse Conditions

Type	Overload reverse
Operation covered	Both directions
Detection method	Operation speed and motor current change direction
	Pinch strips during back door close operation
Non-reversed area	<ul style="list-style-type: none"> <li>For about 0.5 seconds immediately after drive motor operation starts</li> <li>Between full open and approx. 7° from full open</li> <li>Closure operation area (half switch - close switch)</li> </ul>
Number of times reverse allowed	One reversal is allowed (if a second obstacle is detected during a power open or close operation, the door reverts to manual mode).

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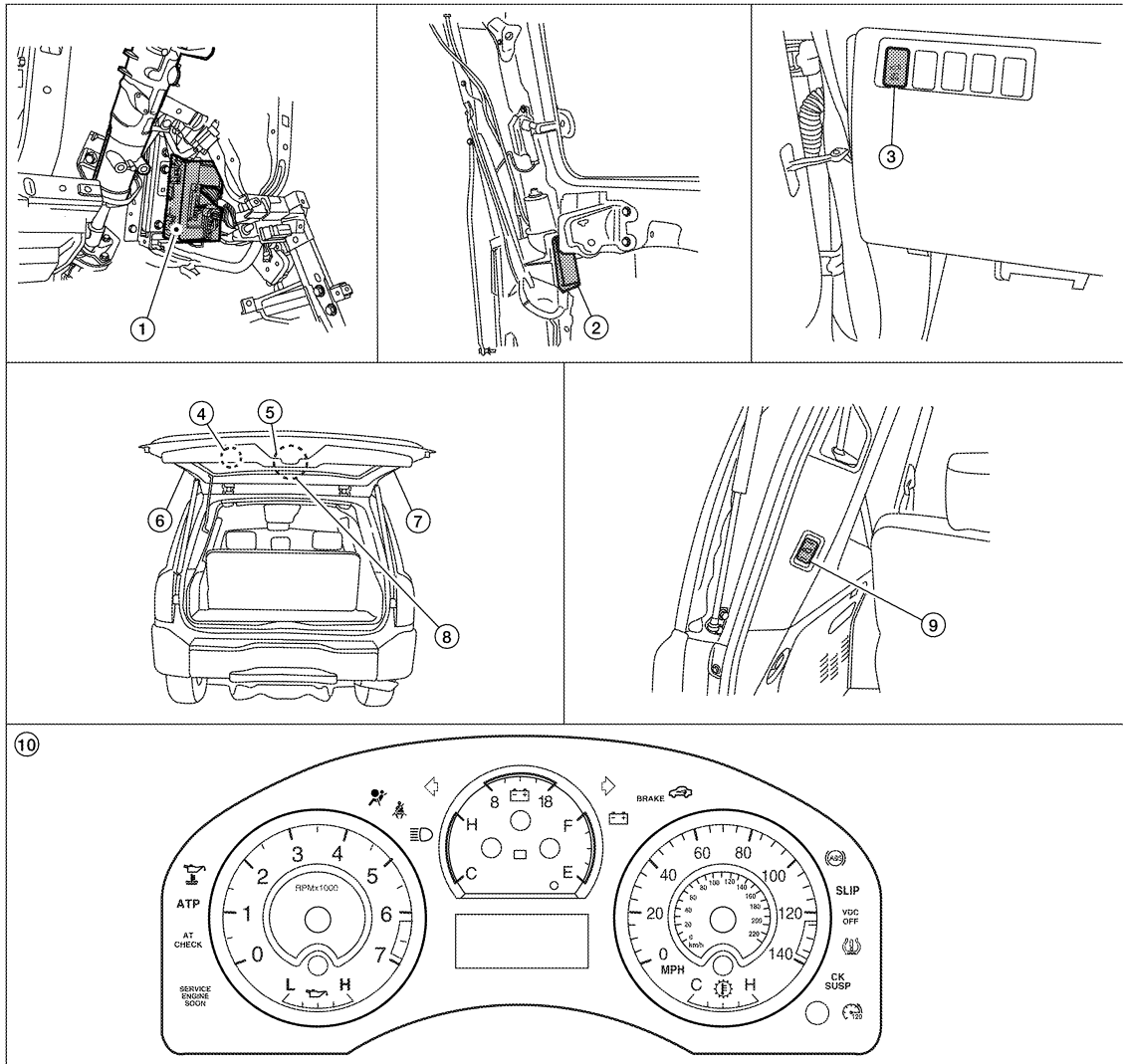
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## Component Parts Location

INFOID:000000001350533



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- |   |   |                               |
|---|---|-------------------------------|
| 1. BCM M18, M19, M20<br>(view with instrument panel LH removed) | 2. Back door control unit B55<br>(view with right rear panel removed) | 3. Power liftgate switch M92  |
| 4. Back door warning chime D514                                 | 5. Back door latch D503<br>Back door handle switch D706               | 6. Pinch strip LH D517        |
| 7. Pinch strip RH D715  | 8. Glass hatch ajar switch D707                                       | 9. Back door close switch B63 |
| 10. Combination meter M24                                       |   |                               |

## Component Description

INFOID:000000001350534

Item	Function
Power liftgate switch	Transmits liftgate open operation signal to back door control unit.
Back door control unit	Transmits liftgate open operation to liftgate motor.
Back door close switch	Transmits back door close signal to back door control unit.
Back door handle switch	Transmits back door open signal to back door control unit.
Pinch strip (LH, RH)	While closing, reverses door direction to full open position when an obstacle is in the way.
Back door warning chime	Announces opening and closing of back door.

# HOMELINK UNIVERSAL TRANSCEIVER

< FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Component Description

INFOID:000000001350547

Item	Function	Reference page
Homelink universal transceiver	A maximum of 3 radio signals can be stored and transmitted to operate the garage door, etc.	Refer to Owner's Manual

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# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

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

INFOID:000000001350548

#### 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-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to <a href="#">DLK-303, "DTC Index"</a> .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
BCM	BCM	×		
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
RAP system	RETAINED PWR		×	

### DOOR LOCK

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

INFOID:000000001350549

#### BCM CONSULT-III FUNCTION

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

#### WORK SUPPORT

Monitor item	Description
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.

#### DATA MONITOR

# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< FUNCTION DIAGNOSIS >

Monitor Item	Contents
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 trunk opener request switch.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch (driver side).
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch (passenger side).
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-BK	Indicates [ON/OFF] condition of back door switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from door lock unlock switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from door lock unlock switch.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from key cylinder.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from key cylinder.

## ACTIVE TEST

Test item	Description
DOOR LOCK	<p>This test is able to check door lock/unlock operation.</p> <ul style="list-style-type: none"> <li>• The all door lock actuators are locked when “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 door lock actuator (driver side) is unlocked when “DR UNLK” on CONSULT-III screen is touched.</li> <li>• The 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>

## REMOTE KEYLESS ENTRY

### REMOTE KEYLESS ENTRY : CONSULT-III Function (BCM - RKE)

INFOID:000000001350550

“MULTI REMOTE ENT”

Data Monitor

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
BACK DOOR SW	Indicates [ON/OFF] condition of back door switch.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from keyfob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
KEYLESS PBD	Indicates [ON/OFF] condition of power back door signal from keyfob.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.

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# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

Monitored Item	Description
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
RKE LCK-UNLCK	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock signal from keyfob.

### Active Test

Test Item	Description
FLASHER	This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when "RH" on CONSULT-III screen is touched and the left hazard lamp turns on when "LH" on CONSULT-III screen is touched.
POWER WINDOW DOWN	This test is able to check power window down operation. The windows are lowered when "ON" on CONSULT-III screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after "ON" on CONSULT-III screen is touched.
DOOR LOCK	This test is able to check door lock operation. The doors lock and unlock based on the item on CONSULT-III screen touched.
TRUNK/BACK DOOR	This test is able to check back door actuator operation. The back door is opened when "OPEN" on CONSULT-III screen is touched.

### Work Support

Test Item	Description
REMO CONT ID REGIST	Keyfob ID code can be registered.
REMO CONT ID ERASUR	Keyfob ID code can be erased.
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.
HORN CHIRP SET	Horn chirp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
HAZARD LAMP SET	Hazard lamp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
TRUNK OPEN SET	Back door opener operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.

### Hazard and horn reminder mode

	MODE 1 (C mode)		MODE 2 (S mode)		MODE 3		MODE 4		MODE 5		MODE 6	
	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—	—	—	Twice	Once	Twice	—	—	Once
Horn sound	Once	—	—	—	—	—	—	—	Once	—	Once	—

### Auto locking function mode

	MODE 1	MODE 2	MODE 3
Auto locking function	5 minutes	Nothing	1 minute

# DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

## < FUNCTION DIAGNOSIS >

### Panic alarm operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

A

### Back door open operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	0.5 seconds

B

### Keyless power window down operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	3 seconds	Nothing	5 seconds

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# U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

#### Description

INFOID:000000001350553

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to [LAN-46, "CAN Communication Signal Chart"](#).

#### DTC Logic

INFOID:000000001350554

#### DTC DETECTION LOGIC

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

#### Diagnosis Procedure

INFOID:000000001350555

#### 1. PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [DLK-232, "Diagnosis Procedure"](#).  
NO >> Refer to [GI-39, "Intermittent Incident"](#).



# U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## U1010 CONTROL UNIT (CAN)

### DTC Logic

INFOID:000000001374732

### DTC DETECTION LOGIC

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

### Diagnosis Procedure

INFOID:000000001374733

#### 1. REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM.

### Special Repair Requirement

INFOID:000000001374734

#### 1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to (Body Control System) for BCM configuration. Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual NATS-IVIS/NVIS.

>> Work end.

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DLK

# POWER SUPPLY AND GROUND CIRCUIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## POWER SUPPLY AND GROUND CIRCUIT

### BCM (BODY CONTROL MODULE)

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

INFOID:000000001350572

Refer to [BCS-32, "Diagnosis Procedure"](#).

### BACK DOOR

#### BACK DOOR : Diagnosis Procedure

INFOID:000000001350573

#### 1. BACK DOOR POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door control unit connector.
3. Check voltage between back door control unit connector B55 terminals 3, 10 and ground.

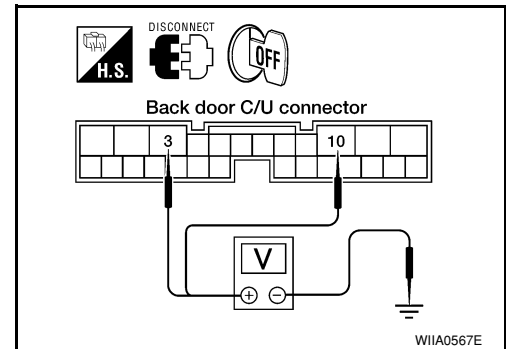
**3 - Ground : Approx. battery voltage**

**10 - Ground : Approx. battery voltage**

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the back door control unit power supply circuit.



#### 2. BACK DOOR GROUND CIRCUIT INSPECTION

Check continuity between back door control unit connector B55 terminal 1, 2 and ground.

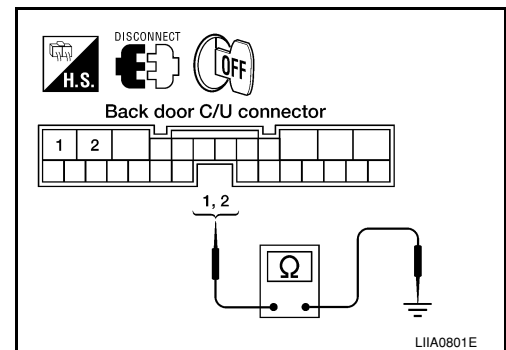
**1 - Ground : Continuity should exist.**

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

Is the inspection result normal?

YES >> Circuit is OK.

NO >> Repair the harness between the back door control unit and ground.



# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DOOR SWITCH

### Description

INFOID:000000001350574

Detects door open/close condition.

### Component Function Check

INFOID:000000001350575

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [DLK-235, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001350576

#### 1. CHECK DOOR SWITCHES INPUT SIGNAL

##### With CONSULT-III

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

• When doors are open:

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

• When doors are closed:

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

##### Without CONSULT-III

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

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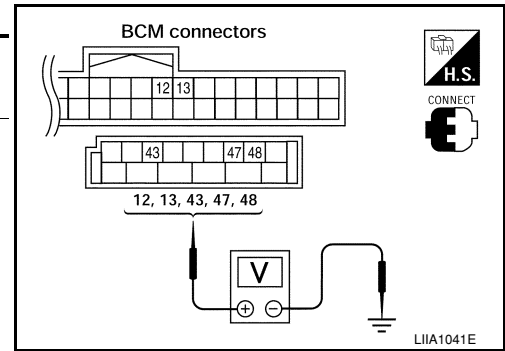
DLK

# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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



Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2

## 2.CHECK DOOR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect door switch and BCM.
- Check continuity between BCM connector (A) M18, M19 terminals 12, 13, 43, 47, 48 and door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or (D) D502 (Back without power back door) terminal 3 or (C) D503 (Back with power back door) terminal 7.

**2 - 47 :Continuity should exist**

**2 - 12 :Continuity should exist**

**2 - 48 :Continuity should exist**

**2 - 13 :Continuity should exist**

**3 - 43 :Continuity should exist**

**7 - 43 :Continuity should exist**

- Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or (D) D502 (Back without power back door) terminal 3 or (C) D503 (Back with power back door) terminal 7 and ground.

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

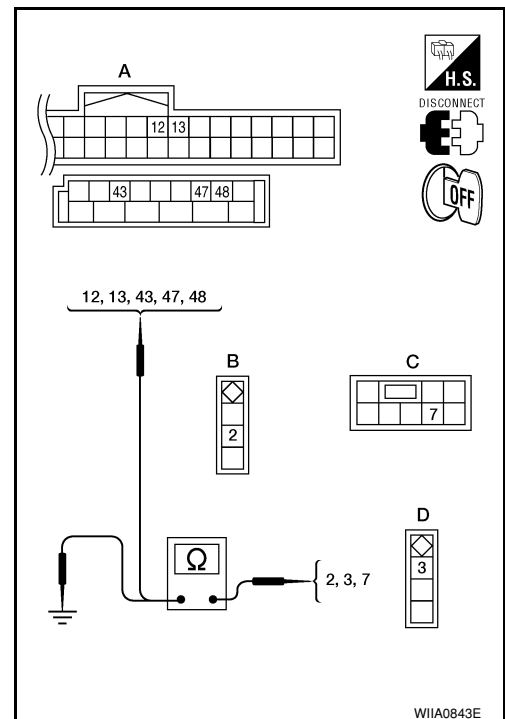
**3 - Ground :Continuity should not exist**

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.



## 3.CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

# DOOR SWITCH

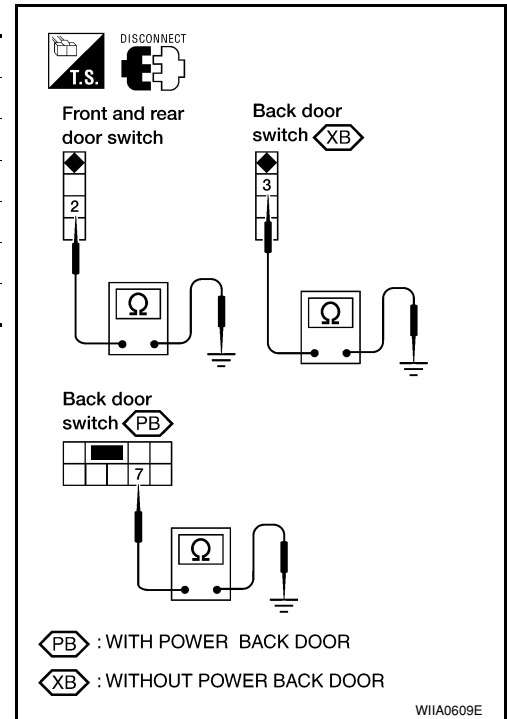
< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Switch	Terminals	Condition	Continuity
Door switch (front and rear)	2 – Ground	Open	Yes
		Closed	No
Back door switch (without power back door)	3 – Ground	Open	Yes
		Closed	No
Back door switch (with power back door)	7 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Door switch circuit is OK.
- NO >> (Front and rear doors) Replace door switch.
- NO >> (Back door) GO TO 4



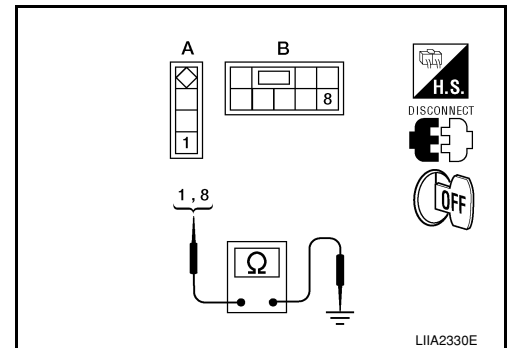
## 4. CHECK BACK DOOR SWITCH CIRCUIT

- Check continuity between door switch connector terminal and ground.

Connector	Terminals	Continuity
A: Back door switch (without power back door)	1 – Ground	Yes
B: Back door switch (with power back door)	8 – Ground	Yes

Is the inspection result normal?

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



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# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000001350577

Transmits door lock/unlock operation to BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000001350578

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> refer to [DLK-238, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001350579

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

##### With CONSULT-III

Check main power window and door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III.

- When main power window and door lock/unlock switch is turned to LOCK:

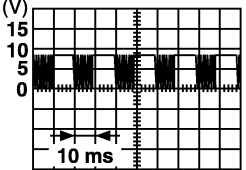
**CDL LOCK SW : ON**

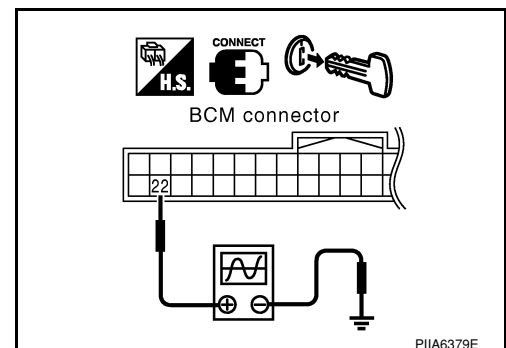
- When main power window and door lock/unlock switch is turned to UNLOCK:

**CDL UNLOCK SW : ON**

##### Without CONSULT-III

1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the door lock/unlock switch is turned to LOCK or UNLOCK.

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 <p style="text-align: right; font-size: small;">PIIA1297E</p>



Is the inspection result normal?

YES >> Door lock and unlock switch circuit is OK.

# DOOR LOCK AND UNLOCK SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

NO >> GO TO 2

## 2.CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "MULTI REMOTE ENT" with CONSULT-III.

**When "ACTIVE TEST" is performed, the front windows should be lowered.**

Is the inspection result normal?

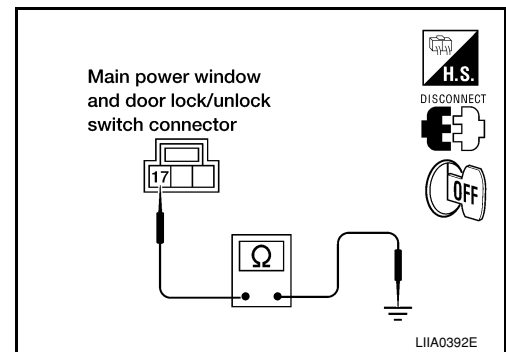
YES >> GO TO 3

NO >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

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

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector D8 terminal 17 and ground.

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



Is the inspection result normal?

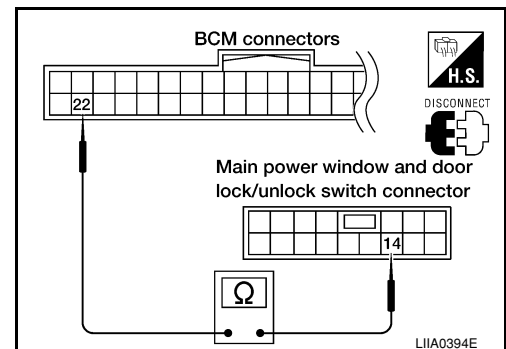
YES >> GO TO 4

NO >> Repair or replace harness.

## 4.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

**22 - 14 : Continuity should exist.**



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000001350580

Transmits door lock/unlock operation to BCM.

### PASSENGER SIDE : Component Function Check

INFOID:000000001350581

## 1.CHECK FUNCTION

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# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

**With CONSULT-III**

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to [DLK-240, "PASSENGER SIDE : Diagnosis Procedure"](#).

## PASSENGER SIDE : Diagnosis Procedure

INFOID:000000001350582

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

**With CONSULT-III**

Check power window and door lock/unlock switch RH ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III.

- When power window and door lock/unlock switch RH is turned to LOCK:

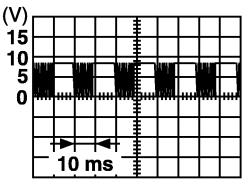
**CDL LOCK SW :ON**

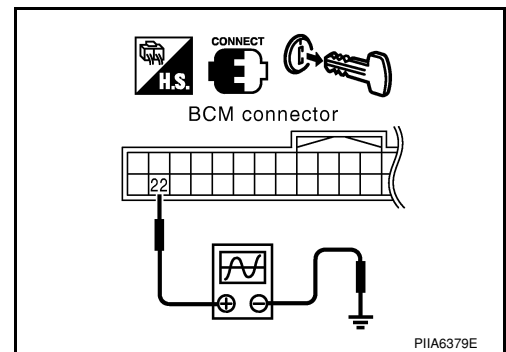
- When power window and door lock/unlock switch RH is turned to UNLOCK:

**CDL UNLOCK SW :ON**

**Without CONSULT-III**

1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 <p>PIIA1297E</p>



Is the inspection normal?

YES >> Power window and door lock/unlock switch RH circuit is OK.

NO >> GO TO 2

### 2. CHECK BCM OUTPUT SIGNAL

Check ("POWER WINDOW DOWN") in ACTIVE TEST mode for "MULTI REMOTE ENT" with CONSULT-II.

**When "ACTIVE TEST" is performed, the front windows should be lowered.**

Is the inspection normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).



# DOOR LOCK AND UNLOCK SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

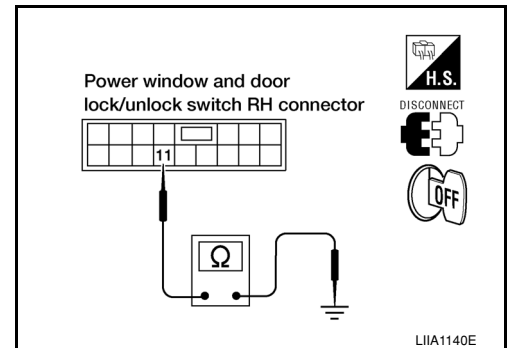
## 3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground

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

Is the inspection normal?

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



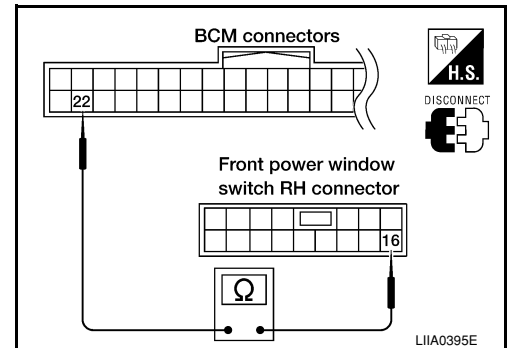
## 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

**22 - 16 : Continuity should exist.**

Is the inspection normal?

- YES >> Replace power window and door lock/unlock switch RH.  
NO >> Repair or replace harness.



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# KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## KEY CYLINDER SWITCH

### Description

INFOID:000000001350583

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

### Component Function Check

INFOID:000000001350584

## 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

- YES >> Key cylinder switch is OK.  
 NO >> Refer to [DLK-242, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001350585

## 1. CHECK DOOR KEY CYLINDER SWITCH LH

④ With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW") in DATA MONITOR mode with CONSULT-III.

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

**KEY CYL LK-SW : ON**

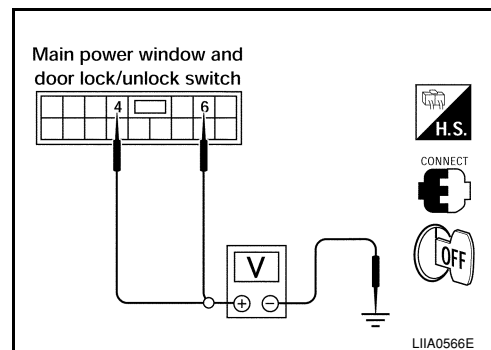
- When key inserted in left front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW : ON**

⊗ Without CONSULT-III

Check voltage between main power window and door lock/unlock switch connector D7 terminals 4, 6 and ground.

Connector	Terminals		Condition of left front key cylinder	Voltage (V) (Approx.)
	(+)	(-)		
D7	4	Ground	Neutral/Unlock	5
			Lock	0
	6		Neutral/Lock	5
			Unlock	0



Is the inspection result normal?

- YES >> Key cylinder switch signal is OK.  
 NO >> GO TO 2

## 2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

- Turn ignition switch OFF.
- Disconnect front door lock assembly LH (key cylinder switch).

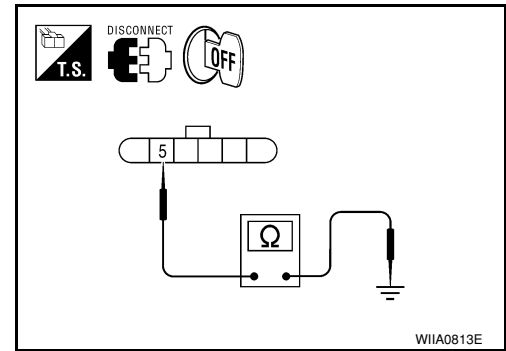
# KEY CYLINDER SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



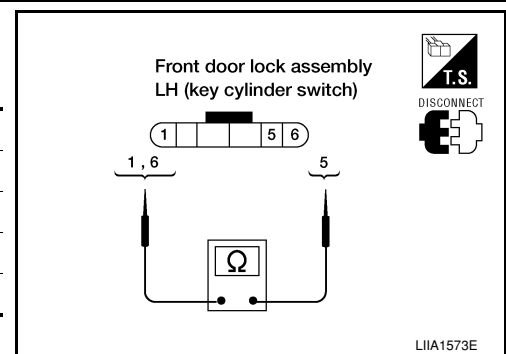
Is the inspection result normal?

- YES >> GO TO 3  
 NO >> Repair or replace harness.

### 3.CHECK DOOR KEY CYLINDER SWITCH LH

Check continuity between front door lock assembly LH (key cylinder switch) terminals.

Terminals	Condition	Continuity
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes



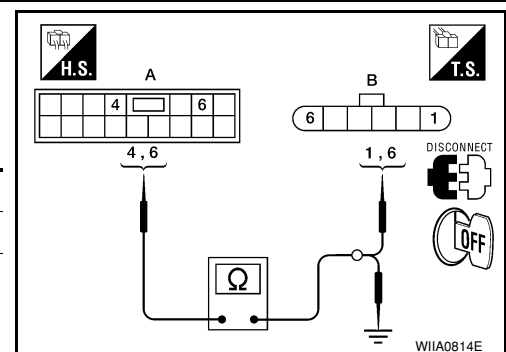
Is the inspection result normal?

- YES >> GO TO 4  
 NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-341. "Removal and Installation"](#).

### 4.CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 1, 6 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main power window and door lock/unlock switch	4	B: Front door lock assembly LH (key cylinder switch)	1	Yes
	6		6	Yes
	4, 6	Ground	No	



Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch.  
 NO >> Repair or replace harness.

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# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## DOOR LOCK ACTUATOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000001350594

Locks/unlocks the door with the signal from BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000001350595

#### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-244, "DRIVER SIDE : Diagnosis Procedure"](#).

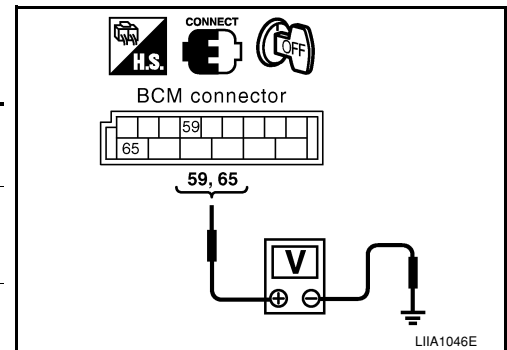
### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001350596

#### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



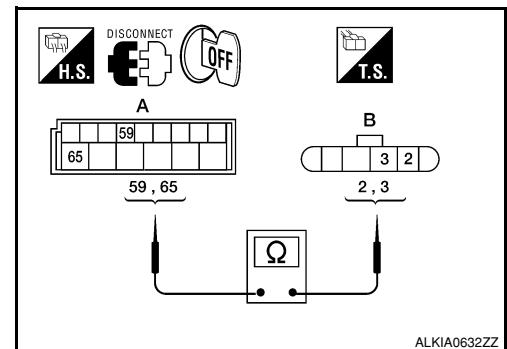
Is the inspection result normal?

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

#### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).
2. Check continuity between BCM connector (A) M20 terminals 59, 65 and front door lock assembly LH (actuator) connector (B) D14 terminals 2, 3.

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
	65		3	Yes



Is the inspection result normal?

- YES >> Replace front door lock assembly LH (actuator).  
 NO >> Repair or replace harness.

#### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).

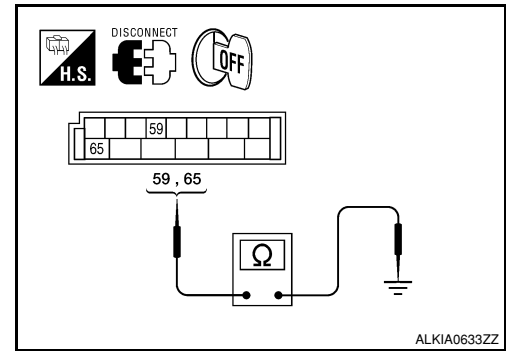
# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector M20 terminals 59, 65 and ground.

Connector	Terminals		Continuity
M20	59	Ground	No
	65		No



### Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000001350597

Locks/unlocks the door with the signal from BCM.

### PASSENGER SIDE : Component Function Check

INFOID:000000001350598

## 1.CHECK FUNCTION

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

### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-245, "PASSENGER SIDE : Diagnosis Procedure"](#).

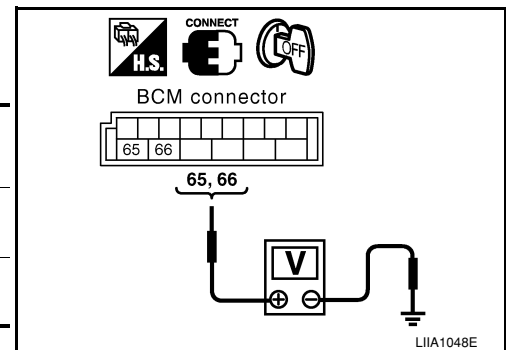
## PASSENGER SIDE : Diagnosis Procedure

INFOID:000000001350599

## 1.CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

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



### Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 3

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and front door lock actuator RH.

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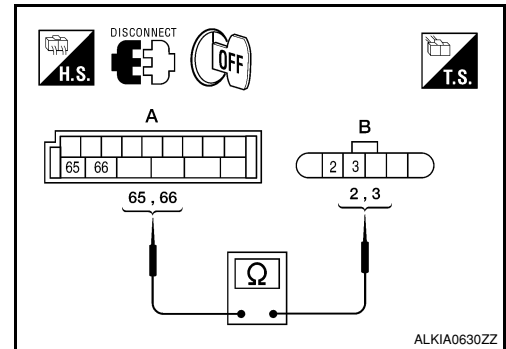
# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector (A) M20 terminals 65, 66 and front door lock actuator RH (B) D114 terminals 2, 3.

Terminal		Continuity
65	3	Yes
66	2	Yes



### Is the inspection result normal?

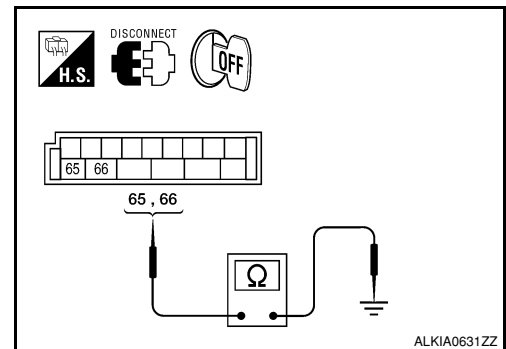
YES >> Replace front door lock actuator RH. Refer to [DLK-205, "Removal and Installation"](#).

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

NO >> Repair or replace harness.

## REAR LH

### REAR LH : Description

INFOID:000000001350600

Locks/unlocks the door with the signal from BCM.

### REAR LH : Component Function Check

INFOID:000000001350601

## 1. CHECK FUNCTION

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

### Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-246, "REAR LH : Diagnosis Procedure"](#).

### REAR LH : Diagnosis Procedure

INFOID:000000001350602

## 1. CHECK DOOR LOCK ACTUATOR SIGNAL

- Turn ignition switch OFF.

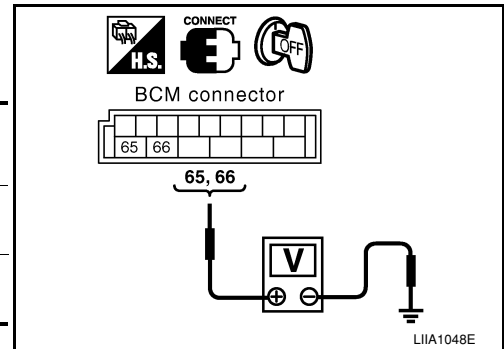
# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check voltage between BCM connector M20 terminals 65, 66 and ground.

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



Is the inspection result normal?

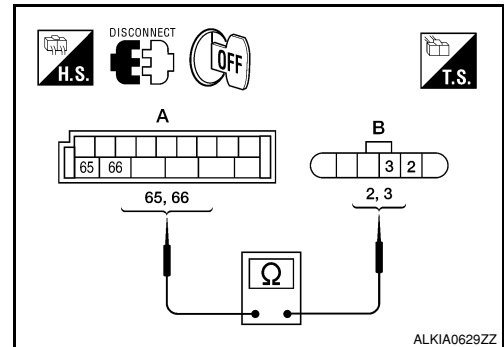
YES >> GO TO 2

NO >> GO TO 3

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and rear door lock actuator LH.
- Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator LH connector (B) D205 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



Is the inspection result normal?

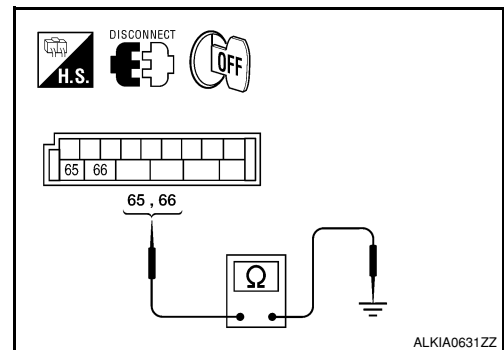
YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness or passenger select unlock relay.

## 3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

NO >> Repair or replace harness or passenger select unlock relay.

## REAR RH

### REAR RH : Description

Locks/unlocks the door with the signal from BCM.

INFOID:000000001350603

# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## REAR RH : Component Function Check

INFOID:000000001350604

### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-248, "REAR RH : Diagnosis Procedure"](#).

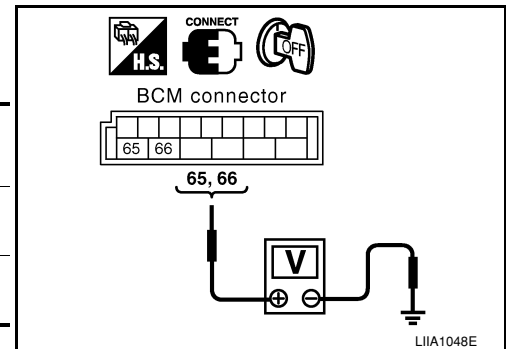
## REAR RH : Diagnosis Procedure

INFOID:000000001350605

### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



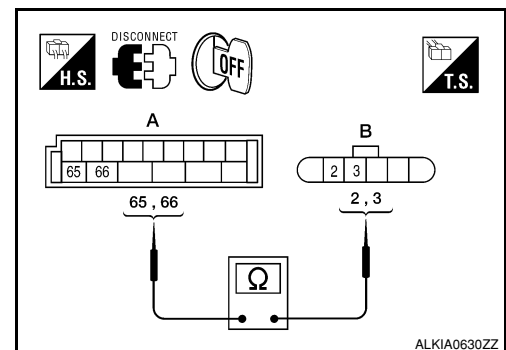
Is the inspection result normal?

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

### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



Is the inspection result normal?

- YES >> Replace rear door lock actuator RH.  
 NO >> Repair or replace harness or passenger select unlock relay.

### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.



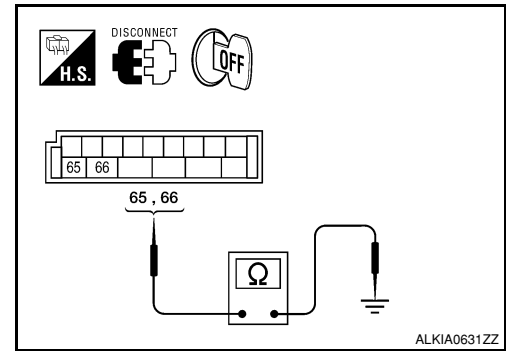
# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector (A) M20 terminals 65, 66 and ground.

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

- YES >> Replace BCM. Refer to BCM REPLACEMENT.  
 NO >> Repair or replace harness or passenger select unlock relay.

## BACK DOOR (WITHOUT POWER BACK DOOR)

### BACK DOOR (WITHOUT POWER BACK DOOR) : Description

INFOID:000000001350740

Locks/unlocks the door with the signal from BCM.

### BACK DOOR (WITHOUT POWER BACK DOOR) : Component Function Check

INFOID:000000001350741

## 1.CHECK FUNCTION

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

### Is the inspection result normal?

- YES >> Door lock actuator is OK.  
 NO >> Refer to [DLK-249. "BACK DOOR \(WITHOUT POWER BACK DOOR\) : Diagnosis Procedure"](#).

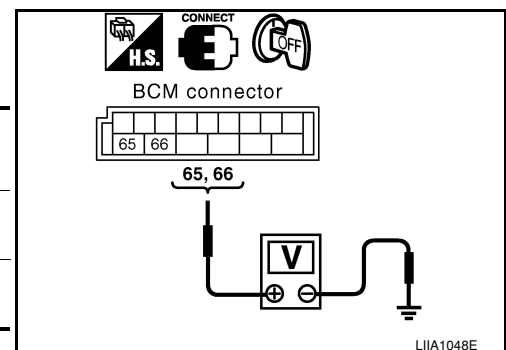
## BACK DOOR (WITHOUT POWER BACK DOOR) : Diagnosis Procedure

INFOID:000000001350742

## 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



### Is the inspection result normal?

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

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and back door lock actuator.

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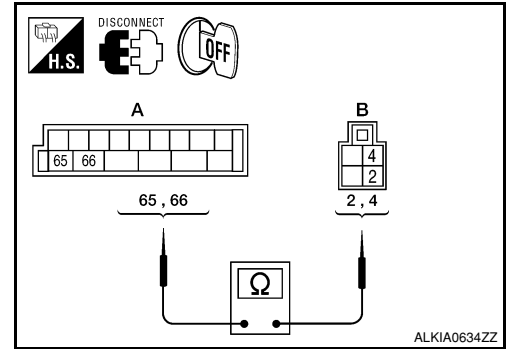
# DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

- Check continuity between BCM connector (A) M20 terminals 65, 66 and back door lock actuator connector (B) D708 terminals 2, 4.

Terminals		Continuity
65	2	Yes
66	4	Yes



### Is the inspection result normal?

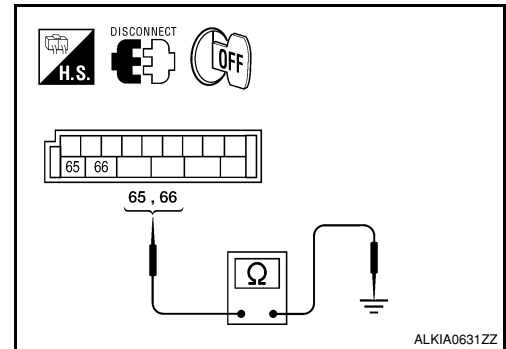
YES >> Replace door lock actuator.

NO >> Repair or replace harness.

## 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

NO >> Repair or replace harness.

## BACK DOOR (WITH POWER BACK DOOR)

### BACK DOOR (WITH POWER BACK DOOR) : Description

INFOID:000000001350762

All vehicles equipped with an automatic back door system are not equipped with a back door actuator. Opening and closing the back door is accomplished through the back door control unit assembly. refer to [DLK-107. "Self-Diagnosis Procedure"](#).

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## REMOTE KEYLESS ENTRY RECEIVER

### Description

INFOID:000000001350621

Receives keyfob operation and transmits to BCM.

### Component Function Check

INFOID:000000001350622

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

Monitor item	Condition
RKE OPE COUN1	Checks whether value changes when operating the keyfob.

Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

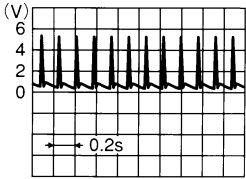

NO >> Refer to [DLK-251, "Diagnosis Procedure"](#).

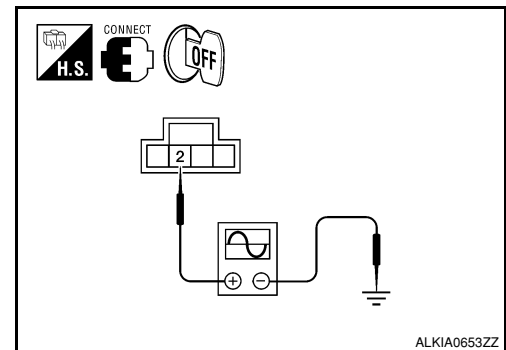
### Diagnosis Procedure

INFOID:000000001350623

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

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

Terminals		Keyfob condition	Signal (Reference value)
(+)	(-)		
Remote keyless entry receiver connector	Terminal		
M120	2	No function	 <p>OCC3879D</p>
		Any button is pressed	 <p>OCC3880D</p>



Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 4

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

# REMOTE KEYLESS ENTRY RECEIVER

[WITHOUT INTELLIGENT KEY SYSTEM]

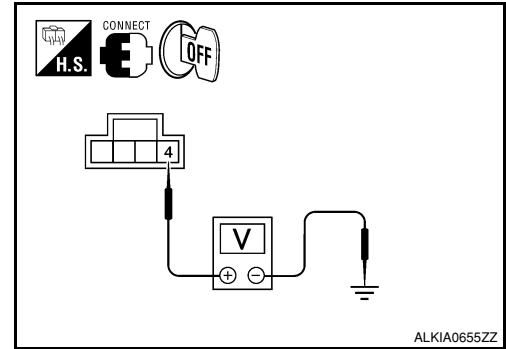
## < COMPONENT DIAGNOSIS >

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

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

Is the inspection result normal?

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



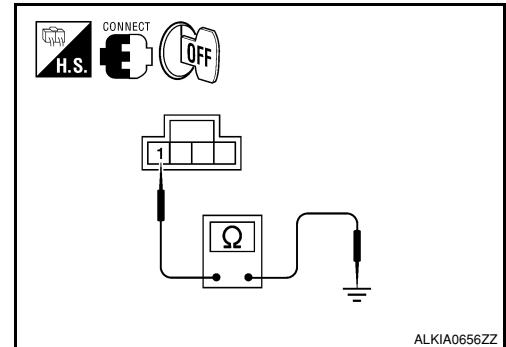
## 3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

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

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

Is the inspection result normal?

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



## 4. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

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

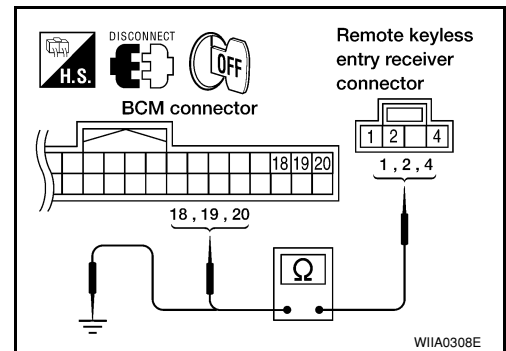
**1 - 18 : Continuity should exist.**  
**2 - 20 : Continuity should exist.**  
**4 - 19 : Continuity should exist.**

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

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

Is the inspection result normal?

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



# KEYFOB BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## KEYFOB BATTERY AND FUNCTION

### Description

INFOID:000000001350624

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

- Door lock/unlock
- Back door open

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

### Component Function Check

INFOID:000000001350625

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Refer to [DLK-253, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001350626

#### 1. CHECK KEYFOB BATTERY

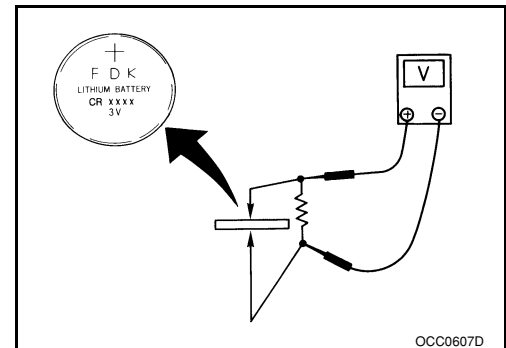
Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

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

Is the measurement value within specification?

YES >> GO TO 2

NO >> Replace Keyfob battery.



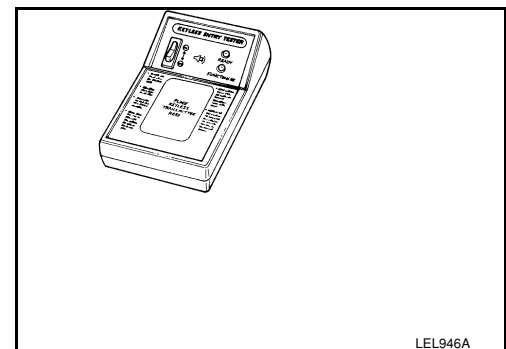
#### 2. CHECK KEYFOB FUNCTION

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

Does the test pass?

YES >> Keyfob is OK.

NO >> Replace keyfob. Refer to CONSULT-III Operation Manual.



### Component Inspection

INFOID:000000001350627

#### 1. REPLACE INTELLIGENT KEY BATTERY

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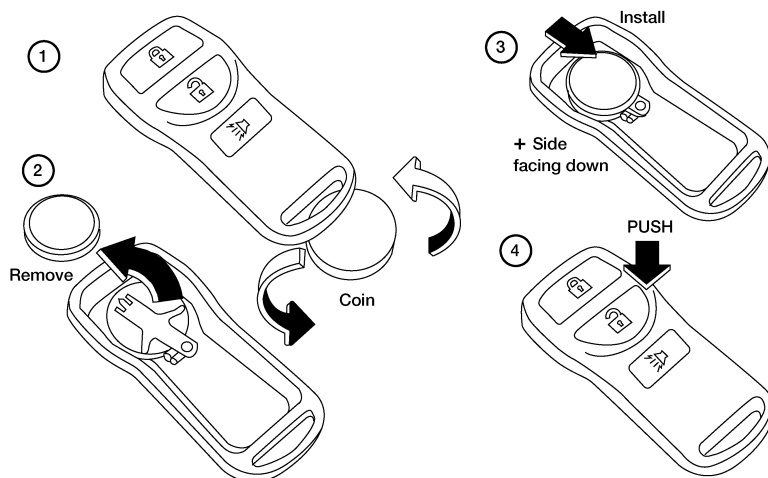
# KEYFOB BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## NOTE:

- Be careful not to touch the circuit board or battery terminal.
  - The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.
1. Open the lid using a coin.
  2. Remove the battery.
  3. Install the new battery, positive side down.
  4. Close the lid securely. Push the keyfob buttons two or three times to check operation.



LIA1514E

Check keyfob operation after replacing the battery.

Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Check remote keyless entry receiver. Refer to [DLK-251, "Component Function Check"](#).

## Special Repair Requirement

INFOID:000000001350628

Refer to CONSULT-III Operation Manual.

# HORN FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Description

INFOID:000000001350629

Perform answer-back for each operation with horn.

### Component Function Check

INFOID:000000001350630

#### 1.CHECK FUNCTION

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

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

Is the operation normal?

- YES >> INSPECTION END.  
 NO >> Go to [DLK-255. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001374735

#### 1.CHECK HORN FUNCTION

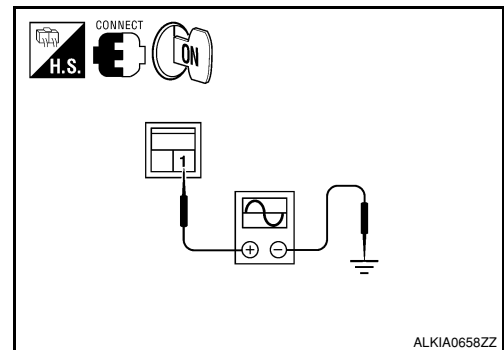
Check horn function with horn switch

Do the horns sound?

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

#### 2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT-III.
3. Using an oscilloscope or analog voltmeter, check voltage between horn relay harness connector and ground.



Horn relay		Ground	Test item	Voltage (V) (Approx.)
Connector	Terminal			
H-1	1	Ground	HORN	Battery voltage → 0 → Battery voltage
			Other than above	Battery voltage

Is the inspection result normal?

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

#### 3.CHECK HORN RELAY CIRCUIT

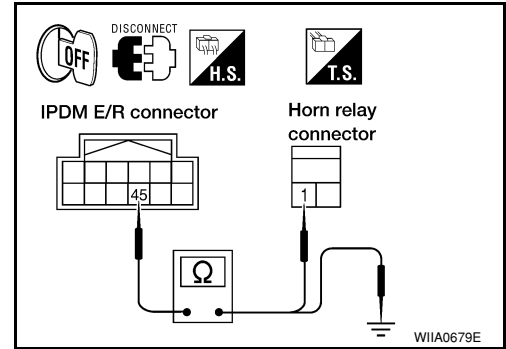
1. Turn ignition switch OFF.
2. Disconnect IPDM E/R and horn relay connector.

# HORN FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E122	45	H-1	1	Yes

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

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

Is the inspection result normal?

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

## 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-30. "Removal and Installation of IPDM E/R"](#).  
 NO >> Repair or replace the malfunctioning part.



# WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## WARNING CHIME FUNCTION

### Description

INFOID:000000001350635

Performs operation method guide and warning with buzzer.

### Component Function Check

INFOID:000000001350636

#### 1.CHECK FUNCTION

##### With CONSULT-III

1. Turn ignition switch ON.
2. Using Consult-III, check the operation of the inside chime by performing "INSIDE BUZZER" ACTIVE TEST.

##### Does the inside chime operate normally?

- Yes >> Warning buzzer into combination meter is OK.
- No >> Replace the combination meter. Refer to [DLK-257, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001350637

#### 1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter.

>> Inspection end.

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## HAZARD FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

### HAZARD FUNCTION

#### Description

INFOID:000000001350638

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

#### Component Function Check

INFOID:000000001374738

#### 1.CHECK FUNCTION

---

Check hazard warning lamp "FLASHER" in ACTIVE TEST.

Is the inspection result normal?

- YES >> Hazard warning lamp circuit is OK.
- NO >> Refer to [DLK-96, "Diagnosis Procedure"](#).

#### Diagnosis Procedure

INFOID:000000001350640

#### 1.CHECK HAZARD SWITCH CIRCUIT

---

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

Do the lights operate normally?

- YES >> Replace the BCM. Refer to BCS for replacement and configuration procedure.
- NO >> Repair or replace hazard warning switch circuit. Refer to EXTERIOR LIGHTING SYSTEM.

# KEY SWITCH (BCM INPUT)

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## KEY SWITCH (BCM INPUT)

### Diagnosis Procedure

INFOID:000000001350642

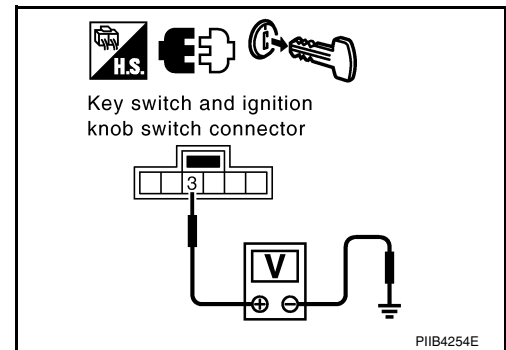
#### 1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M12 terminal 3 and ground.

**3 – Ground : Battery voltage.**

Is the

- OK >> GO TO 2  
 NG >> Check harness between key switch and ignition knob switch and fuse.



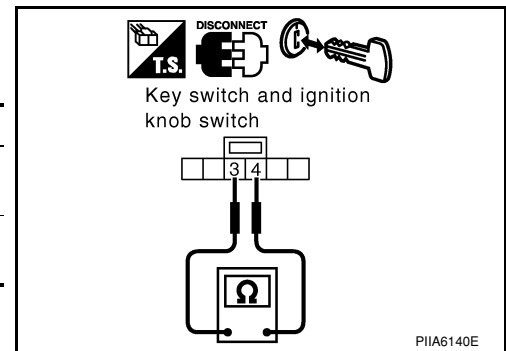
#### 2. CHECK KEY SWITCH

Check continuity between key switch and ignition knob switch terminals 3 and 4.

Component	Terminals		Condition	Continuity
Ignition switch	3	4	Insert mechanical key into ignition switch.	Yes
			Remove mechanical key from ignition switch.	No

OK or NG

- OK >> GO TO 3  
 NG >> Replace key cylinder assembly (built-in key switch).



#### 3. CHECK KEY SWITCH SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch and ignition knob switch harness connector M12 terminal 4.

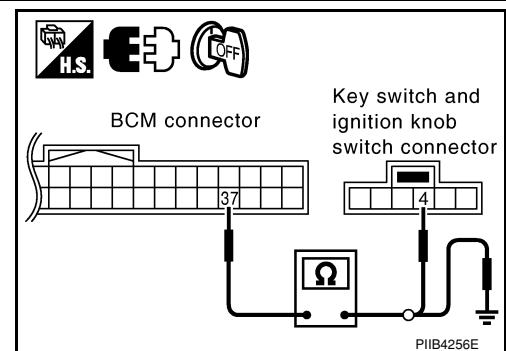
**37 – 4 : Continuity should exist.**

3. Check continuity between BCM harness connector M18 terminal 37 and ground.

**37 – Ground : Continuity should not exist.**

OK or NG

- OK >> Key switch (BCM input) circuit is OK.  
 NG >> Repair or replace harness between key switch and ignition knob switch and BCM.



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## HEADLAMP FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

---

### HEADLAMP FUNCTION

#### Diagnosis Procedure

INFOID:000000001350644

#### 1. CHECK HEADLAMP OPERATION

---

Do headlamps operate with headlamp switch?

YES or NO

YES >> Headlamp circuit is OK.

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

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

### Diagnosis Procedure

INFOID:000000001350645

#### 1. CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.

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

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# KEYFOB ID SET UP WITH CONSULT-III

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITH CONSULT-III

### ID Code Entry Procedure

INFOID:000000001350646

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

##### NOTE:

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

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

##### NOTE:

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

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

# KEYFOB ID SET UP WITHOUT CONSULT-III

< COMPONENT DIAGNOSIS >

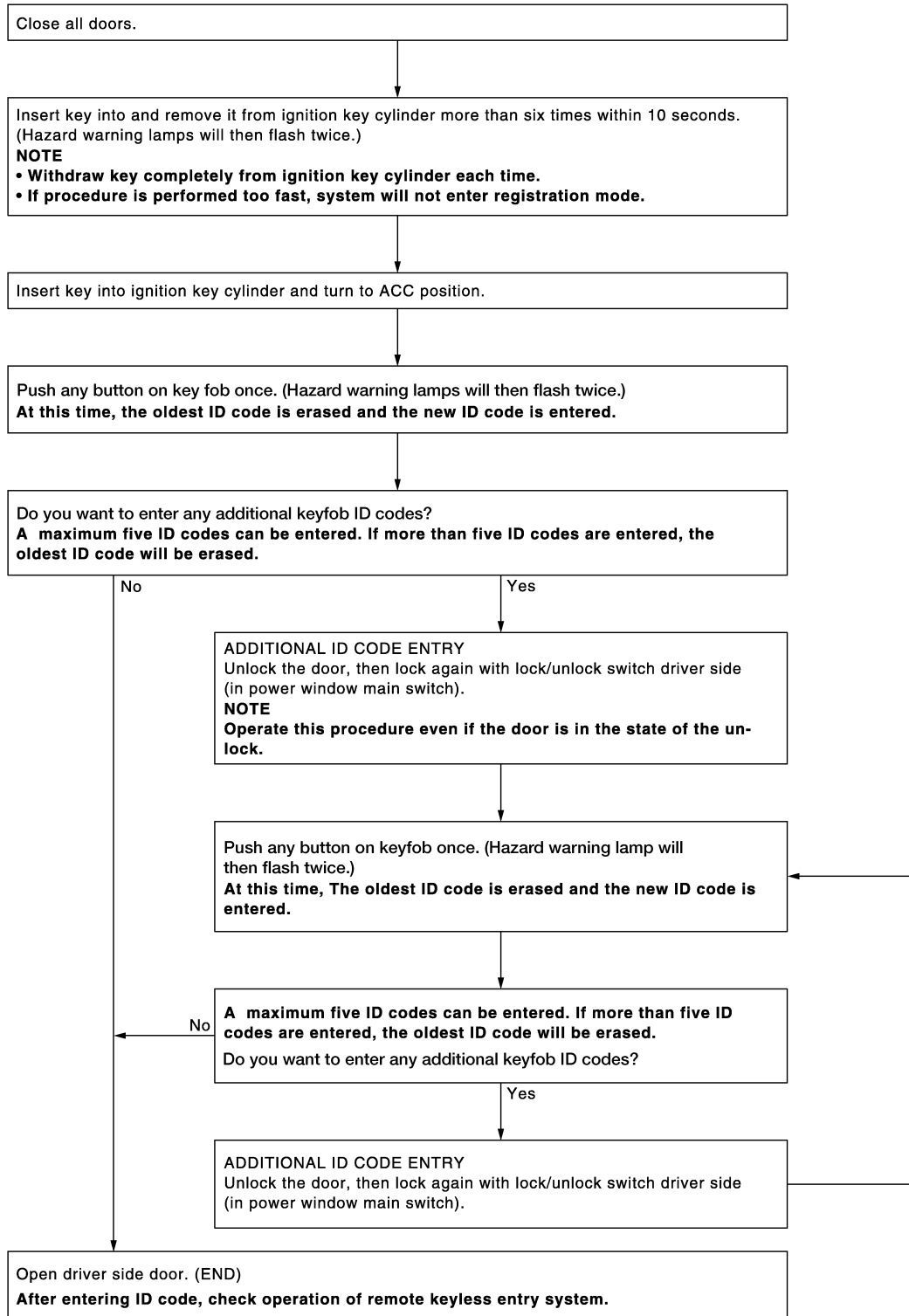
[WITHOUT INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITHOUT CONSULT-III

### ID Code Entry Procedure

INFOID:000000001350647

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



#### NOTE:

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

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DLK

## KEYFOB ID SET UP WITHOUT CONSULT-III

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

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

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

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



# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

### Self-Diagnosis Procedure

INFOID:000000001350648

#### INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the back door control unit.

To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the back door handle switch.
9. Within 8 seconds of the back door warning chime sounding, press and hold the power liftgate switch.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the power liftgate switch.
12. The input signal check mode is now initialized.

The input signal check mode can test the following inputs. The back door warning chime will sound for approximately 0.5 second each time a switch signal input occurs. Use this test when one of these inputs is not responding during normal automatic back door operation.

Switch signal	Operation	Refer to
Power liftgate switch	OFF → ON	<a href="#">DLK-269</a>
Back door close switch (CLOSE)	OFF → ON	<a href="#">DLK-271</a>
Back door close switch (CANCEL)	OFF → ON	<a href="#">DLK-272</a>
Back door handle switch	OFF → ON	<a href="#">DLK-278</a>
A/T device (park switch)	P position → other than P position	<a href="#">TM-44</a>
Vehicle speed*	Vehicle speed	—
Remote keyless entry signal	Keyfob switch OFF → ON	<a href="#">DLK-251</a>
Door lock/unlock signal	LOCK → UNLOCK	<a href="#">DLK-238</a>
Pinch strip LH signal	OFF → ON	<a href="#">DLK-273</a>
Pinch strip RH signal	OFF → ON	<a href="#">DLK-273</a>

\*Back door warning chime should sound as soon as vehicle moves.

Turn ignition switch OFF to end input signal check mode.

#### OPERATING CHECK MODE

Operating check mode allows self-diagnosis of the automatic back door system.

To activate operating check mode on the automatic back door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 second.
8. Release the back door handle switch.

# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

9. Within 8 seconds of the back door warning chime sounding, press the power liftgate switch 5 times in rapid succession.
  10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
  11. Release the power liftgate switch.
  12. Immediately close the back door manually.
  13. Press and release the power liftgate switch to activate the operating check mode.
- Self-diagnosis results are indicated by the back door warning chime.

Back door warning chime order	Back door warning chime length	
Start self-diagnosis	1.5 seconds	
	OK	NG
1. Operating conditions diagnosis	0.5 second	0.2 second
2. Back door encoder diagnosis	0.5 second	0.2 second
3. Back door clutch diagnosis	0.5 second	0.2 second
4. Back door motor diagnosis	0.5 second	0.2 second
5. Cinch latch motor diagnosis	0.5 second	0.2 second
Restart self-diagnosis	1.5 seconds	

Item	NG Result	Refer to
1. Operating conditions diagnosis result	One of the following operating conditions no longer met: ignition switch ON, back door close switch (CANCEL) ON, A/T selector lever in P position	—
2. Back door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	<a href="#">DLK-345</a>
3. Back door clutch diagnosis result	Back door clutch does not operate	<a href="#">DLK-345</a>
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	<a href="#">DLK-345</a>
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	<a href="#">DLK-345</a>

Turn ignition switch OFF to end input signal check mode.

# POWER LIFTGATE SWITCH FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## POWER LIFTGATE SWITCH FUNCTION

### Diagnosis Procedure

INFOID:000000001350649

#### 1. POWER LIFTGATE SWITCH FUNCTION INSPECTION

Check power liftgate switch using switch operation.

Did the back door respond correctly?

- YES >> Power liftgate switch is OK.
- NO >> GO TO 2

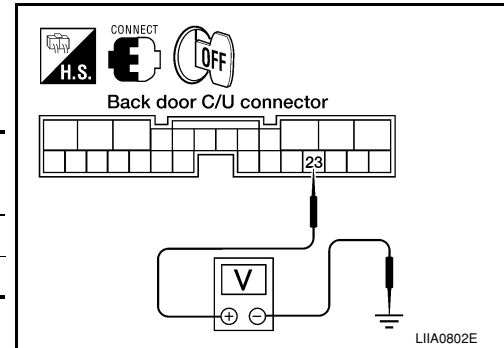
#### 2. POWER LIFTGATE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the power liftgate switch, check voltage between back door control unit connector B55 terminal 23 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
23	Ground	Power liftgate switch ON	0
		Power liftgate switch OFF	Battery voltage

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3



#### 3. POWER LIFTGATE SWITCH CIRCUIT INSPECTION

1. Disconnect back door control unit and power liftgate switch connectors.
2. Check continuity between back door control unit connector (A) B55 terminal 23 and power liftgate switch connector (B) M92 terminal 1.

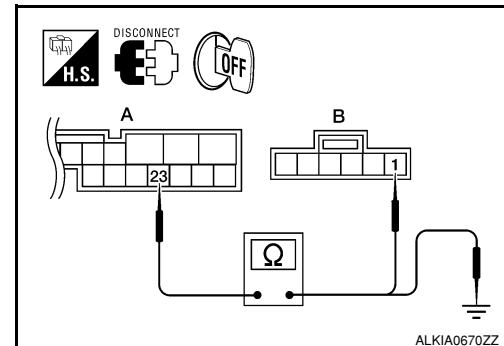
**23 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 23 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the power liftgate switch and the back door control unit.



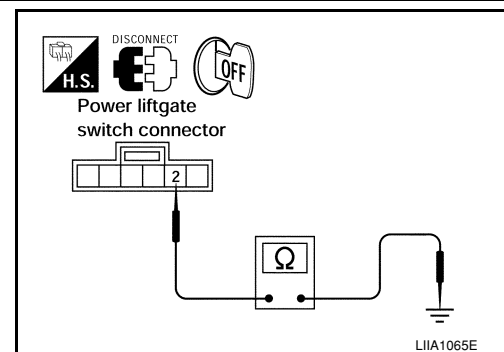
#### 4. POWER LIFTGATE SWITCH GROUND INSPECTION

Check continuity between power liftgate switch connector terminal 2 and ground.

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

Is the inspection result normal?

- YES >> GO TO 5
- NO >> Repair the harness between the power liftgate switch and ground.



#### 5. POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Reconnect back door control unit.
2. Ensure liftgate is closed.

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# POWER LIFTGATE SWITCH FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

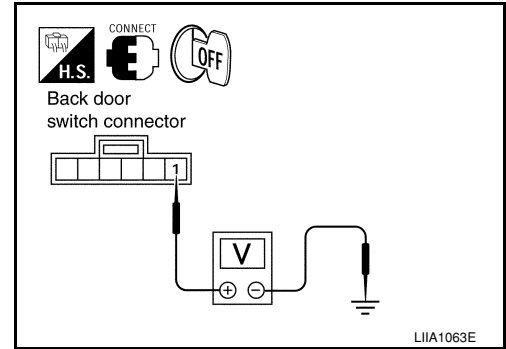
3. Check voltage between power liftgate switch connector M92 terminal 1 and ground.

**1 - Ground**

**:Approx. battery voltage**

Is the inspection result normal?

- YES >> Replace the power liftgate switch.  
NO >> Replace the back door control unit.



# GLASS HATCH AJAR SWITCH

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## GLASS HATCH AJAR SWITCH

### Diagnosis Procedure

INFOID:000000001350650

#### 1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

 With CONSULT-III

Check glass hatch ajar switch ("TRNK OPN MNTR") in DATA MONITOR mode with CONSULT-III.

- When glass hatch is open:

**TRNK OPN MNTR : ON**

- When glass hatch is closed:

**TRNK OPN MNTR : OFF**

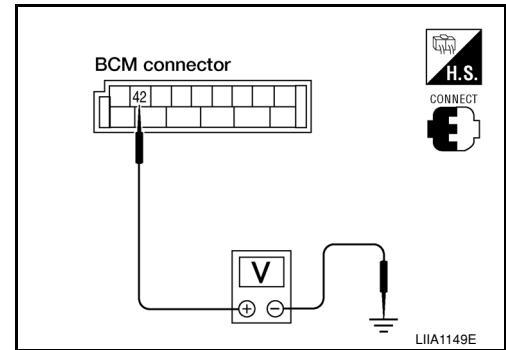
 Without CONSULT-III

Check voltage between BCM connector M19 terminal 42 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M19	BCM	42	Ground	Open ↓ Closed	0 ↓ Battery voltage

Is the inspection result normal?

- YES >> System is OK.  
NO >> GO TO 2



#### 2. CHECK GLASS HATCH AJAR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect glass hatch ajar switch, BCM and back door control unit.
- Check continuity between BCM connector (A) M19 terminal 42 and glass hatch ajar switch connector (C) D707 terminal 1.

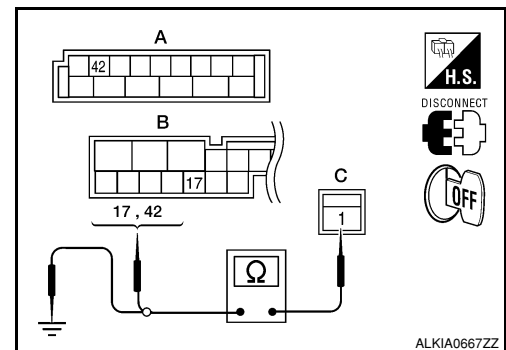
**42 - 1 : Continuity should exist.**

- Check continuity between back door control unit connector B55 (B) terminal 17 and glass hatch ajar switch connector (C) D707 terminal 1.

**17 - 1 : Continuity should exist.**

- Check continuity between glass hatch ajar switch connector (C) D707 terminal 1 and ground.

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



Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace harness.

#### 3. CHECK GLASS HATCH AJAR SWITCH

- Disconnect glass hatch ajar switch connector.
- Check continuity between glass hatch ajar switch connector terminal 1 and ground.

# GLASS HATCH AJAR SWITCH

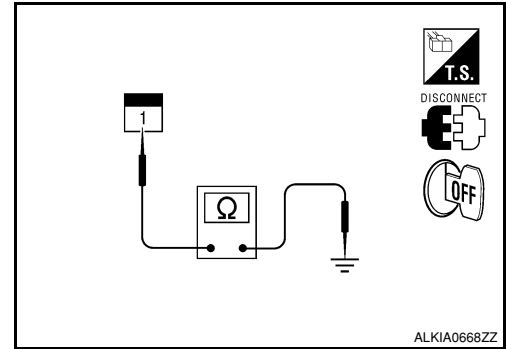
< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

	Terminals	Condition	Continuity
Glass hatch ajar switch	1 – Ground	Open	Yes
		Closed	No

Is the inspection result normal?

- YES >> Check glass hatch ajar switch case ground condition.
- NO >> Replace glass hatch ajar switch, or repair or replace harness.



# BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001350651

#### 1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (close) switch using switch operation.

Is the inspection result normal?

- YES >> Back door close switch is OK.
- NO >> GO TO 2

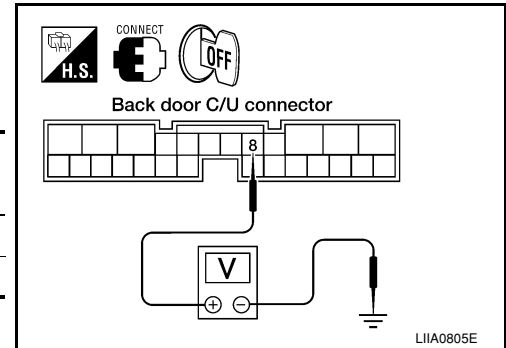
#### 2. BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close switch, check voltage between back door control unit connector B55 terminal 8 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
8	Ground	Back door close switch	ON	0
			OFF	Battery voltage

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3



#### 3. BACK DOOR CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 8 and back door close switch connector (B) B63 terminal 1.

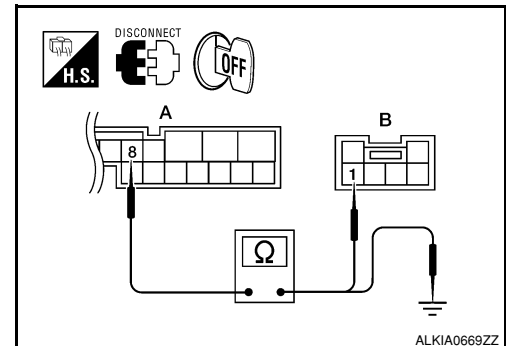
**8 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the back door close switch and the back door control unit.



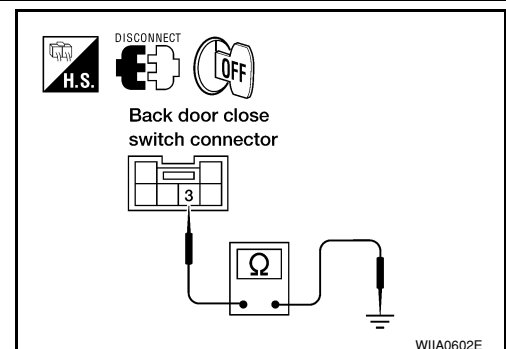
#### 4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

Check continuity between back door close switch connector B63 terminal 3 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door close switch.
- NO >> Repair the harness between the back door close switch and ground.



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# BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001350652

#### 1. BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (cancel) switch using switch operation.

Is the inspection result normal?

- YES >> Back door close switch is OK.
- NO >> GO TO 2

#### 2. BACK DOOR CLOSE (CANCEL) SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close (cancel) switch, check voltage between back door control unit connector B55 terminal 13 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
13	Ground	Back door close switch	ON	0
			OFF	5

Is the inspection result normal?

- YES >> Switch is OK.
- NO >> GO TO 3

#### 3. BACK DOOR CLOSE (CANCEL) SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 13 and back door close switch connector (B) B63 terminal 5.

**13 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 13 and ground.

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

Is the inspection result normal?

- YES >> GO TO 4
- NO >> Repair the harness between the back door close switch and the back door control unit.

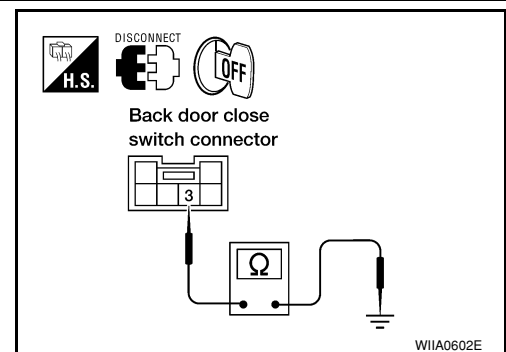
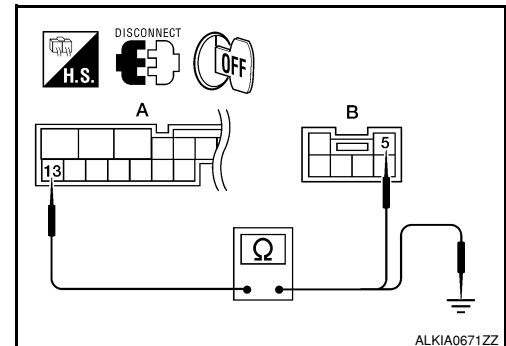
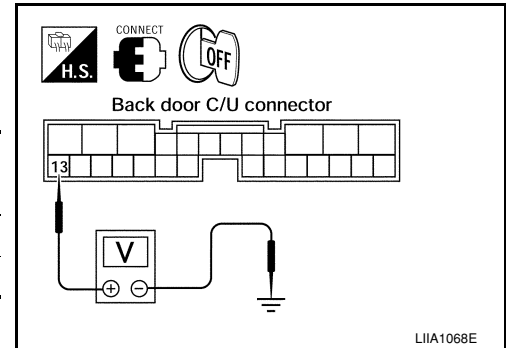
#### 4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

Check continuity between back door close switch connector B63 terminal 3 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door close switch.
- NO >> Repair the harness between the back door close switch and ground.





# PINCH STRIP SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## PINCH STRIP SYSTEM

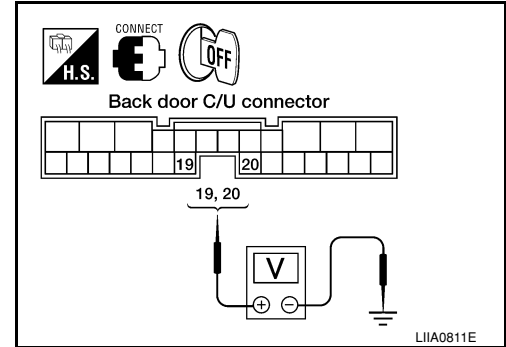
### Diagnosis Procedure

INFOID:000000001350653

#### 1. PINCH STRIP SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the pinch strip, check voltage between back door control unit connector B55 terminals 19, 20 and ground.

Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19	Ground	Pinch strip RH operation	0
		Other	4
20	Ground	Pinch strip LH operation	0
		Other	4



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

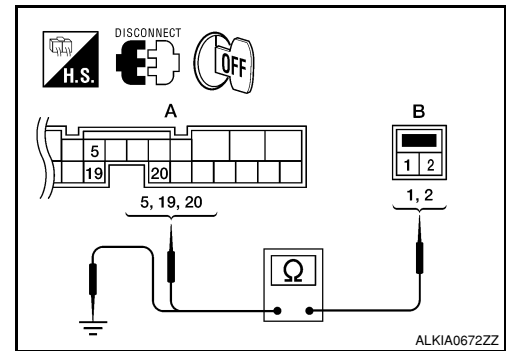
#### 2. PINCH STRIP CIRCUIT INSPECTION

1. Disconnect pinch strip and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 5, 19 (RH) or 5, 20 (LH) and pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2.

- RH: 1 - 19 : Continuity should exist.**  
**LH: 1 - 20 : Continuity should exist.**  
**RH and LH 2 - 5 : Continuity should exist.**

3. Check continuity between pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2 and ground.

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



Is the inspection result normal?

- YES >> Replace the pinch strip.  
NO >> Repair the harness between the pinch strip and the back door control unit.

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# BACK DOOR WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## BACK DOOR WARNING CHIME SYSTEM

### Diagnosis Procedure

INFOID:000000001350654

#### 1. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Disconnect back door control unit and back door warning chime.
2. Check continuity between back door control unit connector (A) B55 terminal 6 and back door warning chime connector (B) D514 terminal 1.

**6 - 1 : Continuity should exist.**

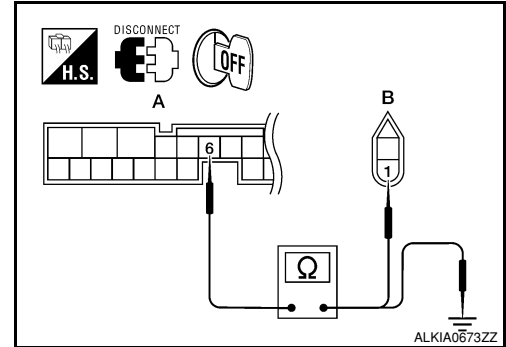
3. Check continuity between back door control unit connector (A) B55 terminal 6 and ground.

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

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the harness between the warning chime and the back door control unit.



#### 2. WARNING CHIME CIRCUIT INSPECTION

1. Check continuity between back door control unit connector (A) B55 terminal 9 and back door warning chime connector (B) D514 terminal 2.

**9 - 2 : Continuity should exist.**

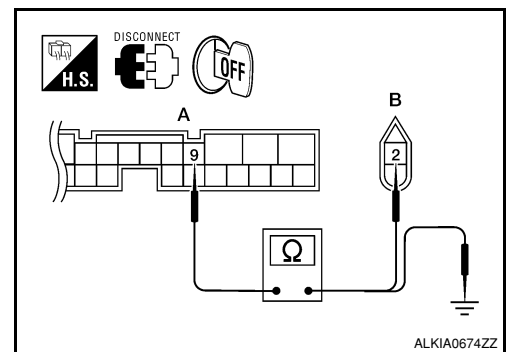
2. Check continuity between back door control unit connector (A) B55 terminal 9 and ground.

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

Is the inspection result normal?

YES >> Replace warning chime.

NO >> Repair or replace the harness between the warning chime and the back door control unit.



# HALF-LATCH SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

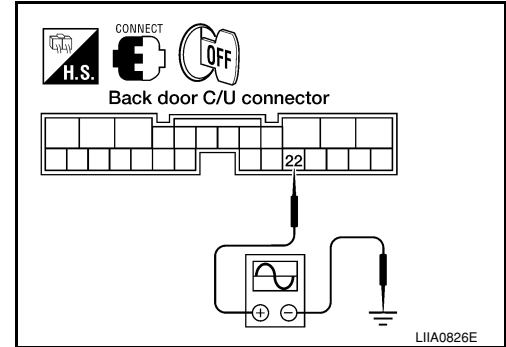
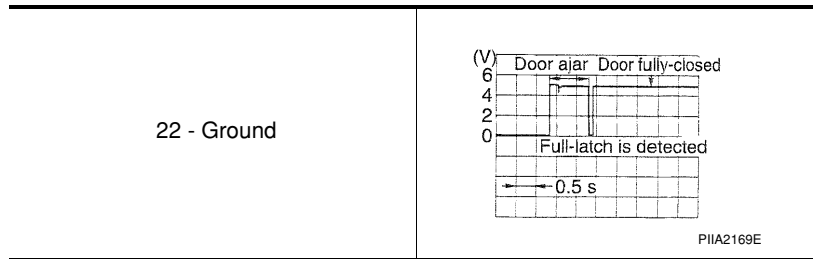
## HALF-LATCH SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001350655

#### 1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 22 and ground.



Is the inspection result normal?

- YES >> Half-latch switch is OK.  
NO >> GO TO 2

#### 2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch switch and back control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 22 and back door latch (half-latch switch) connector (B) D705 terminal 6.

**22 - 6 : Continuity should exist.**

3. Check continuity between back control unit connector (A) B55 terminal 22 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (half-latch switch) and the back door control unit.

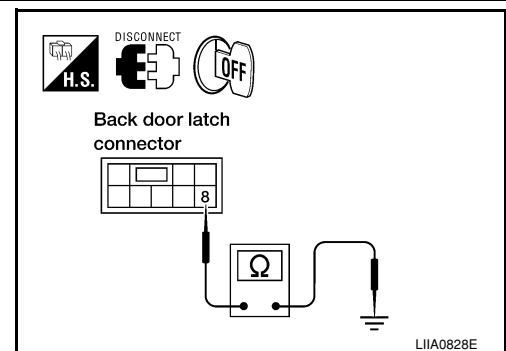
#### 3. HALF-LATCH SWITCH GROUND INSPECTION

Check continuity between back door latch (half-latch switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (half-latch switch) and ground.



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# BACK DOOR OPEN SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

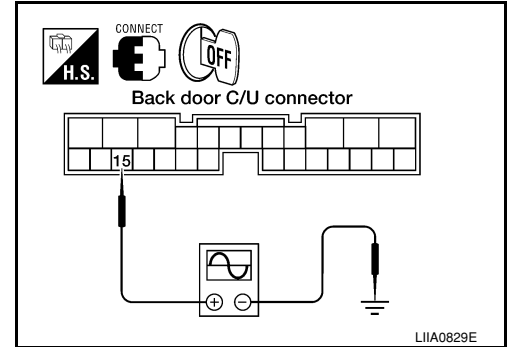
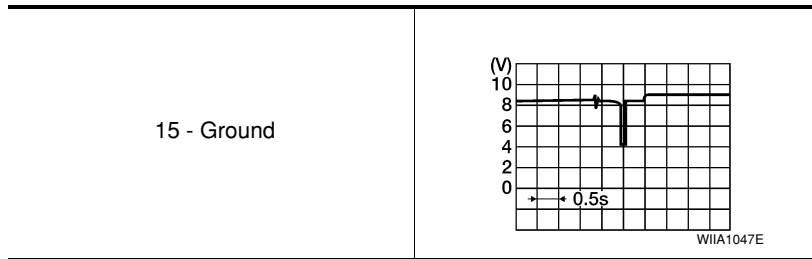
## BACK DOOR OPEN SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001350656

#### 1. OPEN SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the back door, check voltage between back door control unit connector B55 terminal 15 and ground.



Is the inspection result normal?

- YES >> Open switch is OK.  
NO >> GO TO 2

#### 2. OPEN SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 15 and back door latch (open switch) connector (B) D705 terminal 4.

**15 - 4 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 15 and ground.

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

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (open switch) and the back door control unit.

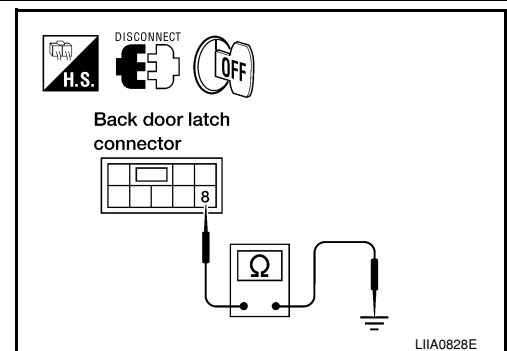
#### 3. OPEN SWITCH GROUND INSPECTION

Check continuity between back door latch (open switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (open switch) and ground.



# BACK DOOR CLOSE SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

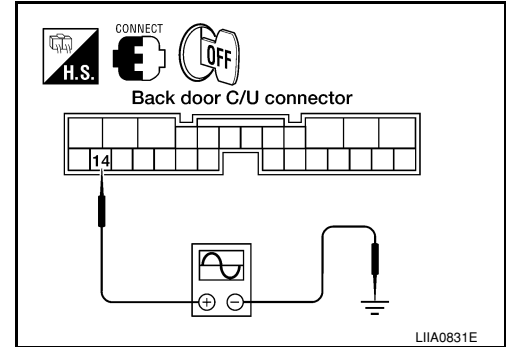
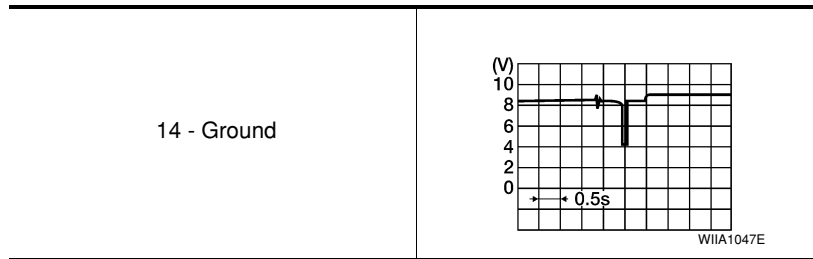
## BACK DOOR CLOSE SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001350657

#### 1. CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 14 and ground.



Is the inspection result normal?

- YES >> Close switch is OK.  
NO >> GO TO 2

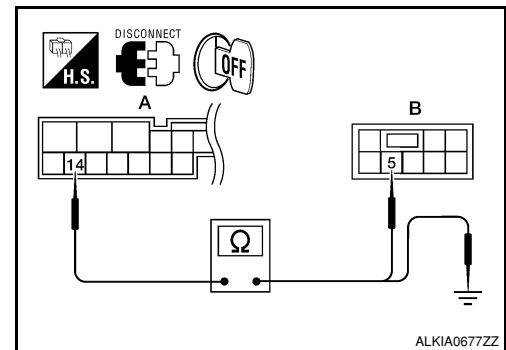
#### 2. CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 14 and back door latch (close switch) connector (B) D705 terminal 5.

**14 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 14 and ground.

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



Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (close switch) and the back door control unit.

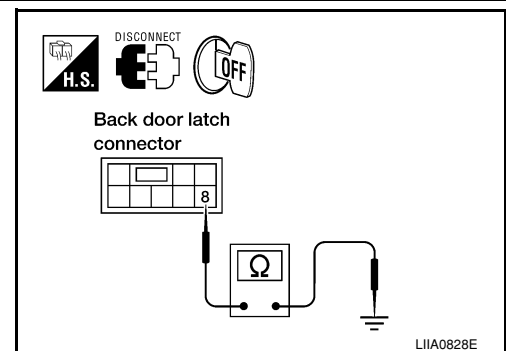
#### 3. CLOSE SWITCH GROUND INSPECTION

Check continuity between back door latch (close switch) connector D705 terminal 8 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (close switch) and ground.



# BACK DOOR HANDLE SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## BACK DOOR HANDLE SWITCH SYSTEM

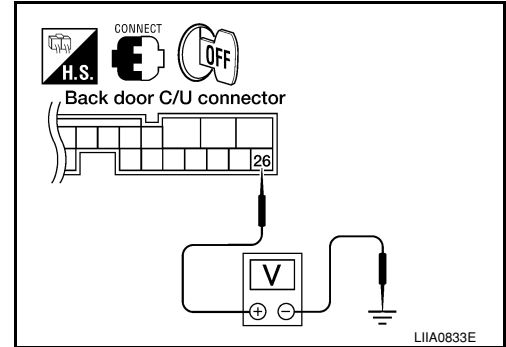
### Diagnosis Procedure

INFOID:000000001350658

#### 1. BACK DOOR HANDLE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door handle switch, check voltage between back door control unit connector B55 terminal 26 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26	Ground	Pull the back door handle switch (ON)	0
		Other (OFF)	Battery voltage



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

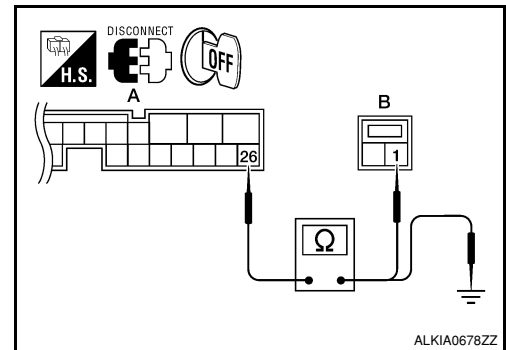
#### 2. BACK DOOR HANDLE SWITCH CIRCUIT INSPECTION

1. Disconnect back door handle switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 26 and back door handle switch connector (B) D706 terminal 1.

**26 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 26 and ground.

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



Is the inspection result normal?

- YES >> GO TO 4  
NO >> Repair the harness between the back door handle switch and the back door control unit.

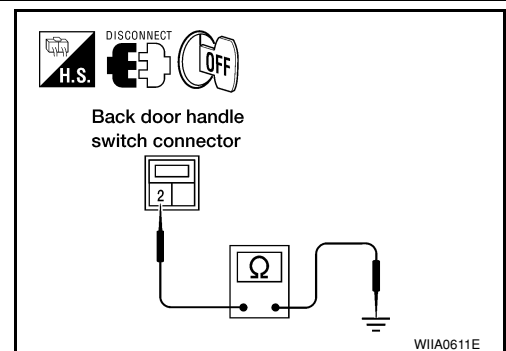
#### 3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

Check continuity between back door handle switch connector D706 terminal 2 and ground.

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

Is the inspection result normal?

- YES >> Replace the back door handle switch.  
NO >> Repair the harness between the back door handle switch and ground.



# CINCH LATCH MOTOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

## CINCH LATCH MOTOR SYSTEM

### Diagnosis Procedure

INFOID:000000001350659

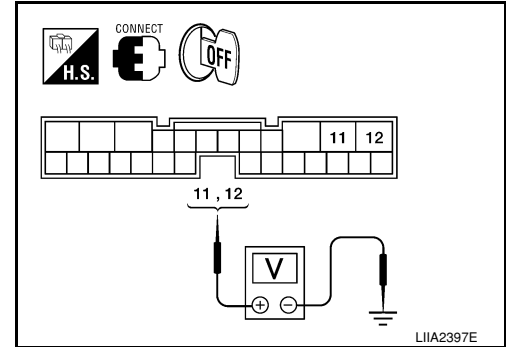
#### 1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminals 11, 12 and ground.

11 - Ground	Battery voltage
12 - Ground	

Is the inspection result normal?

- YES >> GO TO 2  
 NO >> Replace the back door control unit.



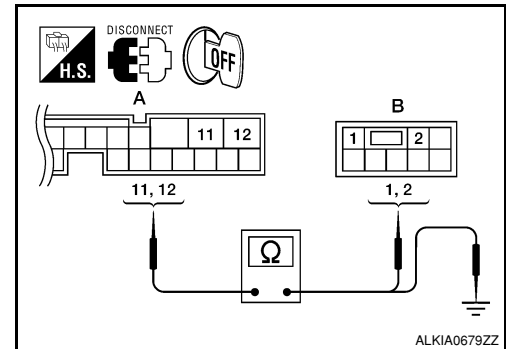
#### 2. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and back door latch (cinch latch motor) connector D705 (B) terminals 1, 2.

- 11 - 2 : Continuity should exist.**  
**12 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and ground.

- 11 - Ground : Continuity should not exist.**  
**12 - Ground : Continuity should not exist.**



Is the inspection result normal?

- YES >> GO TO 3  
 NO >> Repair the harness between the back door latch (cinch latch motor) and the back door control unit.

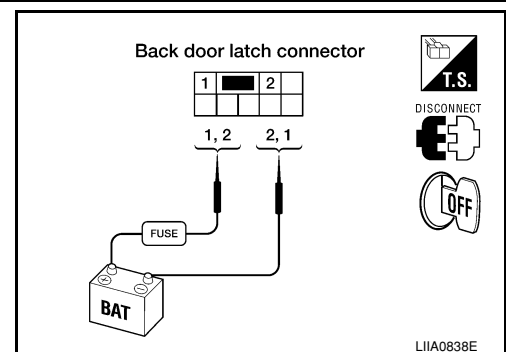
#### 3. CINCH LATCH MOTOR OPERATION INSPECTION

Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

- 1 (+) - 2 (-) : It operates.**  
**1 (-) - 2 (+) : It operates. (Reverse rotation)**

Is the inspection result normal?

- YES >> Motor is OK.  
 NO >> Replace the back door latch.



# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Description

INFOID:000000001350664

Homelink universal transceiver can store and transmit a maximum of 3 radio signals. Allows operation of garage doors, gates, home and office lighting, entry door locks and security system, etc. Homelink universal transceiver power supply uses vehicle battery, which enables it to maintain every program in case battery is discharged or removed.

### Component Function Check

INFOID:000000001350665

#### 1. CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

Is the inspection result normal?

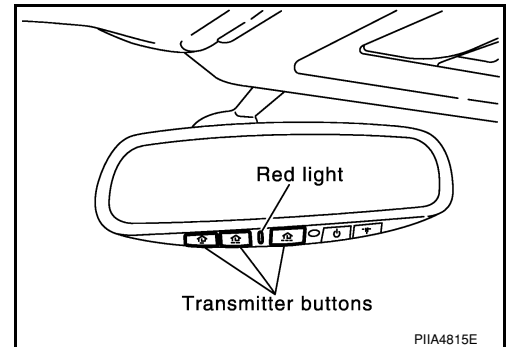
- YES >> GO TO 2
- NO >> Receiver or hand-held transmitter is malfunctioning.

#### 2. CHECK ILLUMINATION

1. Turn ignition switch "OFF".
2. Press each of the transmitter buttons and watch for the red light to illuminate with each button.

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Refer to [DLK-280, "Diagnosis Procedure"](#).



#### 3. CHECK TRANSMITTER

Check transmitter with Tool\*.

\*:For details, refer to Technical Service Bulletin.

Is the inspection result normal?

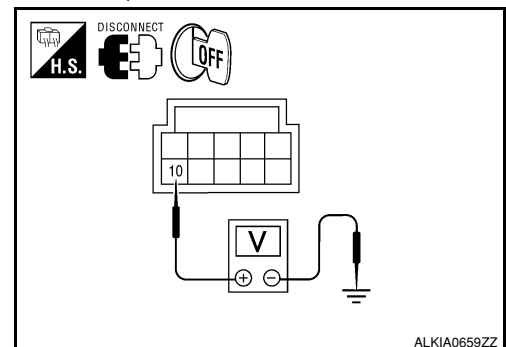
- YES >> Receiver or hand-held transmitter malfunction, not vehicle related.
- NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

### Diagnosis Procedure

INFOID:000000001350666

#### 1. CHECK POWER SUPPLY

1. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
2. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.





# HOMELINK UNIVERSAL TRANSCEIVER

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R4	10	Ground	Ignition switch position: LOCK	Battery voltage

Is the inspection result normal?

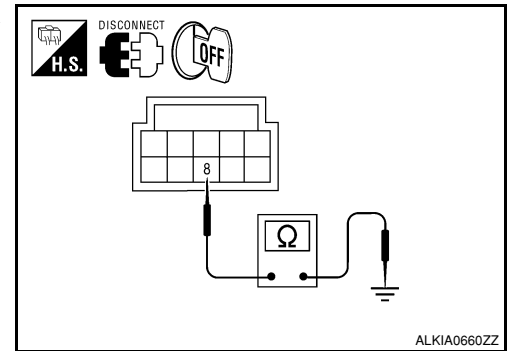
YES >> GO TO 2

NO >> Check the following.

- 10A fuse [No. 19 located in the fuse block (J/B)]
- Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

## 2.CHECK GROUND CIRCUIT

Check continuity between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal	Ground	Continuity
R4	8		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

## 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-39. "Intermittent Incident"](#).

>> INSPECTION END.

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## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000001350667

#### VALUES ON THE DIAGNOSIS TOOL

Refer to [BCS-38, "Reference Value"](#).

#### TERMINAL LAYOUT

Refer to [BCS-41, "Terminal Layout"](#).

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

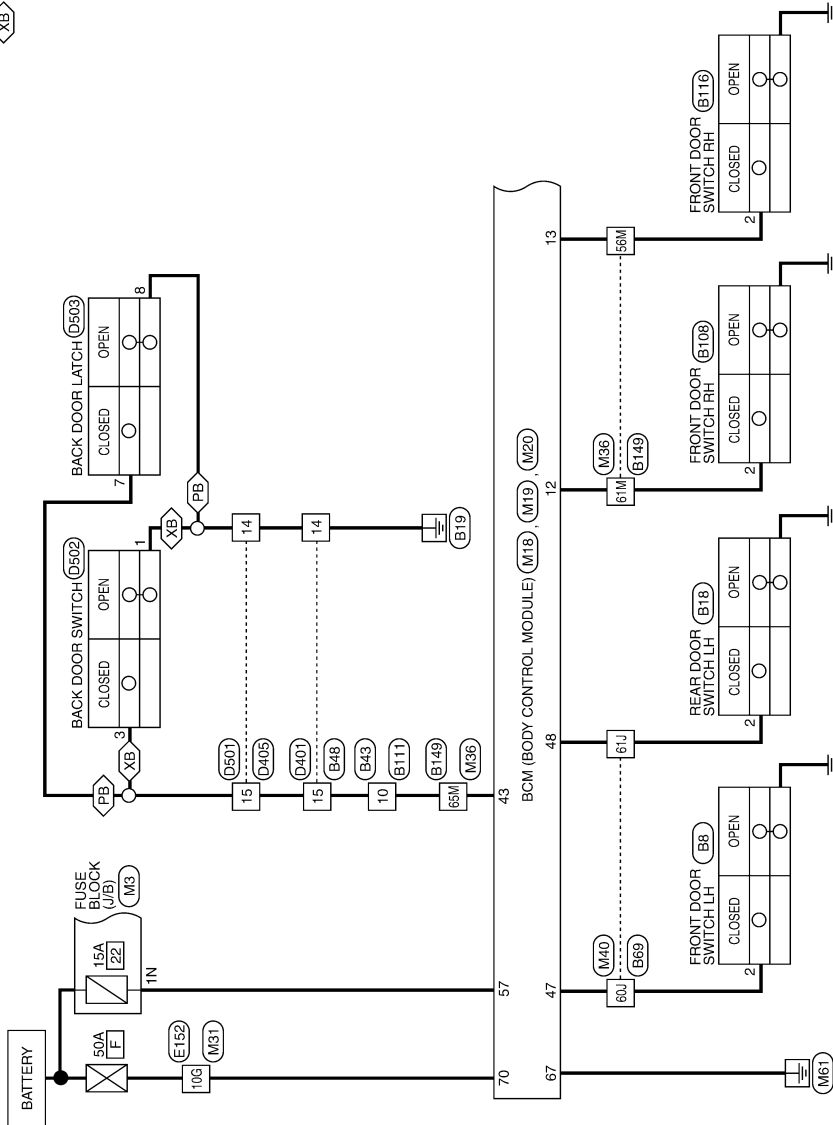
< ECU DIAGNOSIS >

## Wiring Diagram — POWER DOOR LOCK SYSTEM —

INFOID:000000001350668

### POWER DOOR LOCK - WITHOUT INTELLIGENT KEY SYSTEM

◁PB▷: WITH POWER BACK DOOR  
 ▷XB▷: WITHOUT POWER BACK DOOR



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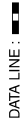
DLK

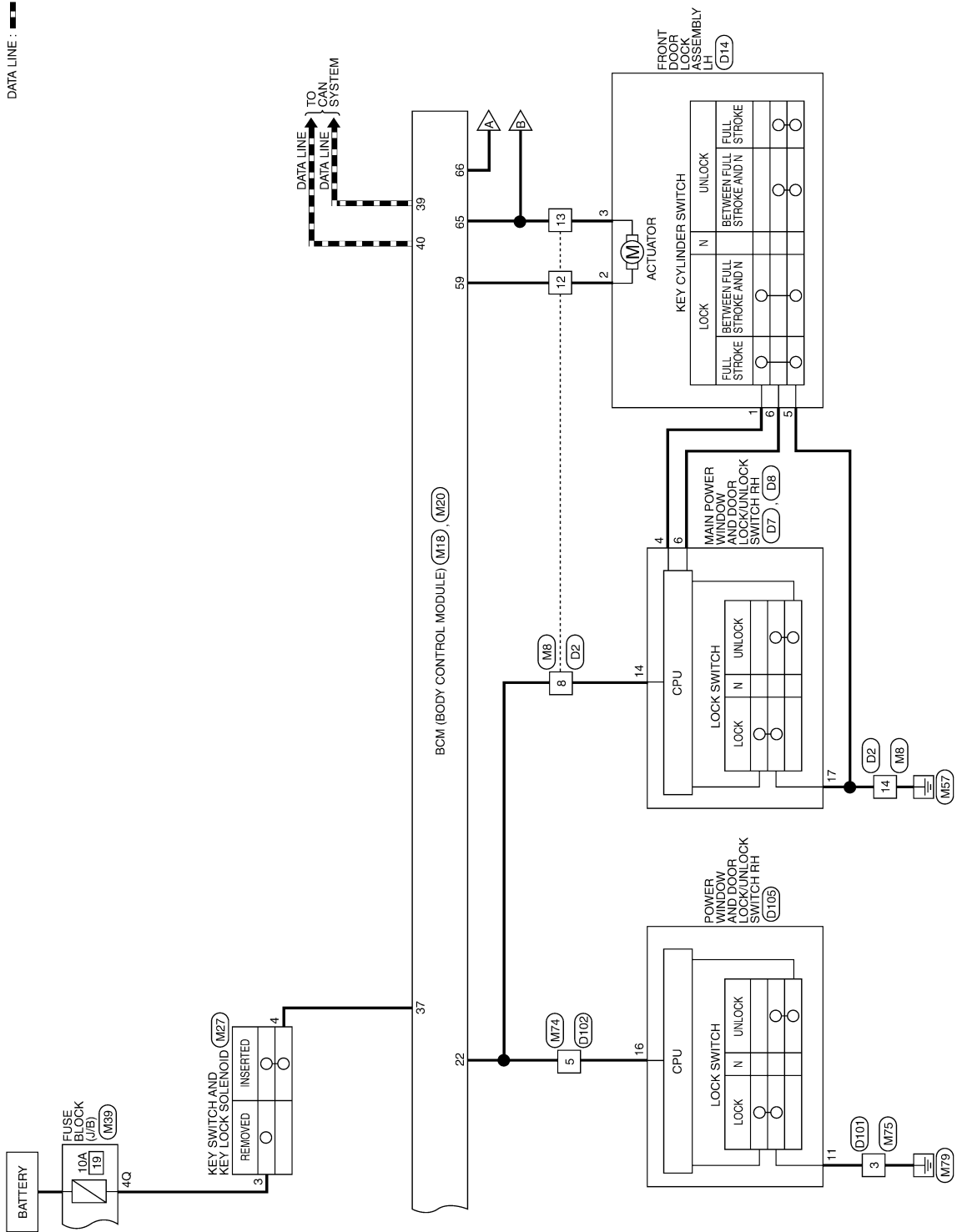
ALKWA0063GE

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

DATA LINE : 



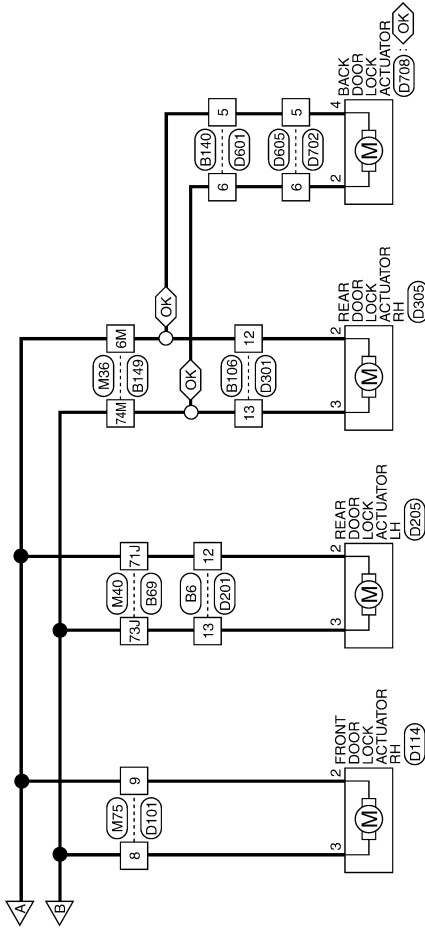
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# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

OK : WITHOUT INTELLIGENT KEY



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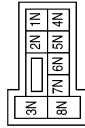
# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

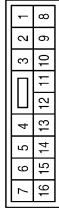
## POWER DOOR LOCK CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

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



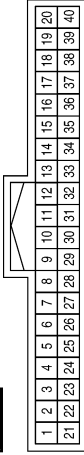
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



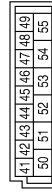
Terminal No.	Color of Wire	Signal Name
8	W/V	-
12	G	-
13	V	-
14	B	-

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



Terminal No.	Color of Wire	Signal Name
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
37	B/R	KEY_SW
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
43	R/B	BACK_DOOR_SW
47	SB	DOOR_SW (DR)
48	R/Y	DOOR_SW (RL)

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



Terminal No.	Color of Wire	Signal Name
57	Y/R	BAT
59	G	DOOR_UNLOCK_OUTPUT(DR)
65	V	DOOR_LOCK_OUTPUT(ALL)

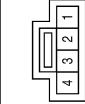
Terminal No.	Color of Wire	Signal Name
66	G/Y	DOOR_UNLOCK_OUTPUT (OTHER)
67	B	GND (POWER)
70	W/B	BATT (F/L)

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

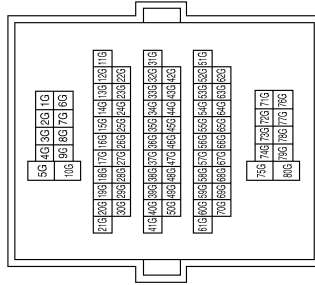
< ECU DIAGNOSIS >

Connector No.	M27
Connector Name	KEY SWITCH AND KEY LOCK SOLENOID
Connector Color	WHITE



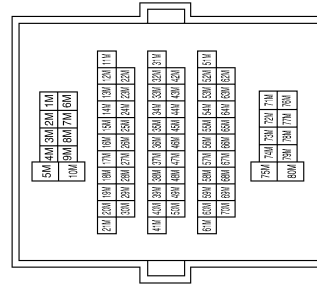
Terminal No.	Color of Wire	Signal Name
3	Y/R	-
4	B/R	-

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



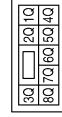
Terminal No.	Color of Wire	Signal Name
10G	W/B	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6M	G/Y	-
56M	GR	-
61M	R/L	-
65M	R/B	-
74M	V	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



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

ALKIA0598GB

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

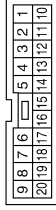
DLK

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

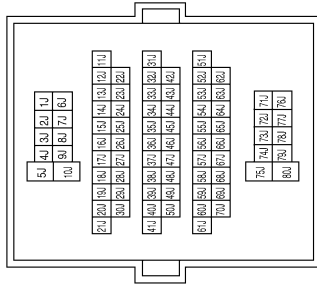
Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



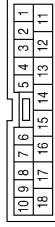
Terminal No.	Color of Wire	Signal Name
5	LGW	-

Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/Y	-
71J	G/Y	-
73J	V	-

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

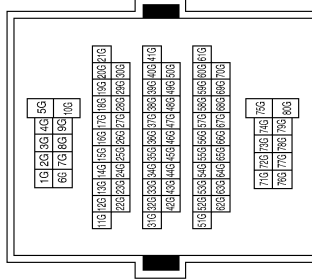


Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
30G	Y	-

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



Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

ALKIA0599GB

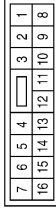


# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

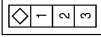
< ECU DIAGNOSIS >

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



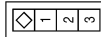
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



Terminal No.	Color of Wire	Signal Name
2	R/Y	-

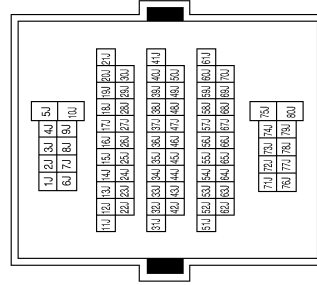
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



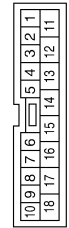
Terminal No.	Color of Wire	Signal Name
2	SB	-

Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/Y	-
71J	G/Y	-
73J	V	-

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



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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

ALKIA0600GB

A  
B  
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E  
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I  
J  
K  
L  
M  
N  
O  
P

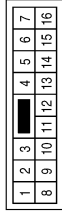
DLK

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

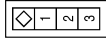
< ECU DIAGNOSIS >

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



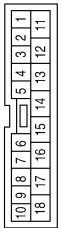
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



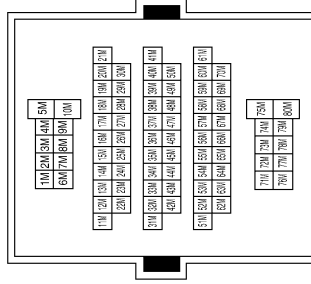
Terminal No.	Color of Wire	Signal Name
2	R/L	-

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



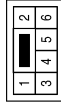
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



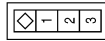
Terminal No.	Color of Wire	Signal Name
6M	G/Y	-
56M	GR	-
61M	R/L	-
65M	R/W	-
74M	V	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

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



Terminal No.	Color of Wire	Signal Name
2	GR	-

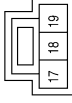
ALKIA0601GB

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

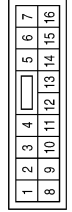
< ECU DIAGNOSIS >

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



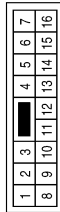
Terminal No.	Color of Wire	Signal Name
17	B	GND

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



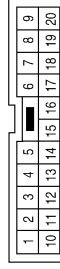
Terminal No.	Color of Wire	Signal Name
4	L	LOCK
6	R	UNLOCK
14	LG/W	ANTI_PINCH_SERIAL_LINK

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	LG/W	-
12	G	-
13	V	-
14	B	-

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



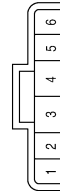
Terminal No.	Color of Wire	Signal Name
5	LG/W	-

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



Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	L	LOCK
2	G	UNLOCK
3	V	LOCK
5	B	GND
6	R	UNLOCK

ALKIA0602GB

A  
B  
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P

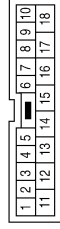
DLK

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

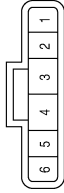
< ECU DIAGNOSIS >

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



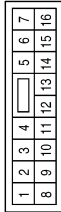
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	D114
Connector Name	FRONT DOOR LOCK ACTUATOR RH
Connector Color	BLACK



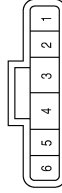
Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



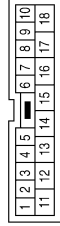
Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	ANTI_PINCH_SERIAL_LINK

Connector No.	D305
Connector Name	REAR DOOR LOCK ACTUATOR RH
Connector Color	BLACK



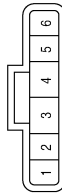
Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	D205
Connector Name	REAR DOOR LOCK ACTUATOR LH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

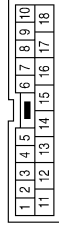
ALKIA0603GB

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

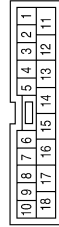
< ECU DIAGNOSIS >

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



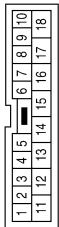
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

ALKIA0604GB

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

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

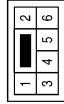
< ECU DIAGNOSIS >

Connector No.	D708
Connector Name	BACK DOOR LOCK ACTUATOR
Connector Color	WHITE



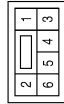
Terminal No.	Color of Wire	Signal Name
2	V	LOCK
4	G/Y	UNLOCK

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

ALKIA0605GB

# BCM (BODY CONTROL MODULE)

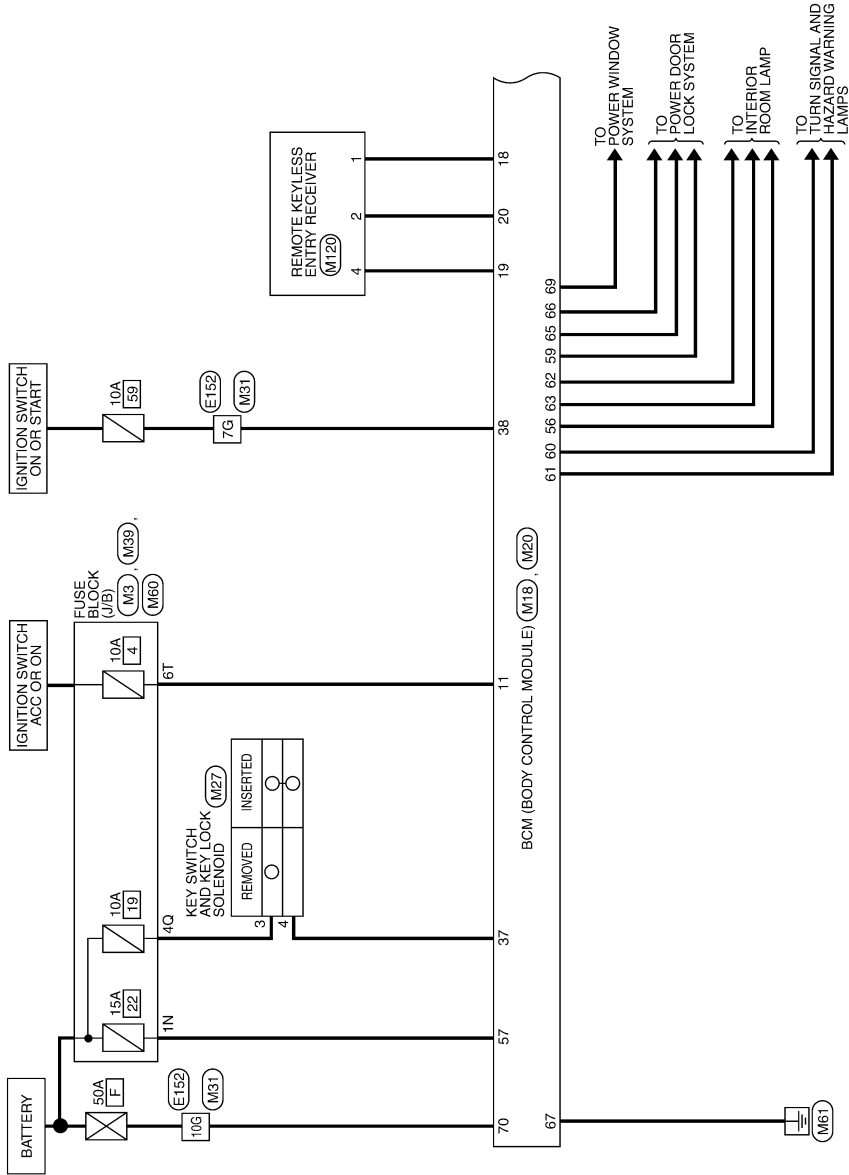
[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —

INFOID:000000001374742

### REMOTE KEYLESS ENTRY SYSTEM



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

DLK

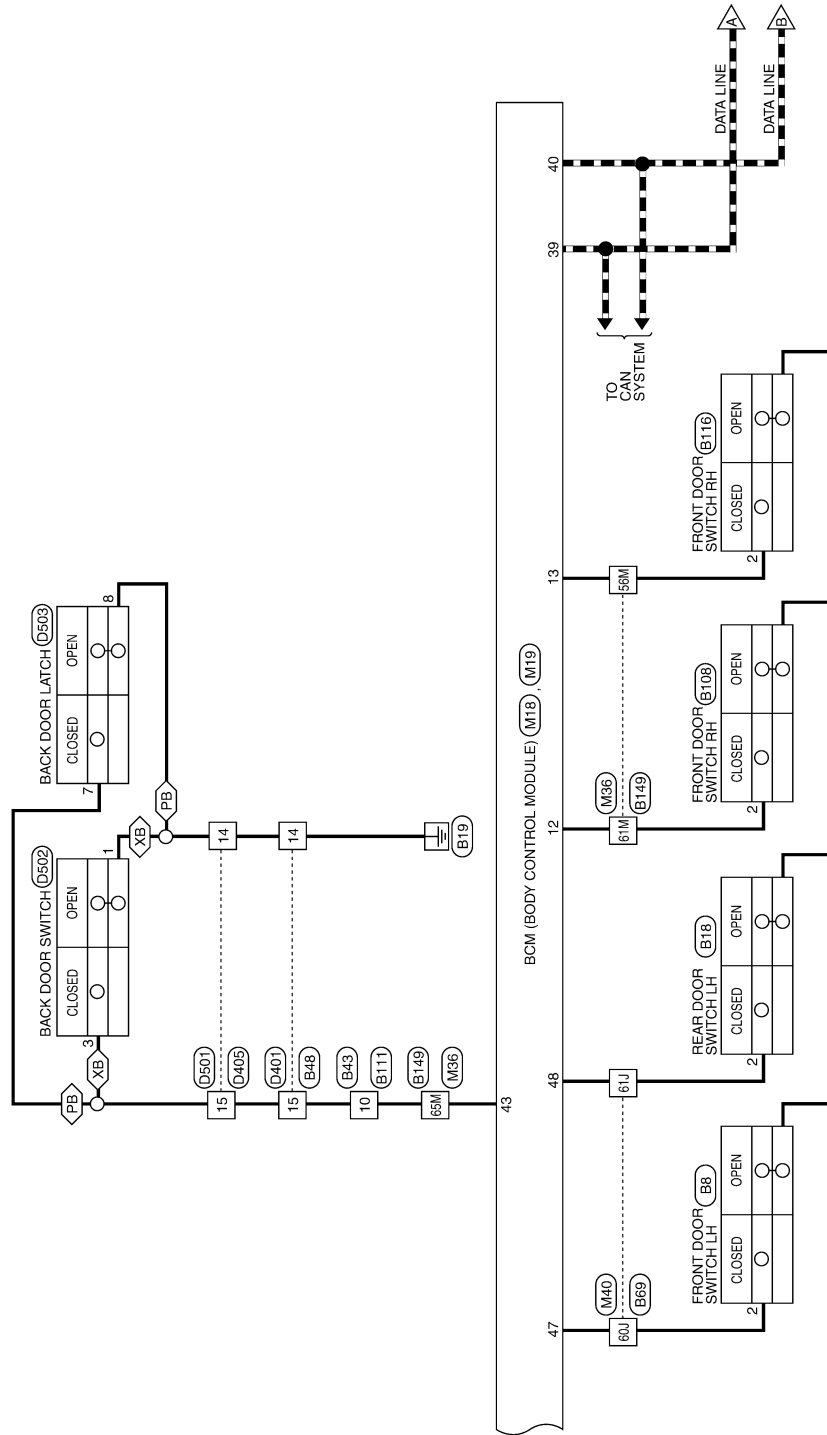
ALKWA0066GE

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

PB : WITH POWER BACK DOOR  
XB : WITHOUT POWER BACK DOOR  
 : DATA LINE



ALKWA0067GE



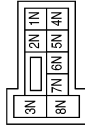
# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

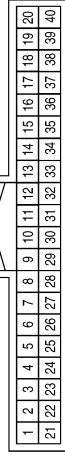
## REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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



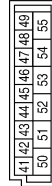
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



Terminal No.	Color of Wire	Signal Name
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
18	P	SIG GND
19	V/W	KEYLESS PWR TUNER
20	G/W	KEYLESS TUNER SIGNAL
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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



Terminal No.	Color of Wire	Signal Name
43	R/B	BACK DOOR SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

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



Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT (FUSE)
59	G	DOOR UNLOCK OUTPUT (DR)
60	G/B	FLASHER OUTPUT (LEFT)

Terminal No.	Color of Wire	Signal Name
61	G/Y	FLASHER OUTPUT (RIGHT)
62	R/W	STEP LAMP OUTPUT
63	L	ROOM LAMP OUTPUT

ALKIA0591GB

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

DLK

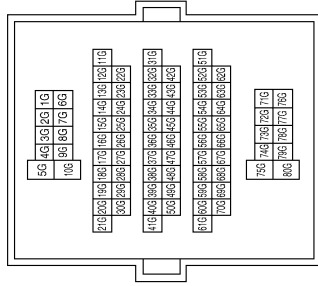
# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

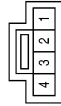
< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
31G	L	-
42G	P	-

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



Connector No.	M27
Connector Name	KEY SWITCH AND KEY LOCK SOLENOID
Connector Color	WHITE



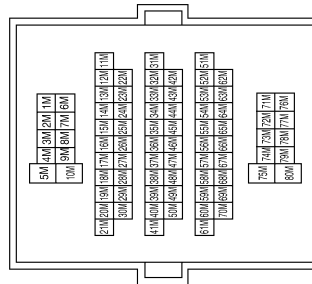
Terminal No.	Color of Wire	Signal Name
3	Y/R	-
4	B/R	-

Connector No.	M39
Connector Name	FUSE BLOCK(U/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
56M	GR	-
61M	R/L	-
65M	R/B	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



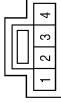
ALKIA0592GB

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

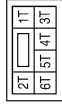
< ECU DIAGNOSIS >

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



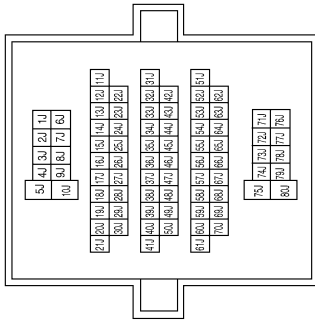
Terminal No.	Color of Wire	Signal Name
1	P	GND
2	GW	SIGNAL
4	V/W	POWER

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6T	O	-

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



Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/Y	-

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



Terminal No.	Color of Wire	Signal Name
59	B	GND (PWR)

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



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIG)
39	L	CAN-H
40	P	CAN-L
45	GW	ANTI_THEFT_HORN

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK



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

ALKIA0593GB

A  
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E  
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J  
K  
L  
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P

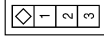
DLK

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

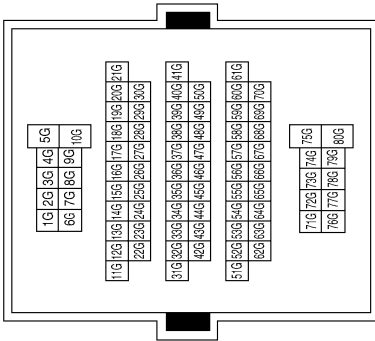
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



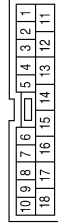
Terminal No.	2	Color of Wire	SB	Signal Name	-
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Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
31G	L	-
42G	P	-

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

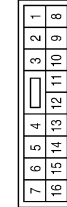


Connector No.	B48
Connector Name	WIRE TO WIRE
Connector Color	WHITE



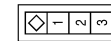
Terminal No.	14	Color of wire	B	Signal Name	-
Terminal No.	15	Color of wire	R/W	Signal Name	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	10	Color of Wire	R/W	Signal Name	-
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Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	2	Color of Wire	R/Y	Signal Name	-
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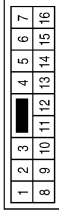
ALKIA0594GB

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

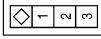
< ECU DIAGNOSIS >

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



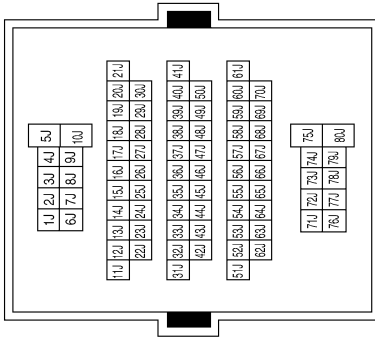
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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



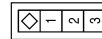
Terminal No.	Color of Wire	Signal Name
2	R/L	-

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



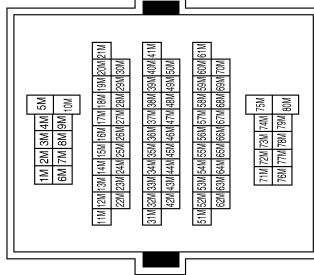
Terminal No.	Color of Wire	Signal Name
60J	SB	-
61J	R/Y	-

Connector No.	B116
Connector Name	REAR DOOR SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	GR	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
56M	GR	-
61M	R/L	-
65M	R/W	-

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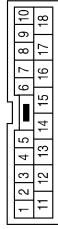
DLK

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

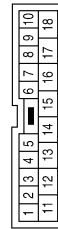
< ECU DIAGNOSIS >

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



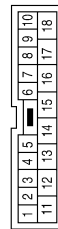
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



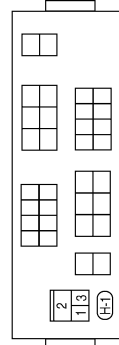
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	FUSE AND FUSIBLE LINK BOX
Connector Name	H-1
Connector Color	-



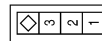
Terminal No.	Color of Wire	Signal Name
1	R/W	-
2	G/B	-
3	G	-

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

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INFOID:000000001374739

## Fail Safe

### Fail-safe index

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

# BCM (BODY CONTROL MODULE)

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

## DTC Inspection Priority Chart

INFOID:000000001374740

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

Priority	DTC
1	<ul style="list-style-type: none"> <li>U1000: CAN COMM CIRCUIT</li> <li>U1010: CONTROL UNIT (CAN)</li> </ul>

## DTC Index

INFOID:000000001374741

### NOTE:

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

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—
U1000: CAN COMM CIRCUIT	—	—	<a href="#">DLK-45</a>
U1010: CONTROL UNIT (CAN)	—	—	<a href="#">DLK-46</a>

DLK

# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

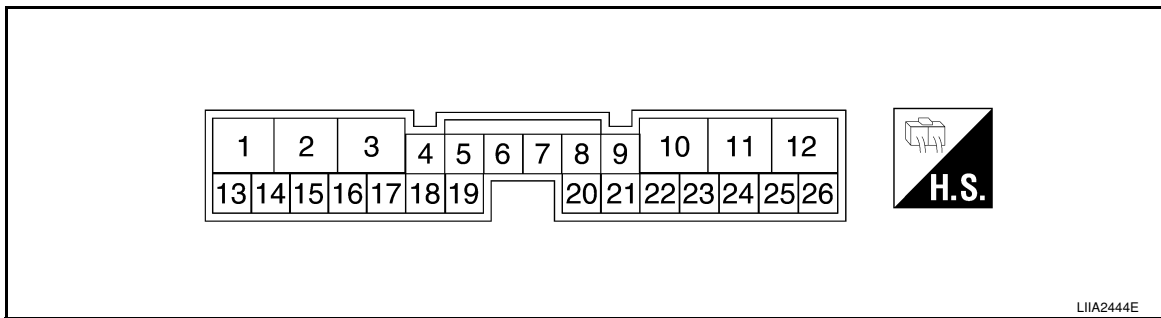
< ECU DIAGNOSIS >

## BACK DOOR CONTROL UNIT

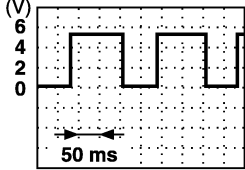
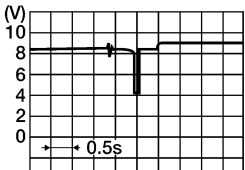
Reference Value

INFOID:000000001350676

### TERMINAL LAYOUT



### PHYSICAL VALUES

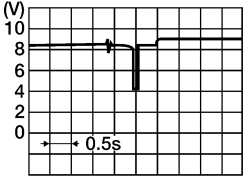
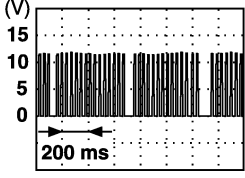
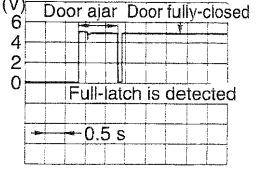
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	B	Ground	—	—
2	B	Ground	—	—
3	Y/R	Battery power supply	—	Battery voltage
4	G	Hazard lamp output	Request to flash hazards	Pulse must be >50ms but less than 250ms 
5	B/P	Pinch strip ground	—	—
6	R	Warning chime output	Back door motor active	Battery voltage
7	G/R	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
8	GR/B	Back door close switch	Close position ON	0
			Neutral position OFF	Battery voltage
9	L	Warning chime ground	—	—
10	L/B	Battery power	—	Battery voltage
11	Y	Cinch latch motor CLOSE output	Back door close operation	Battery voltage
12	L	Closure motor RETURN output	Back door release operation	Battery voltage
13	P/L	Back door close switch	Cancel position	0
			Neutral position	5
14	P	Close switch signal	While fully opening back door	



# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
15	O/L	Open switch signal	While fully closing back door	 <p style="text-align: right; font-size: small;">WIA1047E</p>
				 <p style="text-align: right; font-size: small;">PIIA2344E</p>
17	GR	Glass hatch ajar signal	Glass hatch OPEN	0
			Glass hatch CLOSED	5
18	GR/R	Park switch	P or N position (Ignition is ON)	0
			Other (Ignition is ON)	9
19	BR/B	Pinch strip RH	Detecting obstruction	0
			Other	5
20	GR	Pinch strip LH	Detecting obstruction	0
			Other	5
21	W/V	Power window serial link	—	 <p style="text-align: right; font-size: small;">PIIA2169E</p>
23	L/W	Power liftgate switch	ON	0
			OFF	Battery voltage
26	V	Outside handle signal	Back door handle switch (at rest)	Battery voltage
			Back door handle switch (open)	0

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DLK

# BACK DOOR CONTROL UNIT

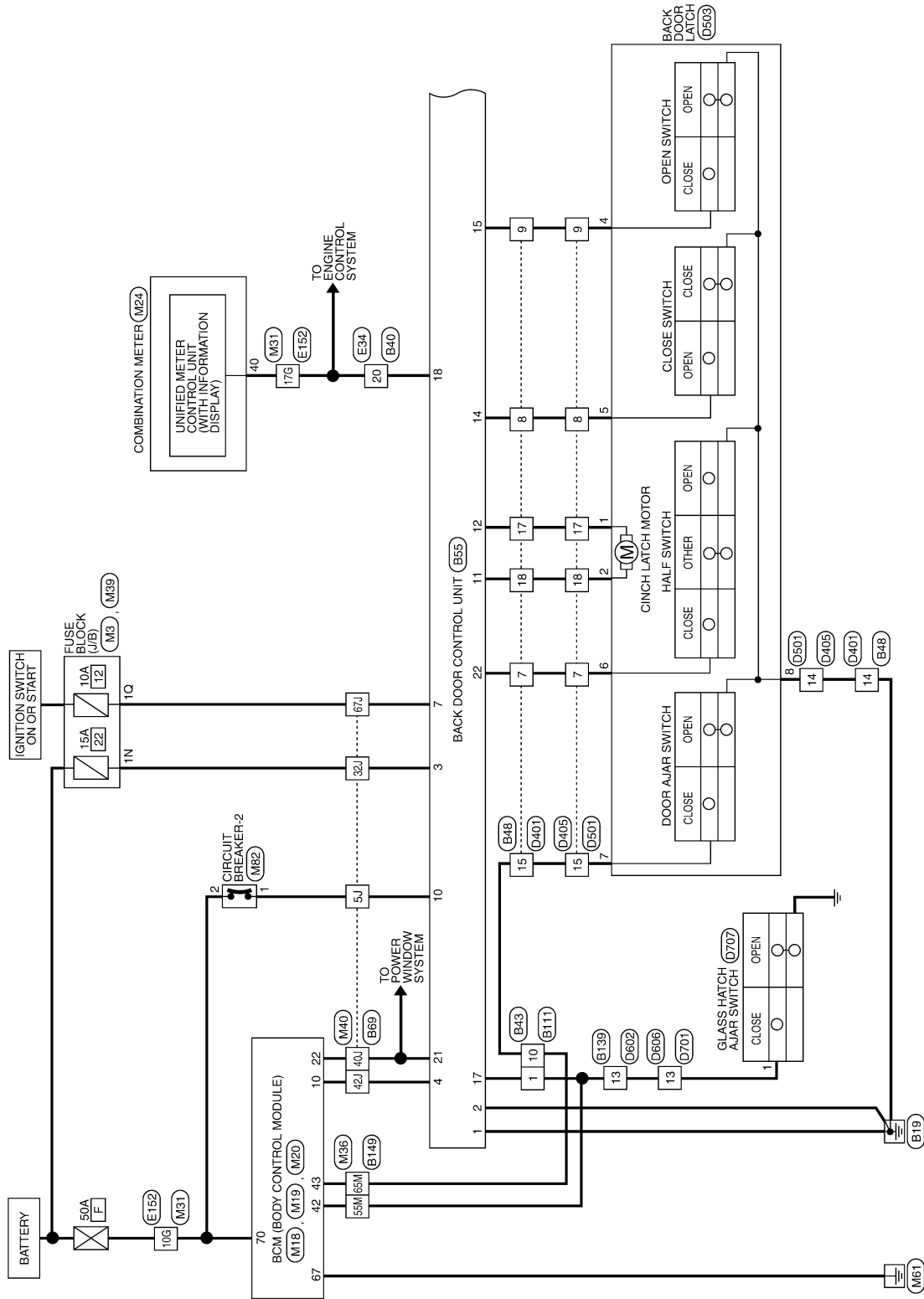
[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## Wiring Diagram—AUTOMATIC BACK DOOR SYSTEM—

INFOID:000000001350677

### AUTOMATIC BACK DOOR SYSTEM - WITHOUT INTELLIGENT KEY SYSTEM

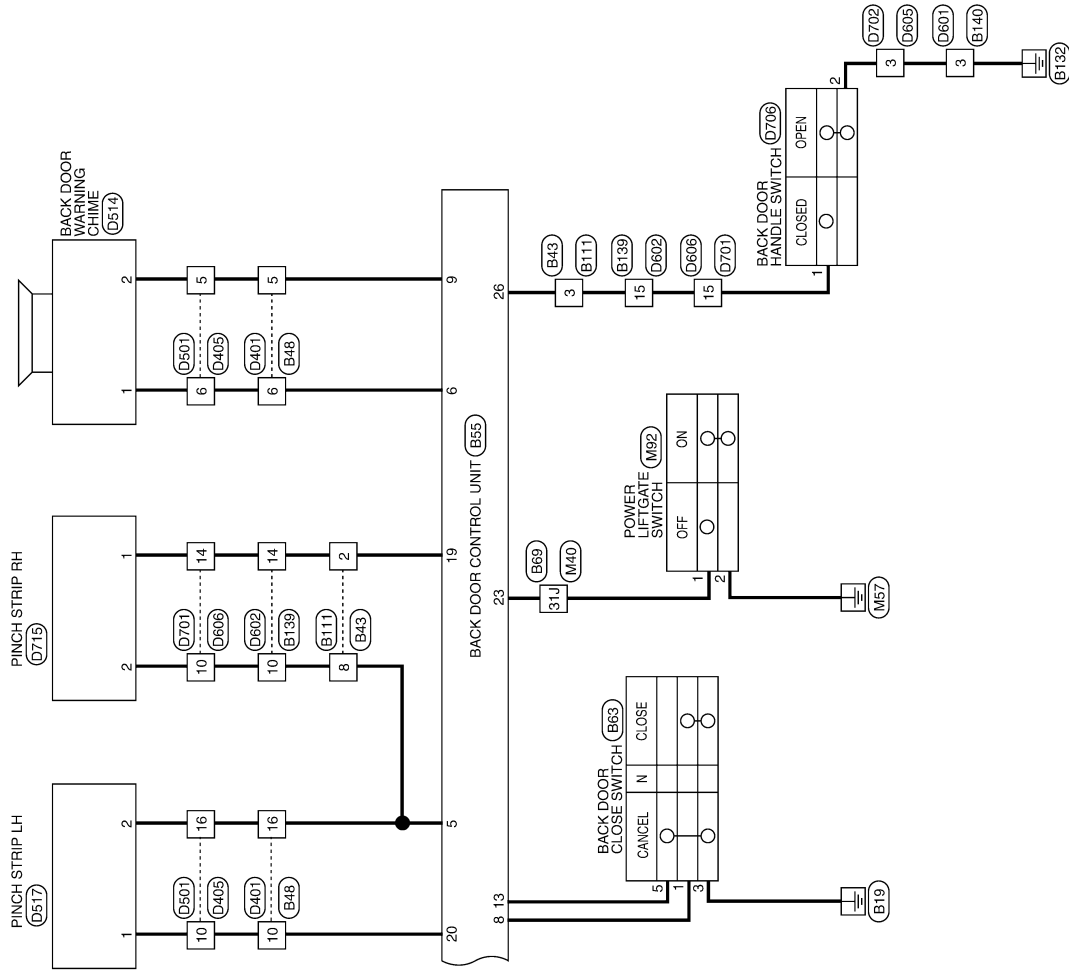


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# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >



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DLK

ALKWA0082GE

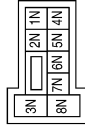
# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

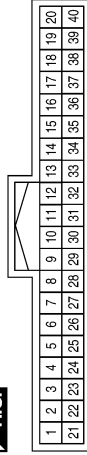
## AUTOMATIC BACK DOOR SYSTEM CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

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



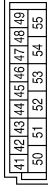
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



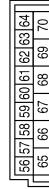
Terminal No.	Color of Wire	Signal Name
10	G	IVCS INPUT
22	W/W	ANTI-PINCH SERIAL LINK (RX, TX)

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



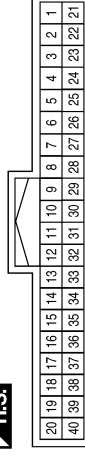
Terminal No.	Color of Wire	Signal Name
42	GR	TRNK/GLASS HATCH SW
43	R/B	BACK DOOR SW/FUEL LID OPEN SW

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



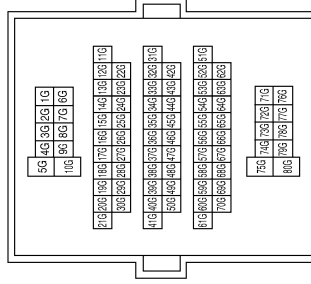
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
40	GR/R	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
17G	GR/R	-

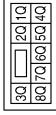
ALKIA0692GB

# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

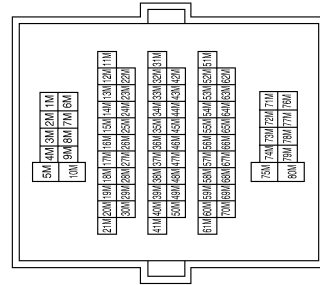
Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1Q	G/R	-

Terminal No.	Color of Wire	Signal Name
55M	GR	-
65M	R/B	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



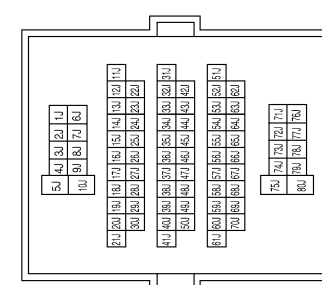
Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

Terminal No.	Color of Wire	Signal Name
5J	L/B	-
31J	L/W	-
32J	Y/R	-
40J	W/V	-
42J	G	-
67J	G/R	-

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



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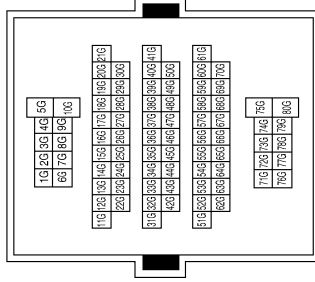
ALKIA0693GB

# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

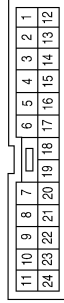
< ECU DIAGNOSIS >

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



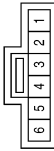
Terminal No.	Color of Wire	Signal Name
10G	W/B	-
17G	GR/R	-

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

Connector No.	M92
Connector Name	POWER LIFTGATE SWITCH
Connector Color	GRAY



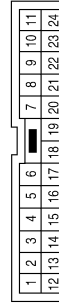
Terminal No.	Color of Wire	Signal Name
1	L/W	-
2	B	-

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

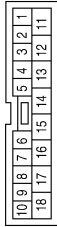
ALKIA0694GB

# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
7	BR	-
8	P	-

Terminal No.	Color of Wire	Signal Name
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

Connector No.	B55
Connector Name	BACK DOOR CONTROL UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	B	GND
3	Y/R	B+
4	G	FLASH_LAMP_IVCS
5	B/P	-
6	R	SP(+)
7	G/R	IGN
8	GR/B	PBD_CLOSE_SW

Terminal No.	Color of Wire	Signal Name
9	L	SP(-)
10	L/B	B+(MOTOR)
11	Y	MTR+
12	L	MTR-
13	P/L	PBD_DISABLE_SW
14	P	CLOSE_SW
15	O/L	OPEN_SW
17	GR	GLASS_HATCH_AJAR
18	GR/R	PARK_SW
19	BR/B	RH_PINCH_STRIP
20	V/G	LH_PINCH_STRIP
21	W/V	ANTI_PINCH_SERIAL_LINK
22	BR	HALF_SW
23	L/W	P-LIFTGATE_SW
26	V	OUTSIDE_HANDLE

Connector No.	B63
Connector Name	BACK DOOR CLOSE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR/B	CLOSE
3	B	GND
5	P/L	DISABLE

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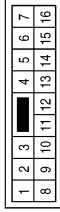
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# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

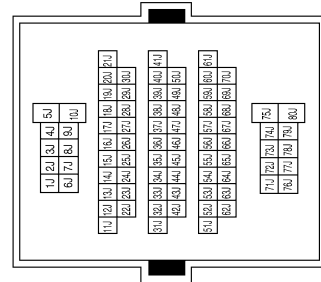
Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



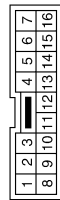
Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Terminal No.	Color of Wire	Signal Name
5J	L/B	-
31J	L/W	-
32J	Y/R	-
40J	W/V	-
42J	G	-
67J	G/R	-

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

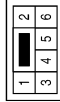


Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



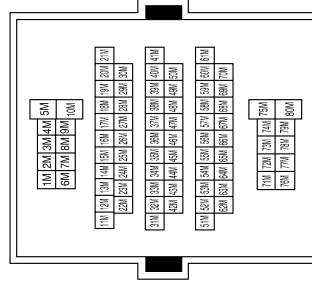
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
55M	GR	-
65M	R/W	-

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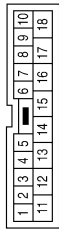


# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

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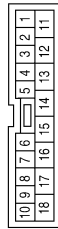
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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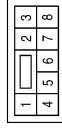
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# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

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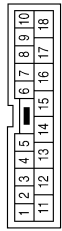
Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
4	O/L	-
5	P	-
6	BR	-
7	R/W	-
8	B	-

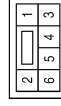
Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D517
Connector Name	PINCH STRIP LH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	V/G	-
2	B/P	-

Connector No.	D514
Connector Name	BACK DOOR WARNING CHIME
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	R	-
2	L	-

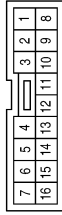
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# BACK DOOR CONTROL UNIT

[WITHOUT INTELLIGENT KEY SYSTEM]

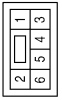
< ECU DIAGNOSIS >

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



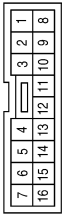
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



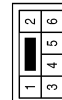
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D706
Connector Name	BACK DOOR HANDLE SWITCH
Connector Color	GRAY



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

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

## Fail Safe

### Fail-safe index

The automatic back door system operation will be interrupted if the back door control unit loses power, switch input signals or communication with the BCM.

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# HOMELINK UNIVERSAL TRANSCEIVER

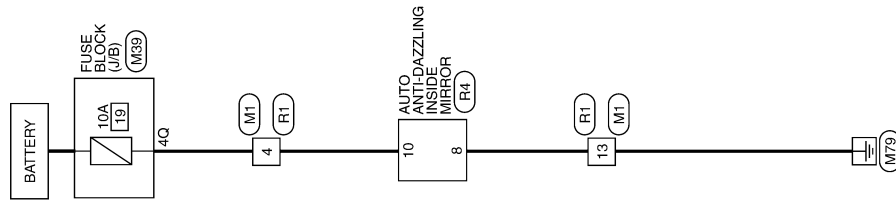
[WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## HOMELINK UNIVERSAL TRANSCEIVER

### Wiring Diagram

INFOID:000000001350679



INTEGRATED HOMELINK TRANSMITTER

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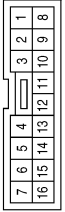
# HOMELINK UNIVERSAL TRANSCEIVER

[WITHOUT INTELLIGENT KEY SYSTEM]

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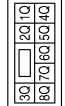
## INTEGRATED HOMELINK TRANSMITTER CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE


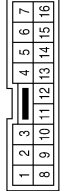
Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE


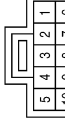
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	R4
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
8	B	GND
10	Y/R	B+

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# DOOR LOCK

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## SYMPTOM DIAGNOSIS

### DOOR LOCK

#### Symptom Table

INFOID:000000001350686

#### DOOR LOCK SYSTEM

##### NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-211, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Symptom	Repair order	Refer to page
Key reminder door function does not operate properly.	1. Door switch check	<a href="#">DLK-235</a>
	2. Key switch (Insert) check	<a href="#">DLK-259</a>
	3. Replace BCM.	<a href="#">BCS-54</a>
Power door lock does not operate with door lock and unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH.	1. Door lock/unlock switch check (driver side)	<a href="#">DLK-238</a>
	2. Door lock/unlock switch check (passenger side)	<a href="#">DLK-239</a>
Specific door lock actuator does not operate.	1. Door lock actuator check (Front LH)	<a href="#">DLK-244</a>
	2. Door lock actuator check (Front RH)	<a href="#">DLK-245</a>
	3. Door lock actuator check (Rear LH)	<a href="#">DLK-246</a>
	4. Door lock actuator check (Rear RH)	<a href="#">DLK-248</a>
	5. Back door (without power back door)	<a href="#">DLK-249</a>
	6. Back door (with power back door)	<a href="#">DLK-250</a>
Power door lock does not operate with front door key cylinder LH operation.	1. Front door lock assembly LH (key cylinder switch) check	<a href="#">DLK-242</a>
	2. Replace BCM.	<a href="#">BCS-54</a>
Power door lock does not operate.	1. BCM power supply and ground circuit check	<a href="#">BCS-32</a>
	2. Door lock/unlock switch check	<a href="#">DLK-238</a>

# REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## REMOTE KEYLESS ENTRY SYSTEM

### Symptom Table

INFOID:000000001350687

### REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) <b>NOTE:</b> If the result of keyfob function check is OK, keyfob is not malfunctioning.	<a href="#">DLK-253</a>
	2. Check BCM and remote keyless entry receiver.	<a href="#">DLK-251</a>
The new ID of keyfob cannot be entered.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) <b>NOTE:</b> If the result of keyfob function check is OK, keyfob is not malfunctioning.	<a href="#">DLK-253</a>
	2. Key switch (insert) check	<a href="#">DLK-259</a>
	3. Door switch check	<a href="#">DLK-235</a>
	4. ACC power check	
	5. Replace BCM.	XX-XX, *****
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) <b>NOTE:</b> If the result of keyfob function check is OK, keyfob is not malfunctioning.	<a href="#">DLK-217</a>
	2. Replace BCM.	XX-XX, *****
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	1. Check hazard and horn reminder mode with CONSULT-III <b>NOTE:</b> Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	<a href="#">DLK-217</a>
	2. Door switch check	<a href="#">DLK-235</a>
	3. Replace BCM.	XX-XX, *****
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder OK)	1. Check hazard reminder mode with CONSULT-III <b>NOTE:</b> Hazard reminder mode can be changed. First check the hazard reminder mode setting.	<a href="#">DLK-217</a>
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	XX-XX, *****
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	1. Check horn reminder mode with CONSULT-III <b>NOTE:</b> Horn reminder mode can be changed. First check the horn reminder mode setting.	<a href="#">DLK-217</a>
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	<a href="#">DLK-255</a>
	4. Replace BCM.	XX-XX, *****

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# REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

Symptom	Diagnoses/service procedure	Reference page
Back door open/close operation is not carried out with keyfob operation. (The automatic back door system is normal.)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) <b>NOTE:</b> If the result of keyfob function check is OK, keyfob is not malfunctioning.	<a href="#">DLK-253</a>
	2. Key switch (insert) check	<a href="#">DLK-259</a>
	3. Remote keyless entry receiver system inspection	<a href="#">DLK-251</a>
	4. Replace BCM.	XX-XX, *****
Room lamp, ignition keyhole illumination and step lamp operation do not activate properly.	1. Room lamp operation check	—
	2. Ignition keyhole illumination operation check	—
	3. Step lamp operation check	—
	4. Door switch check	<a href="#">DLK-235</a>
	5. Replace BCM.	XX-XX, *****
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) <b>NOTE:</b> If the result of keyfob function check is OK, keyfob is not malfunctioning.	<a href="#">DLK-253</a>
	2. Key switch (insert) check	<a href="#">DLK-259</a>
	3. Replace BCM.	XX-XX, *****
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode with CONSULT-III <b>NOTE:</b> Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	<a href="#">DLK-215</a>
	2. Replace BCM.	XX-XX, *****
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check power window down operation mode with CONSULT-III <b>NOTE:</b> Power window down operation mode can be changed. First check the power window down operation mode setting.	—
	2. Check power window function with switch	—
	3. Replace BCM.	XX-XX, *****



# BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

## BACK DOOR OPENER FUNCTION

### BACK DOOR OPENER SWITCH

#### BACK DOOR OPENER SWITCH : Symptom Table

INFOID:000000001350681

#### BACK DOOR OPEN FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-211. "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Vehicle is in park.

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the back door fully closed or fully open position. (Auto closure operates normally).	Power liftgate switch system inspection	<a href="#">DLK-265</a>
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-273</a>
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	<a href="#">DLK-267</a>
	Back door close switch system inspection	<a href="#">DLK-277</a>
	Auto back door power supply and ground circuit system inspection.	<a href="#">DLK-234</a>
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	<a href="#">DLK-273</a>
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	<a href="#">DLK-265</a>
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	<a href="#">DLK-278</a>
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	<a href="#">DLK-251</a>
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-273</a>
Auto closure does not operate.	Half-latch switch system	<a href="#">DLK-275</a>
	Cinch latch motor system	<a href="#">DLK-279</a>
	Handle switch system	<a href="#">DLK-278</a>
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	<a href="#">DLK-276</a>
	Handle switch system	<a href="#">DLK-278</a>
Warning chime does not sound.	Back door warning chime system	<a href="#">DLK-274</a>
Auto closure operation works, but the back door is not fully closed	Close switch system	<a href="#">DLK-277</a>
	Handle switch system	<a href="#">DLK-278</a>
	Cinch latch motor system	<a href="#">DLK-279</a>
	Back door latch assembly mechanism damaged or worn.	<a href="#">DLK-275</a>

## BACK DOOR HANDLE

#### BACK DOOR HANDLE : Symptom Table

INFOID:000000001350682

#### BACK DOOR OPEN FUNCTION MALFUNCTION

**NOTE:**

## BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

### < SYMPTOM DIAGNOSIS >

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-211, "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following “symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

#### Conditions of Vehicle (Operating Conditions)

- Vehicle is in park.

Symptom	Diagnosis/service procedure	Reference page
Back door open function does not operate by back door handle switch (doors unlocked).	1. Refer to diagnosis chart.	<a href="#">DLK-321</a>
	2. Check Intermittent Incident.	<a href="#">GI-39</a>

# HOMELINK UNIVERSAL TRANSCEIVER

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Symptom Table

INFOID:000000001350688

### HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	<a href="#">DLK-280</a>
	2. Check Intermittent Incident.	<a href="#">GI-39</a>

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

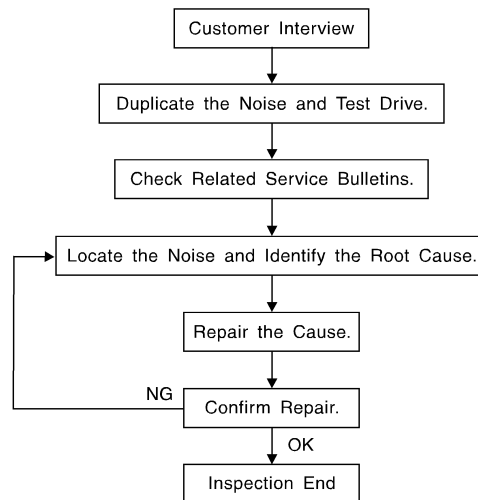
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[WITHOUT INTELLIGENT KEY SYSTEM]

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

### Work Flow

INFOID:000000001329019



SBT842

### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [DLK-328, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

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

### DUPLICATE THE NOISE AND TEST DRIVE

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

## [WITHOUT INTELLIGENT KEY SYSTEM]

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

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

## CHECK RELATED SERVICE BULLETINS

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

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

## LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
  - removing the components in the area that you suspect the noise is coming from.  
Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
  - tapping or pushing/pulling the component that you suspect is causing the noise.  
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks.Refer to [DLK-326. "Generic Squeak and Rattle Troubleshooting"](#).

## REPAIR THE CAUSE

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

### **CAUTION:**

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

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

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

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

**Insulates connectors, harness, etc.**

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

**INSULATOR (Foam blocks)**

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

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

**INSULATOR (Light foam block)**

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

**FELT CLOTH TAPE**

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

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

**UHMW (TEFLON) TAPE**

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## SILICONE GREASE

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

Note: Will only last a few months.

## SILICONE SPRAY

Use when grease cannot be applied.

## DUCT TAPE

Use to eliminate movement.

## CONFIRM THE REPAIR

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

## Generic Squeak and Rattle Troubleshooting

INFOID:000000001329020

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

## INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

### CAUTION:

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

## CENTER CONSOLE

Components to pay attention to include:

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

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

## DOORS

Pay attention to the:

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

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

## TRUNK

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

In addition look for:

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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

## SUNROOF/HEADLINING

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

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

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

## OVERHEAD CONSOLE (FRONT AND REAR)

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

In addition look for:

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

## SEATS

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

Cause of seat noise include:

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

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

## UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## Diagnostic Worksheet

INFOID:000000001329021

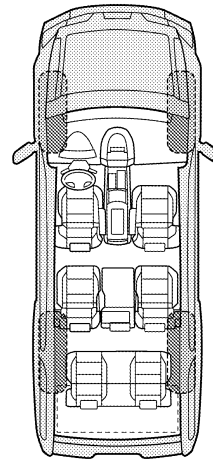
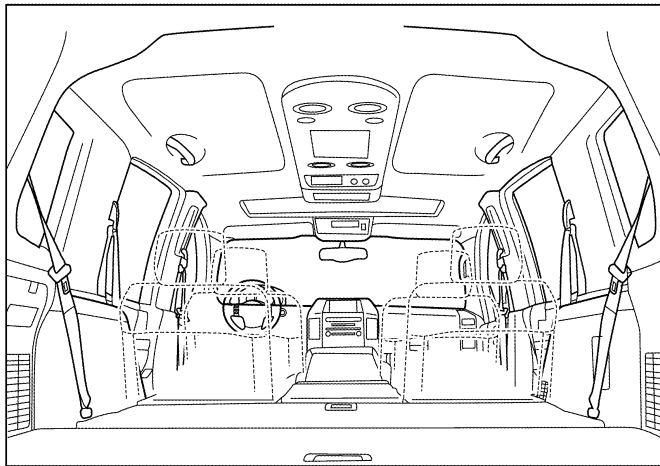
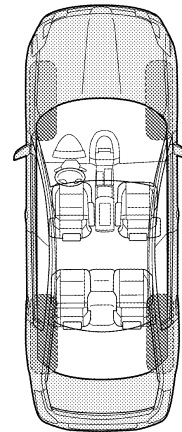
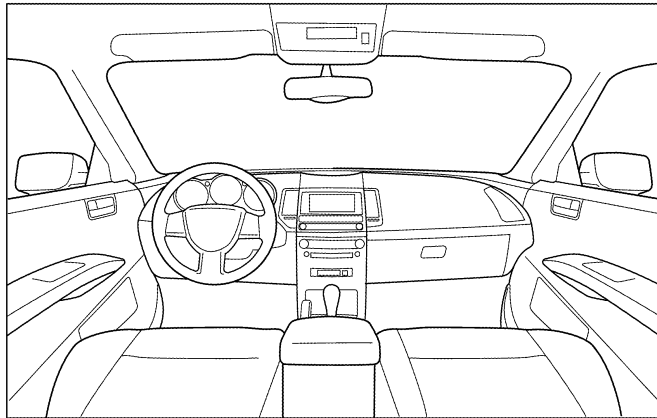
Dear Customer:

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

### SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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



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



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

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

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

### III. WHEN DRIVING:

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

### IV. WHAT TYPE OF NOISE

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

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: \_\_\_\_\_ Customer Name \_\_\_\_\_

W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

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## PRECAUTIONS

< PRECAUTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

### PRECAUTION

#### PRECAUTIONS

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

INFOID:000000001328971

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

##### **WARNING:**

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

##### Precaution for work

INFOID:000000001328972

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

# PREPARATION

[WITHOUT INTELLIGENT KEY SYSTEM]

< PREPARATION >

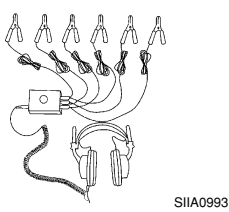
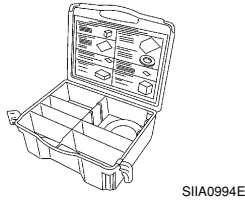
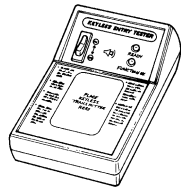
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:000000001328973

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

Tool number (Kent-Moore No.) Tool name	Description
<p>— (J-39570) Chassis ear</p>  <p>SIA0993E</p>	<p>Locating the noise</p>
<p>— (J-43980) NISSAN Squeak and Rattle Kit</p>  <p>SIA0994E</p>	<p>Repairing the cause of noise</p>
<p>— (J-43241) Remote Keyless Entry Tester</p>  <p>LEL946A</p>	<p>Used to test keyfobs</p>

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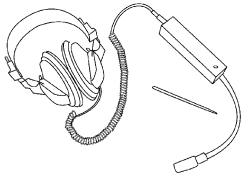
# PREPARATION

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[WITHOUT INTELLIGENT KEY SYSTEM]

## Commercial Service Tool

INFOID:000000001328974

(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIA0995E	Locating the noise

# HOOD

< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

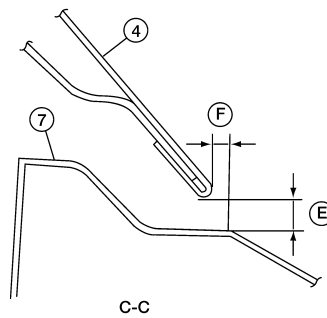
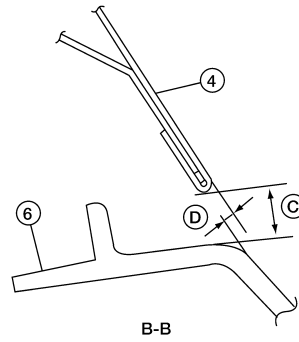
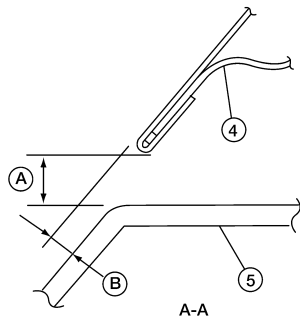
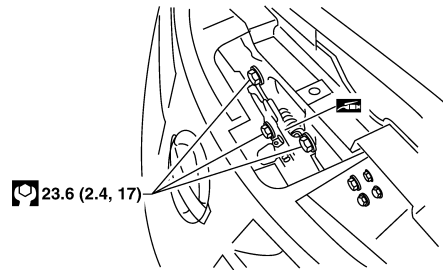
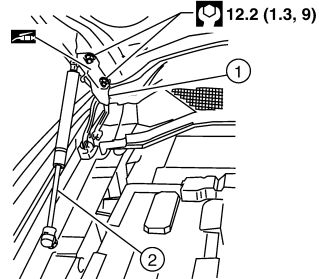
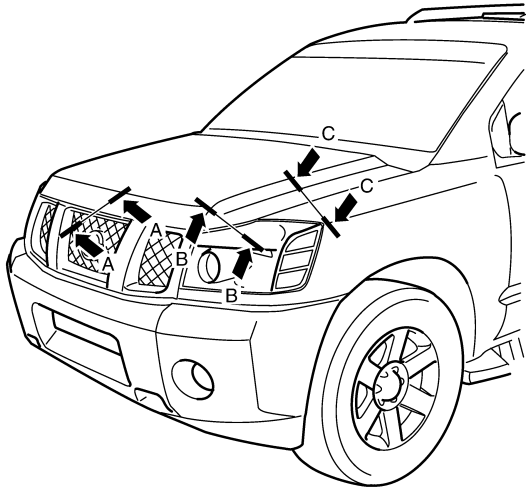
## ON-VEHICLE REPAIR

### HOOD

#### Fitting Adjustment

INFOID:000000001278676

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# HOOD

< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

- |                     |                      |                       |
|---------------------|----------------------|-----------------------|
| 1. Hood hinge       | 2. Hood stay         | 3. Hood lock assembly |
| 4. Hood assembly    | 5. Front grille      | 6. Headlamp           |
| 7. Front fender     | A. 8.0 mm (0.315 in) | B. 2.0 mm (0.079 in)  |
| C. 8.0mm (0.315 in) | D. 0.8 mm (0.031 in) | E. 5.0 mm (0.197 in)  |
| F. 0.0 mm (0.00 in) |                      |                       |

## CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-16. "Removal and Installation"](#).
2. Remove the hood lock assembly and adjust the height by rotating the bumper rubber until the hood clearance of hood and fender becomes 1 mm (0.04 in) lower than fitting standard dimension.
3. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the lock bolt to the specified torque.
4. Adjust the clearance and surface height of hood and fender according to the fitting standard dimension by rotating right and left bumper rubbers.

### CAUTION:

**Adjust right/left gap between hood and each part to the following specification.**

**Hood and headlamp (B-B) : Less than 8.0 mm**

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

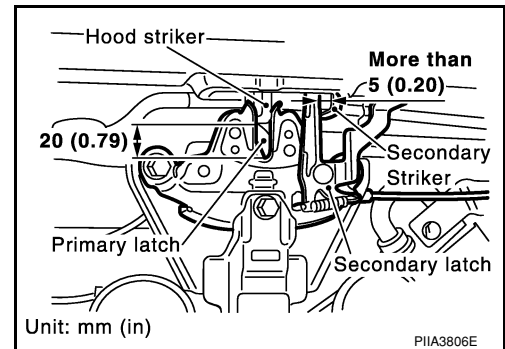
## HOOD LOCK ADJUSTMENT

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

### CAUTION:

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

4. After adjusting hood lock, tighten the lock bolts to the specified torque.
5. Install the front grille. Refer to [EXT-16. "Removal and Installation"](#).



## Removal and Installation of Hood Assembly

INFOID:000000001278677

1. Support the hood with a suitable tool.

### WARNING:

**Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.**

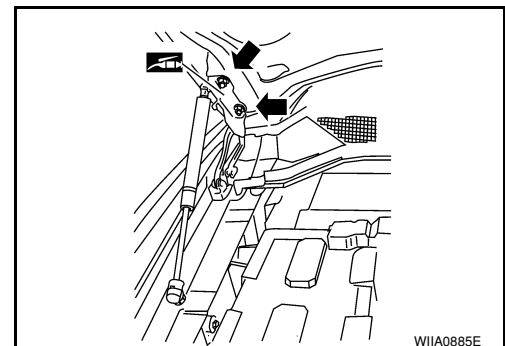
2. Remove the hinge nuts from the hood to remove the hood assembly.

### CAUTION:

**Operate with two workers, because of its heavy weight.**

Installation is in the reverse order of removal.

- Adjust the hood. Refer to [DLK-333. "Fitting Adjustment"](#).
- Adjust the hood lock. Refer to [DLK-333. "Fitting Adjustment"](#).



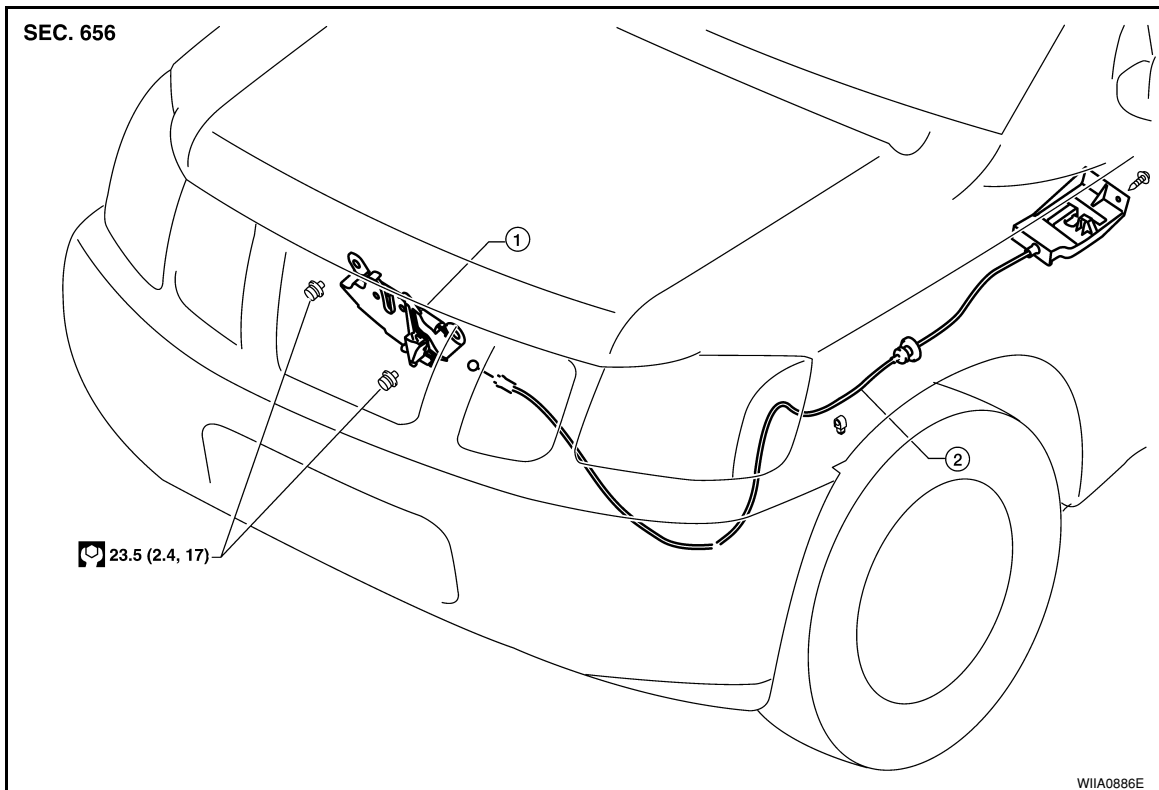
# HOOD

< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

## Removal and Installation of Hood Lock Control

INFOID:000000001278678



1. Hood lock assembly
2. Hood lock cable

### REMOVAL

1. Remove the front grill. Refer to [EXT-16, "Removal and Installation"](#).
2. Remove the front fender protector (LH). Refer to [EXT-20, "Removal and Installation"](#).
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolt and the hood opener.
5. Remove the grommet from the dash lower, and pull the hood lock cable toward the passenger room.

#### **CAUTION:**

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

### INSTALLATION

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

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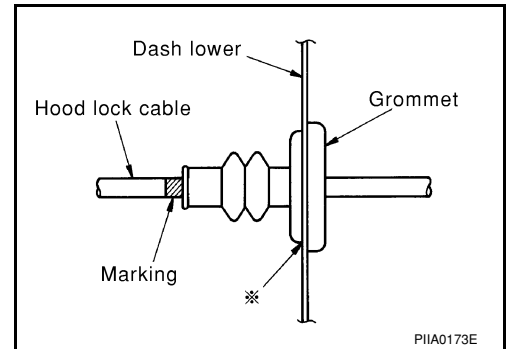
# HOOD

## < ON-VEHICLE REPAIR >

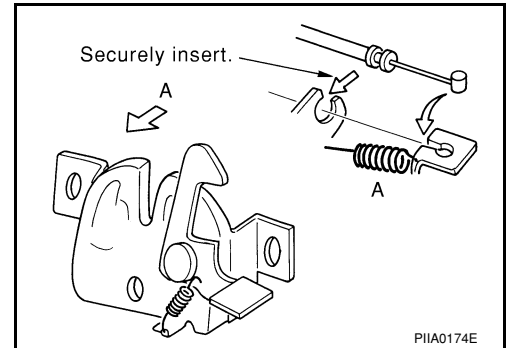
## [WITHOUT INTELLIGENT KEY SYSTEM]

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

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



4. Install the cable securely to the lock.
5. After installing, check the hood lock adjustment and hood opener operation.



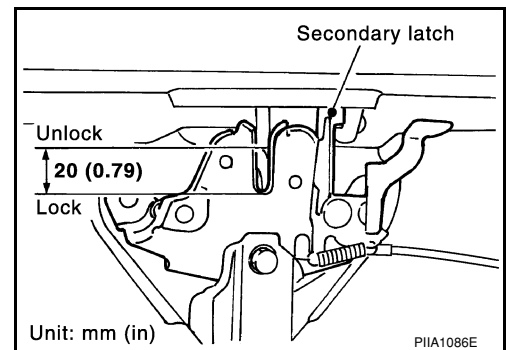
## Hood Lock Control Inspection

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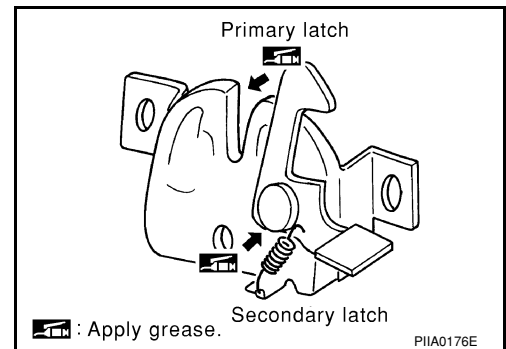
### **CAUTION:**

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

1. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
2. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



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





# DOOR

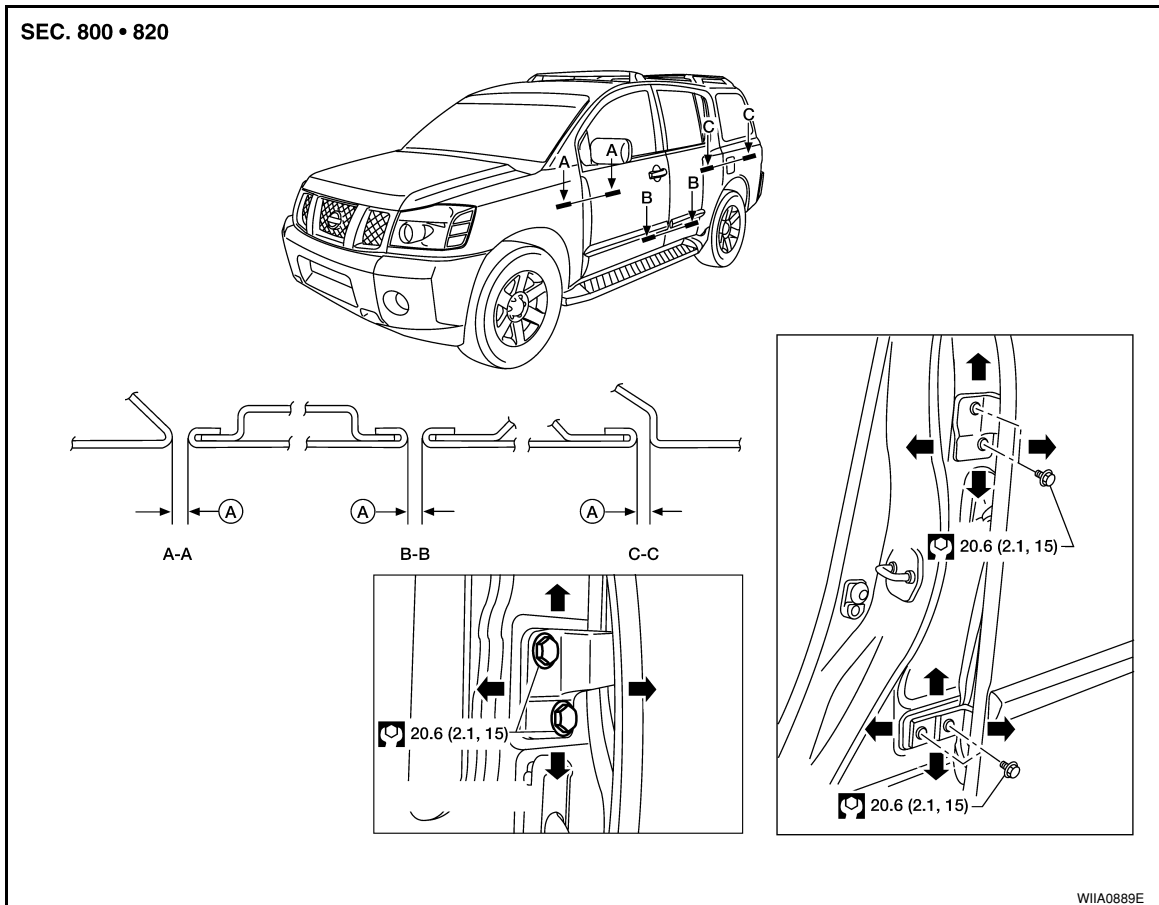
< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

## DOOR

### Fitting Adjustment

INFOID:000000001278674



A.  $4.5 \pm 1.0$  mm ( $0.177 \pm 0.039$  in)

#### Front door

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to [EXT-19, "Removal and Installation"](#).
2. Loosen the hinge bolts. Raise the front door at rear end to adjust.
3. Install the front fender. Refer to [EXT-19, "Removal and Installation"](#).

#### Rear door

Longitudinal clearance and surface height adjustment at front end

1. Loosen the bolts. Open the rear door, and raise the rear door at rear end to adjust.

#### Striker adjustment

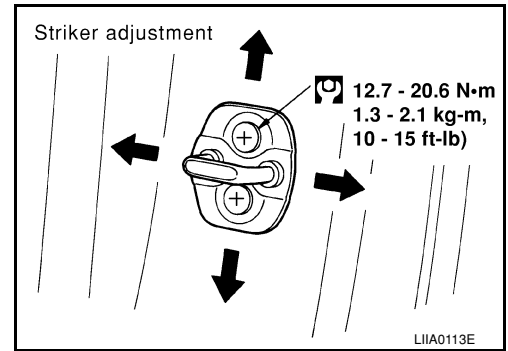
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# DOOR

< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

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



## Removal and Installation

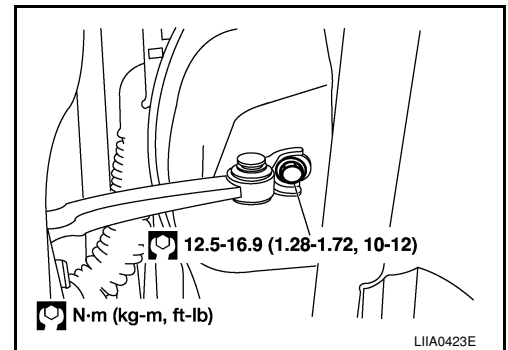
INFOID:000000001278675

### FRONT DOOR

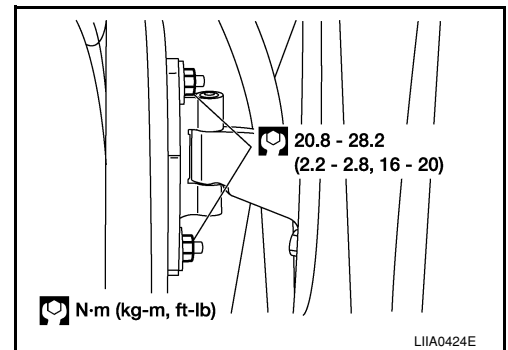
Removal

**CAUTION:**

- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
  - When removing and installing door assembly, be sure to carry out the fitting adjustment.
  - Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
1. Remove the door window and module assembly. Refer to [GW-14, "Removal and Installation"](#).
  2. Remove the door harness.
  3. Remove the check link cover.
  4. Remove the check link bolt from the hinge pillar.



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



Installation

Installation is in the reverse order of removal.

### REAR DOOR

Removal

**CAUTION:**

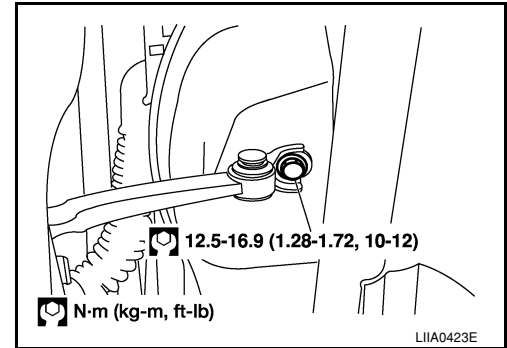
- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

# DOOR

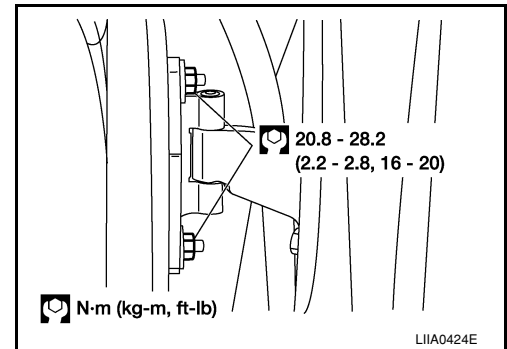
< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

1. Remove the door window and module assembly. Refer to [GW-17. "Removal and Installation"](#).
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



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



Installation

Installation is in the reverse order of removal.

## BACK DOOR

Removal

### WARNING:

**Always support back door when removing or replacing back door stays. Power back door opener will not support back door with back door stays removed.**

1. Remove the back door glass. Refer to [GW-12. "Removal and Installation"](#).
2. Remove the back door lock assembly. Refer to [DLK-346. "Door Lock Assembly"](#).
3. Remove the rear wiper motor. Refer to [WW-53. "Rear Wiper Motor"](#).
4. Remove the back door wire harness.
5. Remove the rear washer nozzle and hose from the back door. Refer to [WW-55. "Rear Washer Nozzle"](#).

### CAUTION:

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

6. Support the back door.
7. Disconnect the power back door lift arm from the door.
8. Remove the back door stays.

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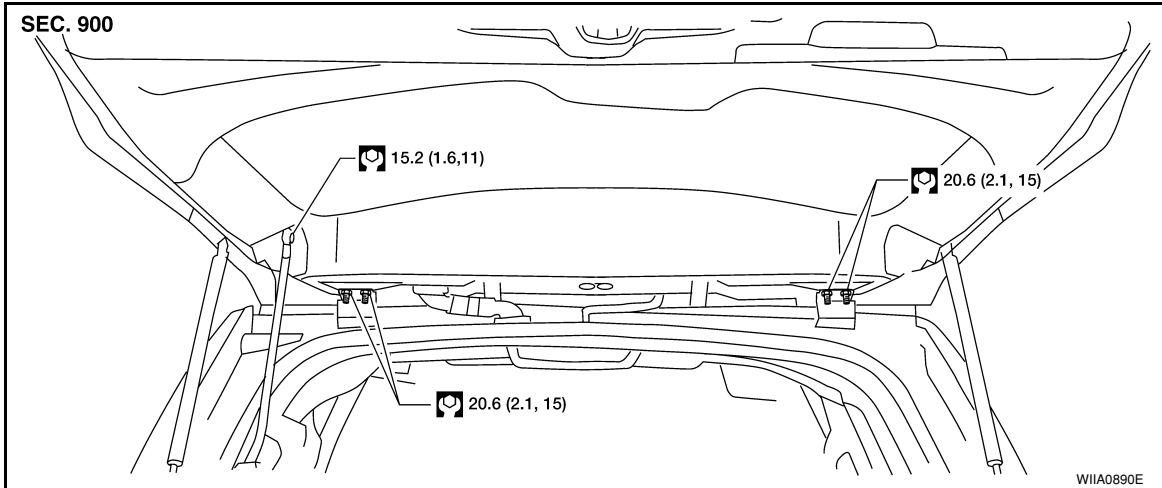
DLK

# DOOR

< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

9. Remove the door side nuts and the back door assembly.



Installation

Installation is in the reverse order of removal.

# FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

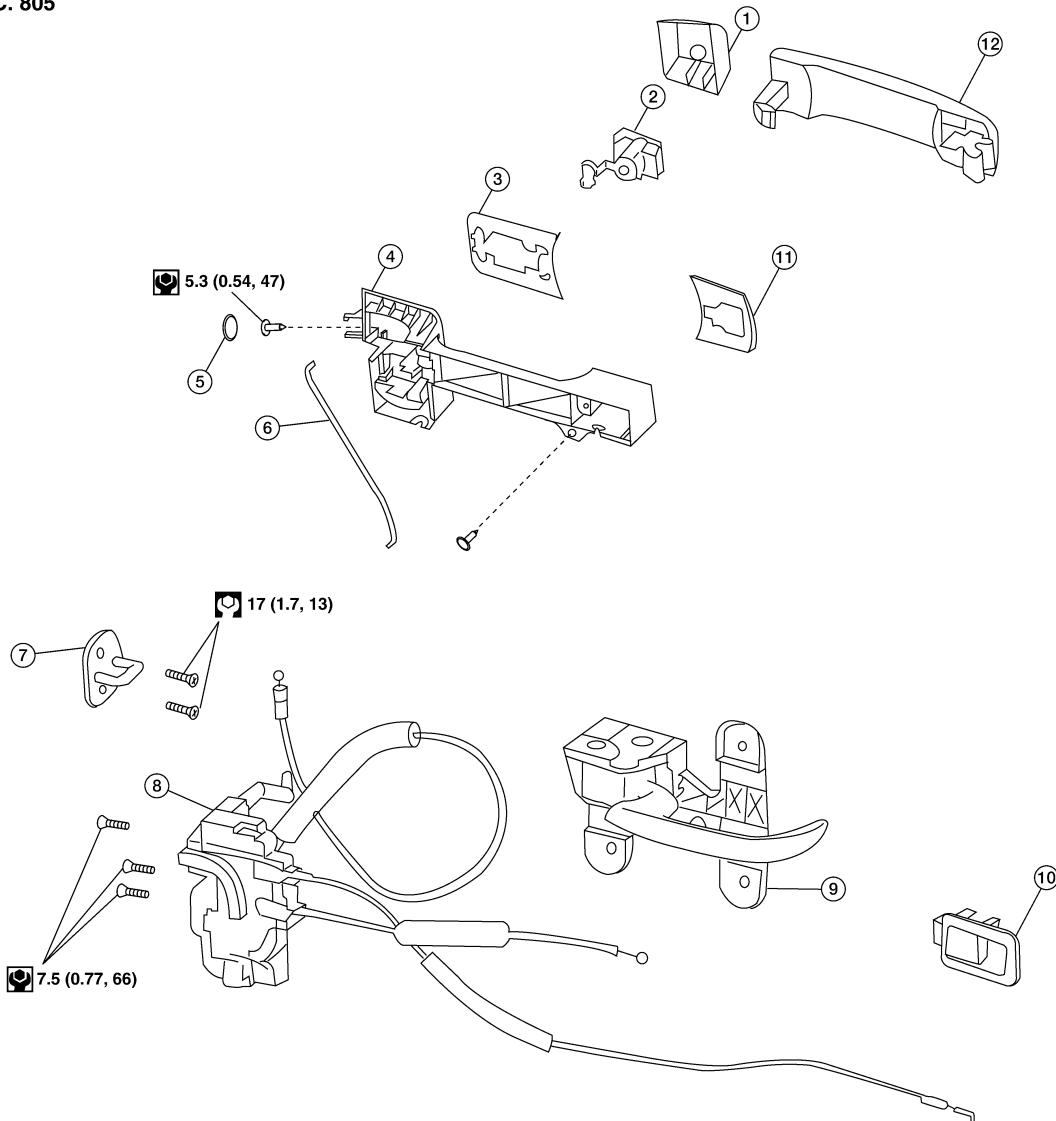
[WITHOUT INTELLIGENT KEY SYSTEM]

## FRONT DOOR LOCK

### Component Structure

INFOID:000000001542534

SEC. 805



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DLK

- |  |   |  |
|--|---|--|
| 1. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side) | 2. Key cylinder assembly (Driver side only) | 3. Rear gasket                         |
| 4. Outside handle bracket  | 5. Grommet                                  | 6. Key cylinder rod (Driver side only) |
| 7. Front door striker  | 8. Door lock assembly                       | 9. Inside handle assembly              |
| 10. Inside door lock lever   | 11. Front gasket                            | 12. Outside handle assembly            |

### Removal and Installation

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INFOID:000000001542535

#### REMOVAL

1. Remove the front door window regulator. Refer to [GW-14, "Removal and Installation"](#).
2. Remove the front door window rear glass run.

# FRONT DOOR LOCK

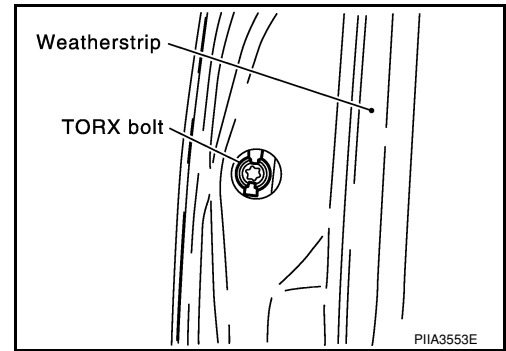
< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

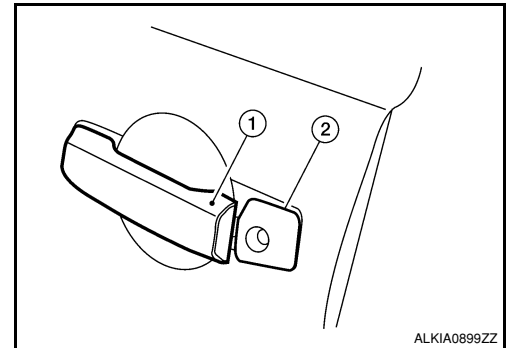
3. Remove the door side grommet, and the bolt (TORX T30) from the grommet hole.

**Torx bolt**

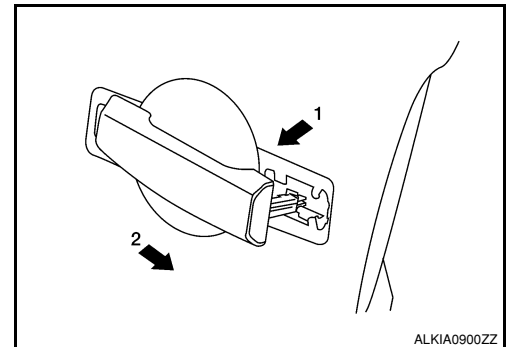
**5.3 N·m (0.54 kg-m, 47 in-lb)**



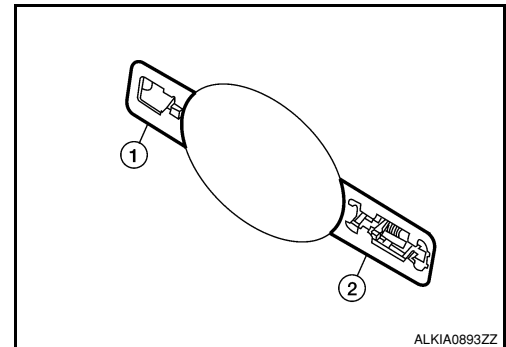
4. While pulling the outside handle (1), remove the door key cylinder assembly or outside handle escutcheon (2).



5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling the outside handle, slide it toward rear of vehicle to remove as shown.



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



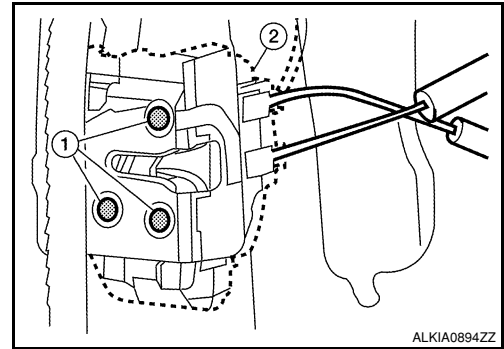
# FRONT DOOR LOCK

[WITHOUT INTELLIGENT KEY SYSTEM]

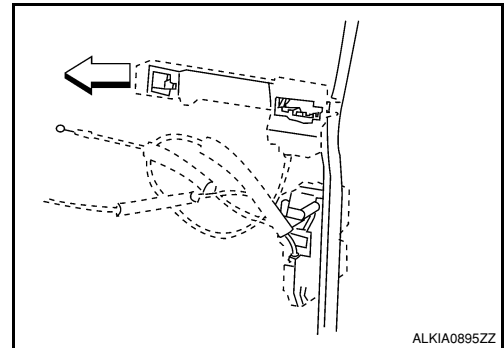
< ON-VEHICLE REPAIR >

- Remove the TORX bolts (T30), and separate the door lock assembly from the door.

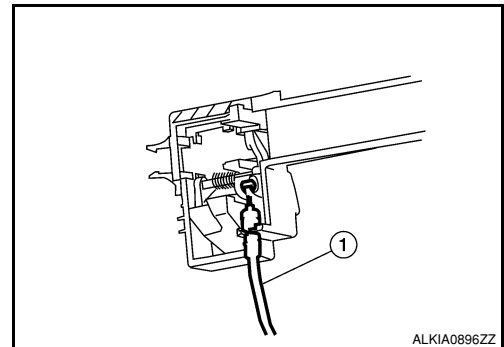
**Door lock assembly bolts 7.5 N·m (0.77 kg·m, 66 in·lb)**



- While pulling the outside handle bracket, slide it toward the front of the vehicle to remove it and the door lock assembly as shown.



- Disconnect the door lock actuator electrical connector.
- Separate the outside handle cable connection (1) from the outside handle bracket.



## INSTALLATION

Installation is in the reverse order of removal.

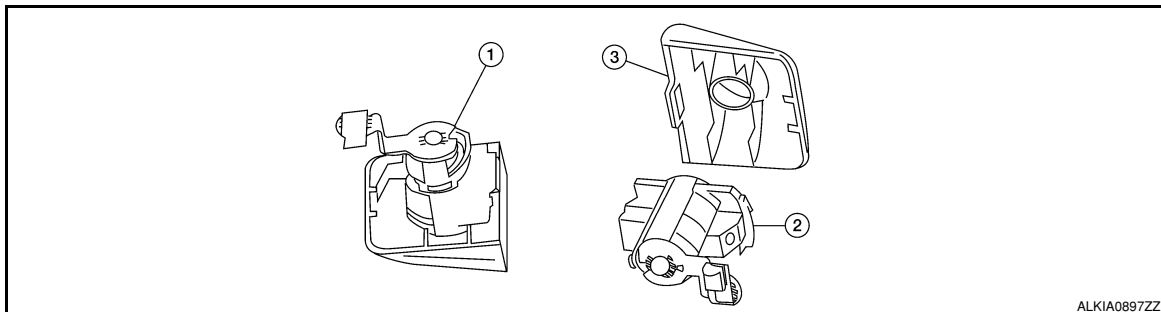
### CAUTION:

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

## Disassembly and Assembly

INFOID:000000001542536

## DOOR KEY CYLINDER ASSEMBLY



- Door key cylinder assembly
- Key cylinder assembly
- Door key cylinder escutcheon

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

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# REAR DOOR LOCK

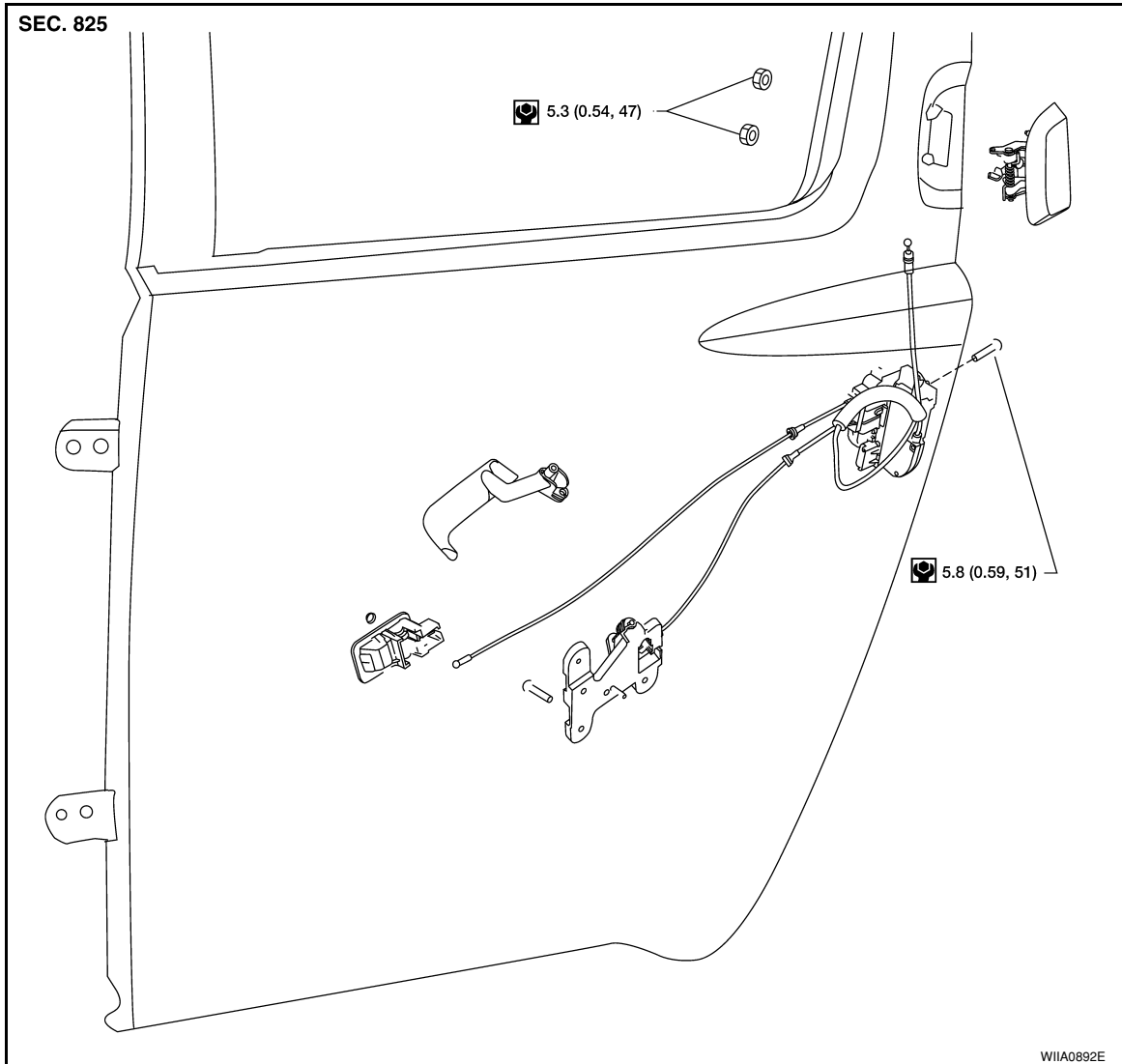
< ON-VEHICLE REPAIR >

[WITHOUT INTELLIGENT KEY SYSTEM]

## REAR DOOR LOCK

### Component Structure

INFOID:000000001278669



### Removal and Installation

INFOID:000000001278670

#### REMOVAL

1. Remove the rear door window and rear door module assembly. Refer to [GW-17. "Removal and Installation"](#).
2. Remove door grommets, and remove outside handle nuts from grommet hole.
3. Remove outside handle.
4. Disconnect the door lock actuator connector.
5. Reach to separate outside handle rod connection.

#### INSTALLATION

Installation is in the reverse order of removal.



# BACK DOOR LOCK

[WITHOUT INTELLIGENT KEY SYSTEM]

< ON-VEHICLE REPAIR >

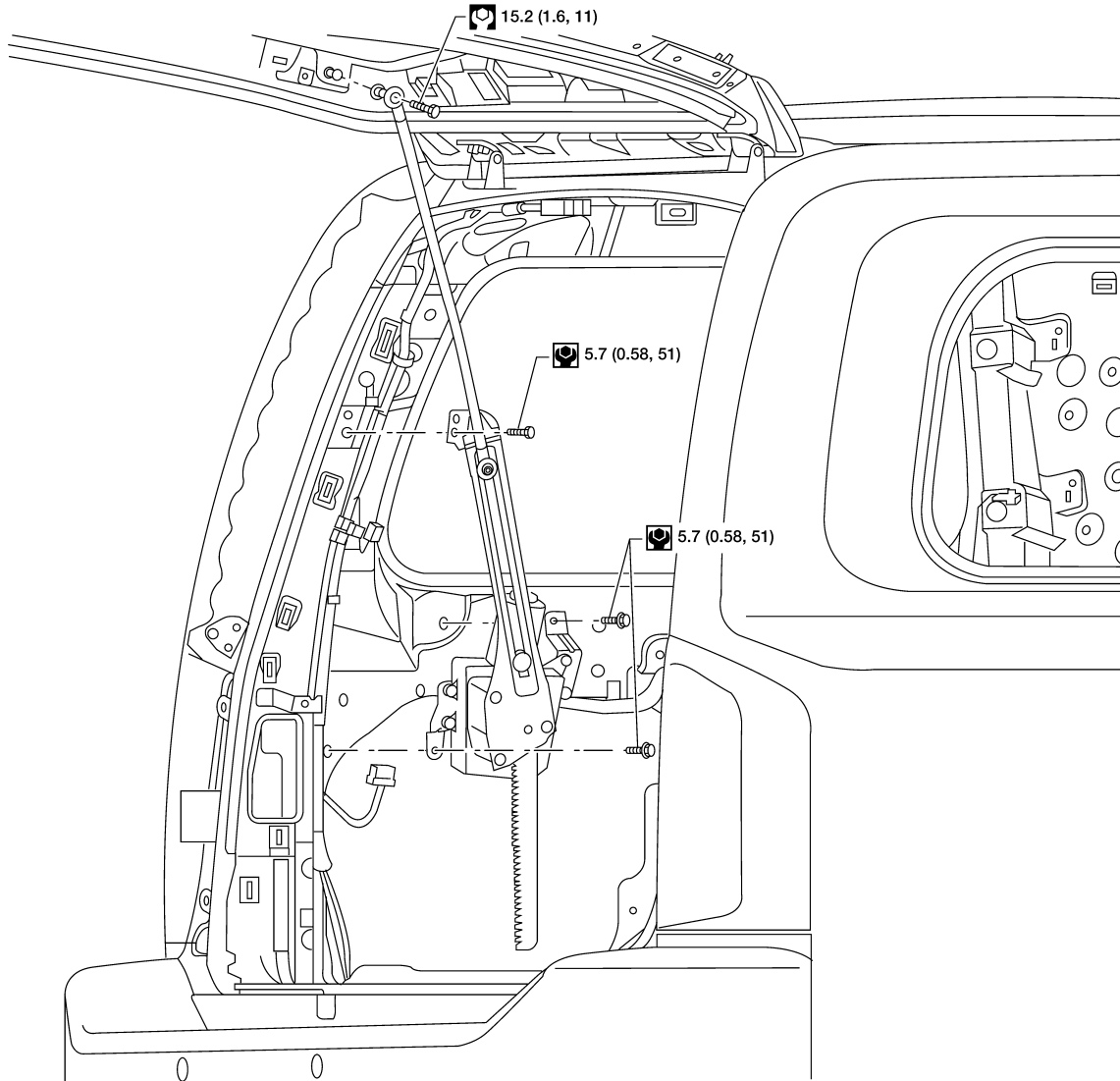
## BACK DOOR LOCK

### Power Back Door Opener

INFOID:000000001278667

#### Removal

SEC. 905



1. Remove the LH luggage side upper. Refer to [INT-18, "Removal and Installation"](#).
2. Disconnect the power back door motor electrical connector.
3. Disconnect the ball socket from the back door.
4. Remove the power back door motor assembly.

#### Installation

Installation is in the reverse order of removal.

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# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

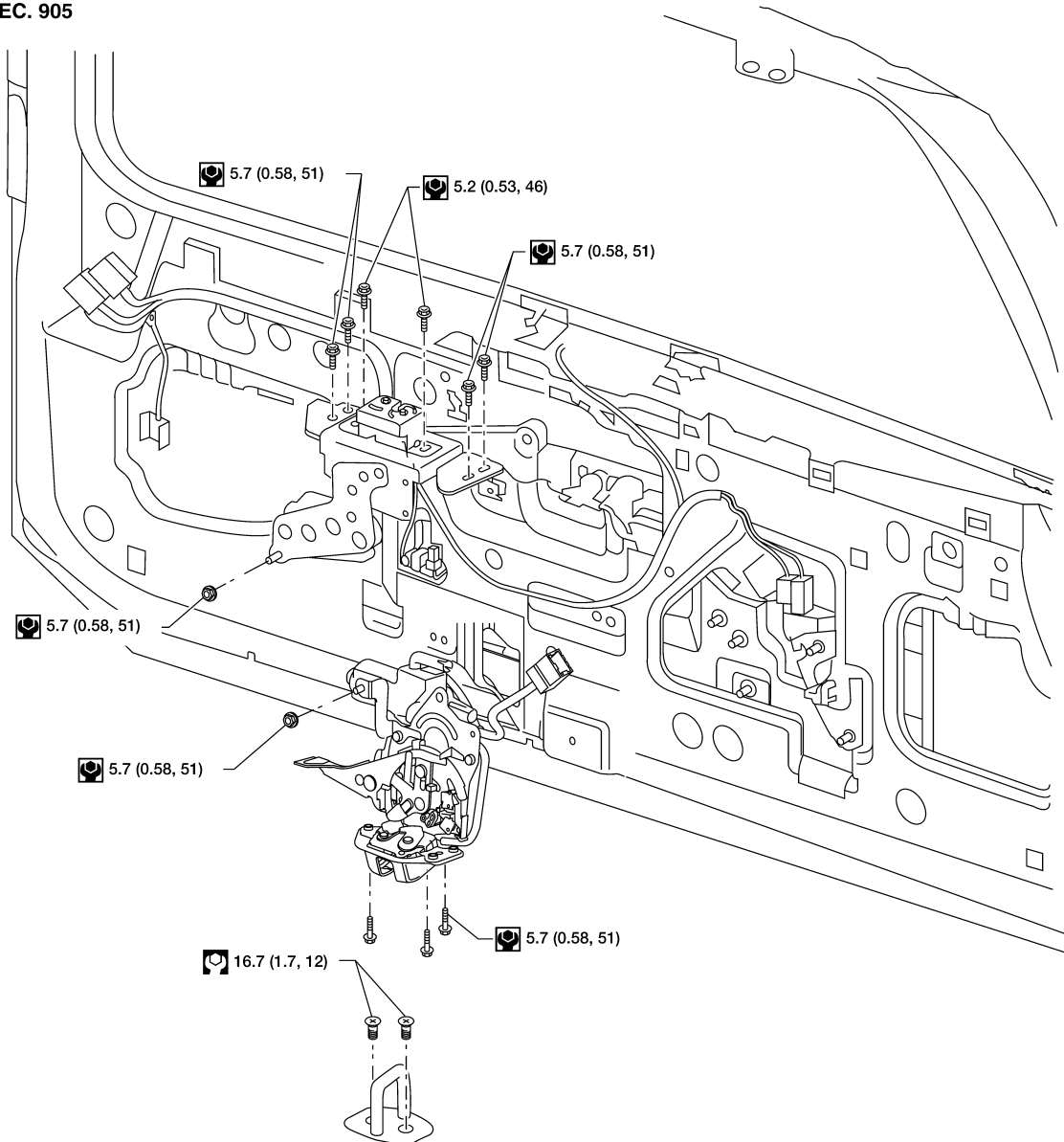
[WITHOUT INTELLIGENT KEY SYSTEM]

## Door Lock Assembly

INFOID:000000001278668

### Removal

SEC. 905



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1. Remove the lower back door trim panel. Refer to [INT-20, "Removal and Installation"](#).
2. Remove the weathershields.
3. Disconnect the back door lock electrical connectors.
4. Remove the back door lock assembly.
5. Disconnect the back door glass lock electrical connector.
6. Remove the back door glass lock.

### Installation

Installation is in the reverse order of removal.