

SECTION **DLK**
DOOR & LOCK

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

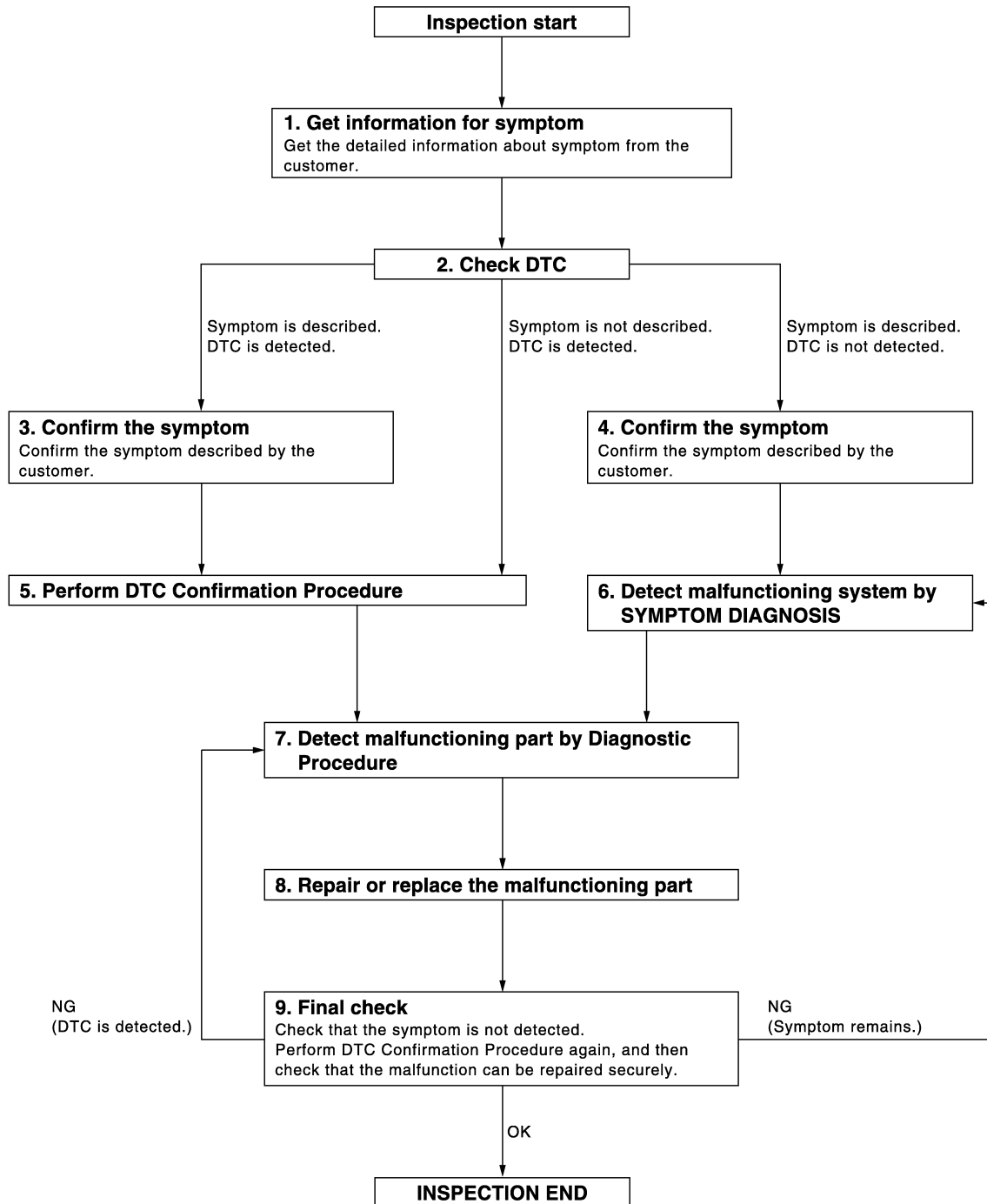
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000009822726

OVERALL SEQUENCE



DETAILED FLOW

Revision: August 2013

DLK-8

2014 Armada NAM

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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).
 - 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 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 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 to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-44. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 7.

NO >> Refer to [GI-42. "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> GO TO 7.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

[WITH INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

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

Is malfunctioning part detected?

YES >> GO TO 8.

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

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

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

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

Does the symptom reappear?

YES (DTC is detected) >> GO TO 7.

YES (Symptom remains) >> GO TO 6.

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

A

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

B

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The automatic back door system must be initialized anytime the battery or the automatic back door control unit has been disconnected.

C

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

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D

1. INITIALIZATION

1. Close back door.
2. Open the back door with automatic open operation.

E

NOTE:

Do not stop the automatic operation until back door is fully open.

F

>> Work end.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

G

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

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H

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

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Refer to the CONSULT Immobilizer mode and follow the on-screen instructions.

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AUTOMATIC DOOR LOCKS

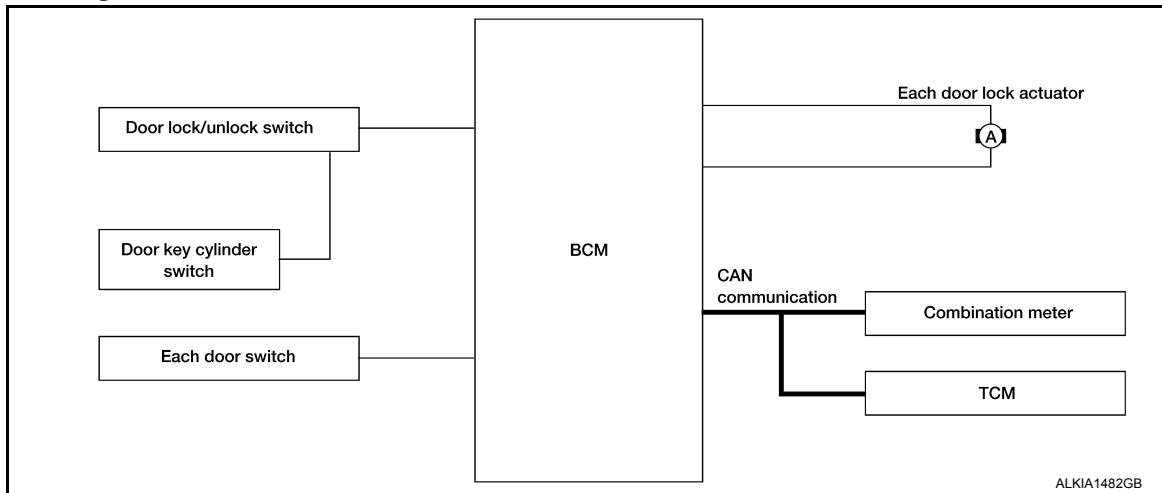
[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

AUTOMATIC DOOR LOCKS

System Diagram



System Description

INFOID:000000009822732

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

DOOR LOCK FUNCTION

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

Door Key Cylinder

- With the door key inserted in the door key cylinder on driver side, turning it to “LOCK”, will lock door lock actuator of all doors.
- With the door key inserted in the door key cylinder on driver side, turning it to “UNLOCK” once unlocks the driver side door lock actuator; turning it to “UNLOCK” again within 5 seconds after the first unlock operation unlocks all of the other doors. - (SELECTIVE UNLOCK OPERATION)

Selective unlock operation mode can be changed using “DOOR LOCK-UNLOCK SET” mode in “WORK SUPPORT”. Refer to [DLK-55. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

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

AUTOMATIC DOOR LOCKS

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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

Setting change of Automatic Door Locks (LOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-55, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

IGN OFF Interlock Door Unlock*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-55, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

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

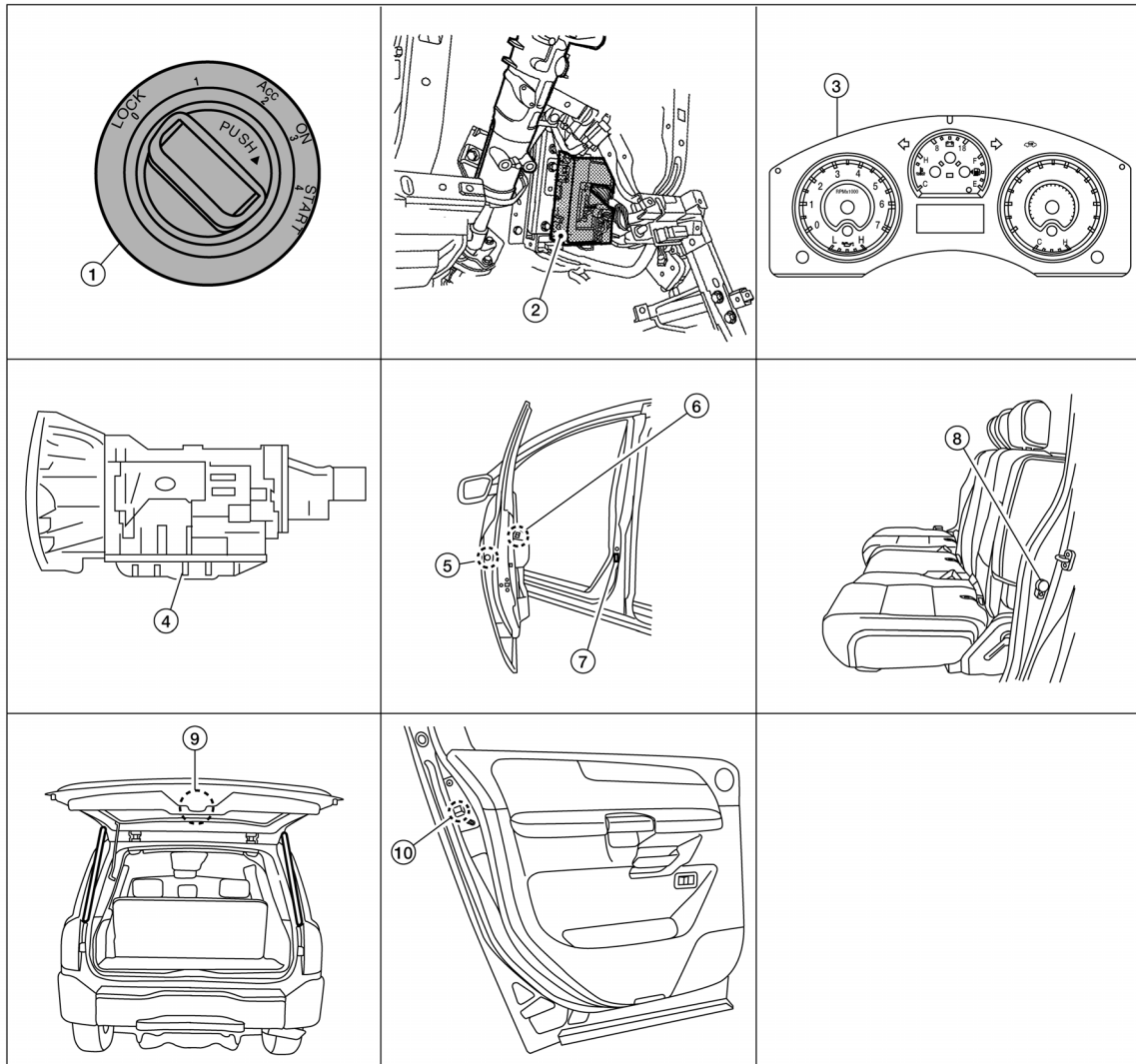
AUTOMATIC DOOR LOCKS

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:000000009822733



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- | | | |
|--|--|---|
| 1. Key switch and ignition knob switch M12 | 2. BCM M18, M19, M20 (view with instrument panel removed) | 3. Combination meter M24 |
| 4. A/T assembly F9 | 5. Front door lock assembly LH (key cylinder switch) D14
Front door lock actuator RH D114 | 6. Main power window and door lock/unlock switch D7, D8 |
| 7. Front door switch LH B8
RH B108 | 8. Rear door switch LH B18
RH B116 | 9. Back door latch (door ajar switch) D503 |
| 10. Rear door lock actuator LH D205
RH D305 | | |

Component Description

INFOID:000000009822734

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Input lock or unlock signal to BCM.

AUTOMATIC DOOR LOCKS

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Item	Function
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Input door open/close condition to BCM.
Door key cylinder switch	<ul style="list-style-type: none">• Input lock or unlock signal to main power window and door lock/unlock switch.• Main power window and door lock/unlock switch transmits door lock/unlock signal to BCM.
Combination meter	<ul style="list-style-type: none">• Receive buzzer signal from BCM via CAN communication line, and sounds the buzzer.• Transmits vehicle speed signal to CAN communication line.
TCM	Transmit shift position signal to BCM via CAN communication line.

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DOOR LOCK FUNCTION

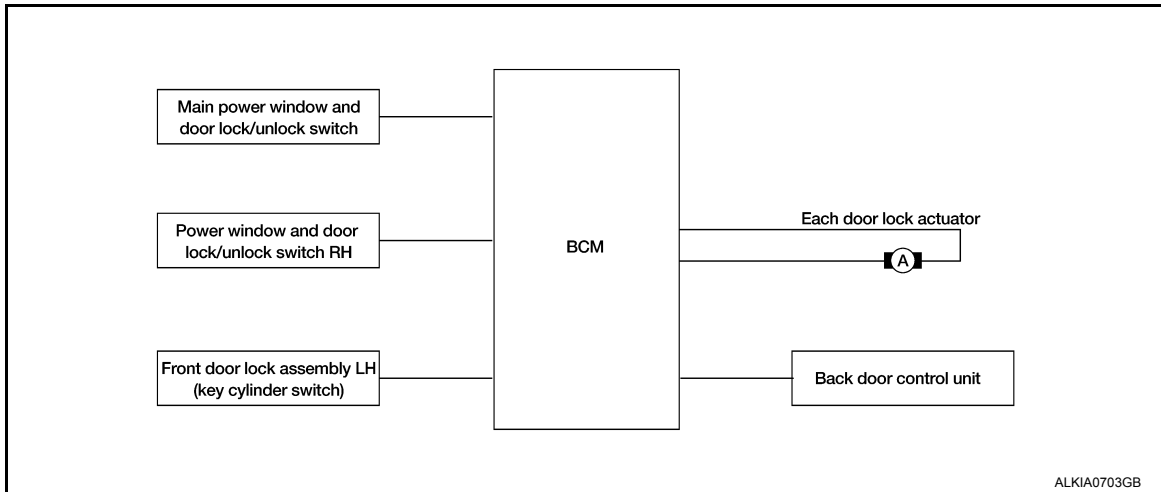
[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:000000009822735



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000009822736

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-55, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

Refer to [DLK-46, "System Description"](#).

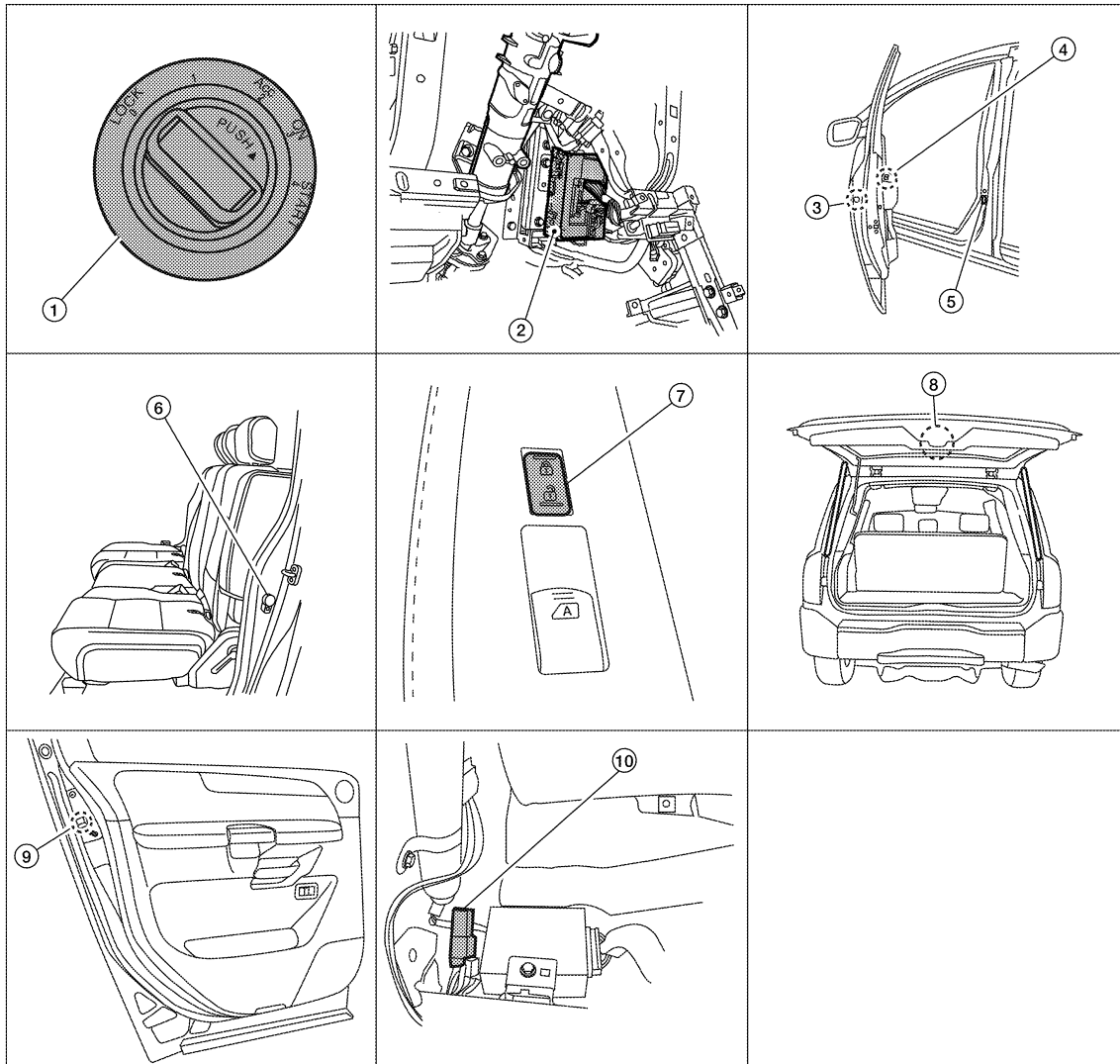
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000009822737



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

DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000009822738

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

[WITH INTELLIGENT KEY SYSTEM]

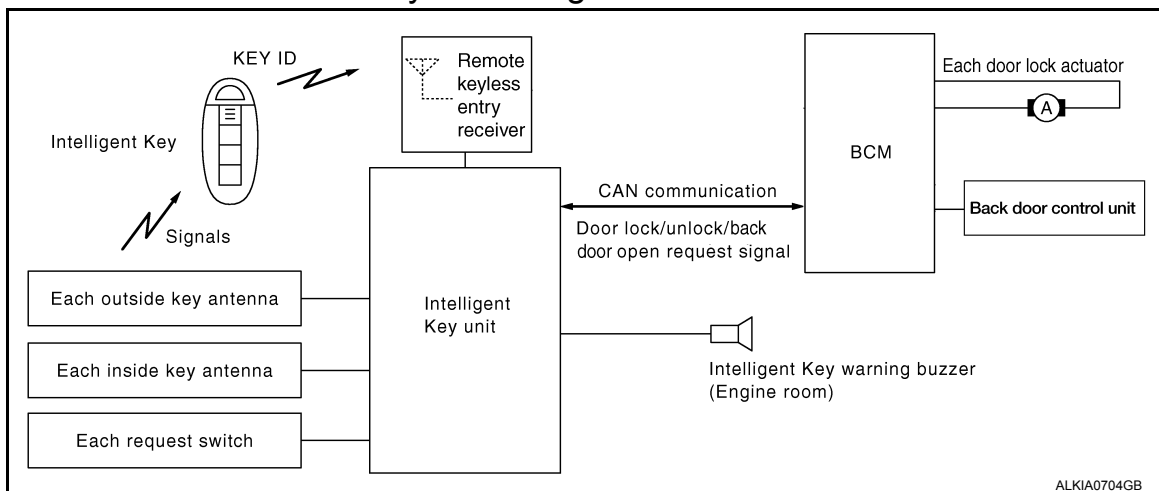
< SYSTEM DESCRIPTION >

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:00000000982739



DOOR REQUEST SWITCH : System Description

INFOID:00000000982740

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.
- 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.

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

[WITH INTELLIGENT KEY SYSTEM]

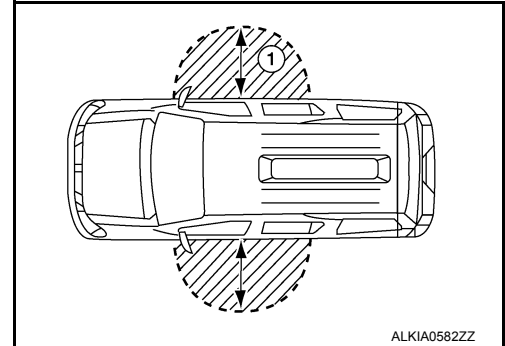
< SYSTEM DESCRIPTION >

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

*: 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.

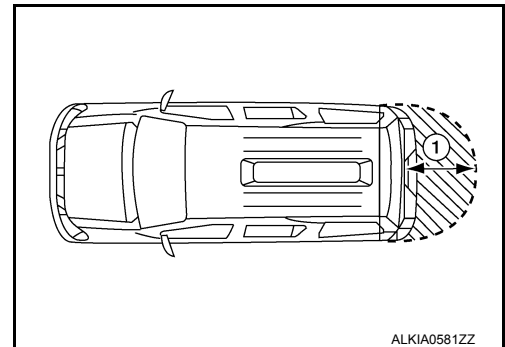
OUTSIDE KEY ANTENNA DETECTION AREA

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
Back door open	—	Four times

How to change hazard and buzzer reminder mode

Refer to [DLK-57. "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)".](#)

AUTO DOOR LOCK FUNCTION

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DOOR LOCK FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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-55, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

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-16, "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	×	×		×	×	×				×	×	

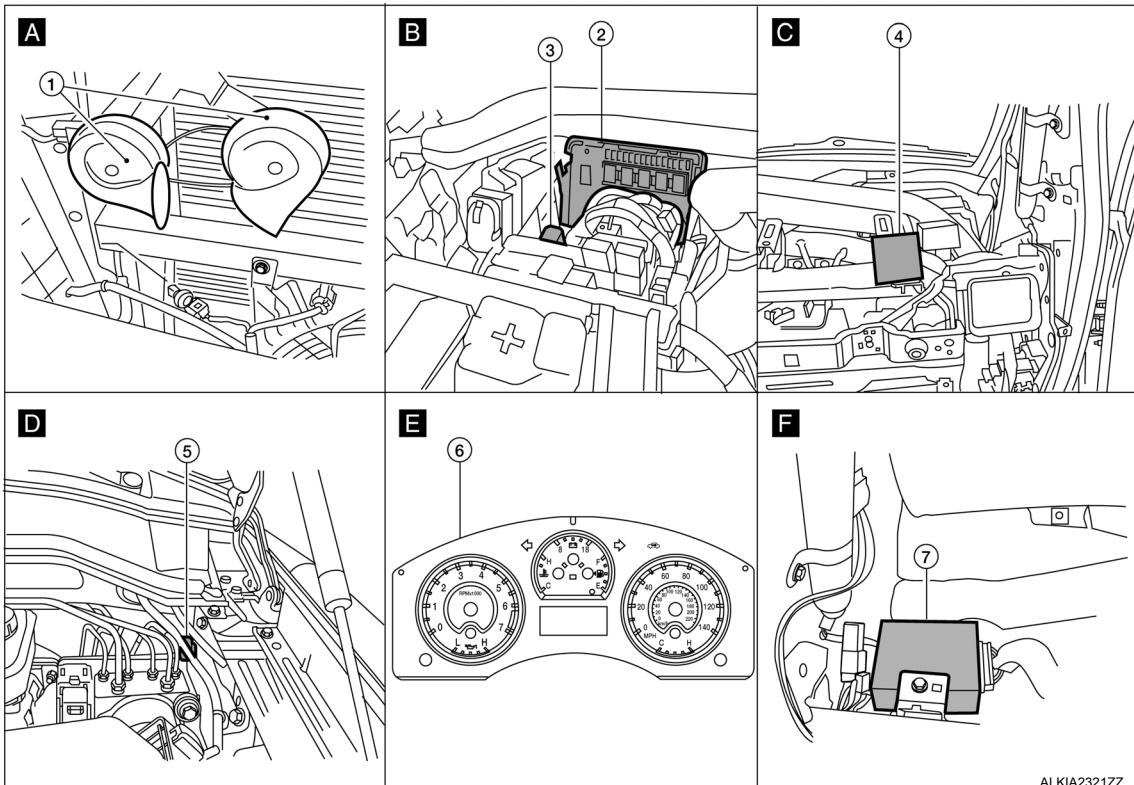
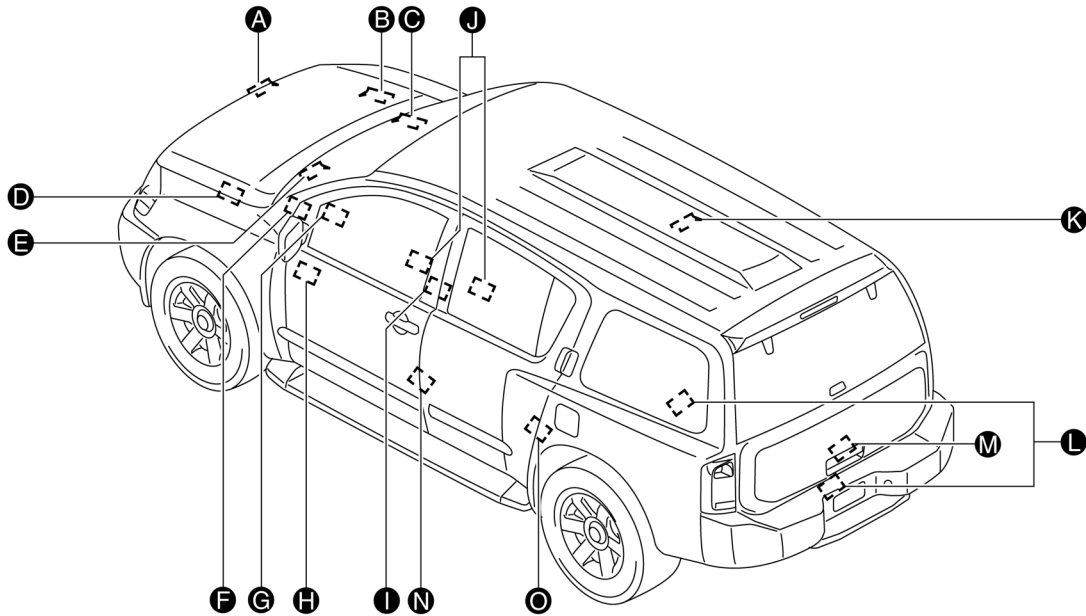
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DOOR REQUEST SWITCH : Component Parts Location

INFOID:00000009822741

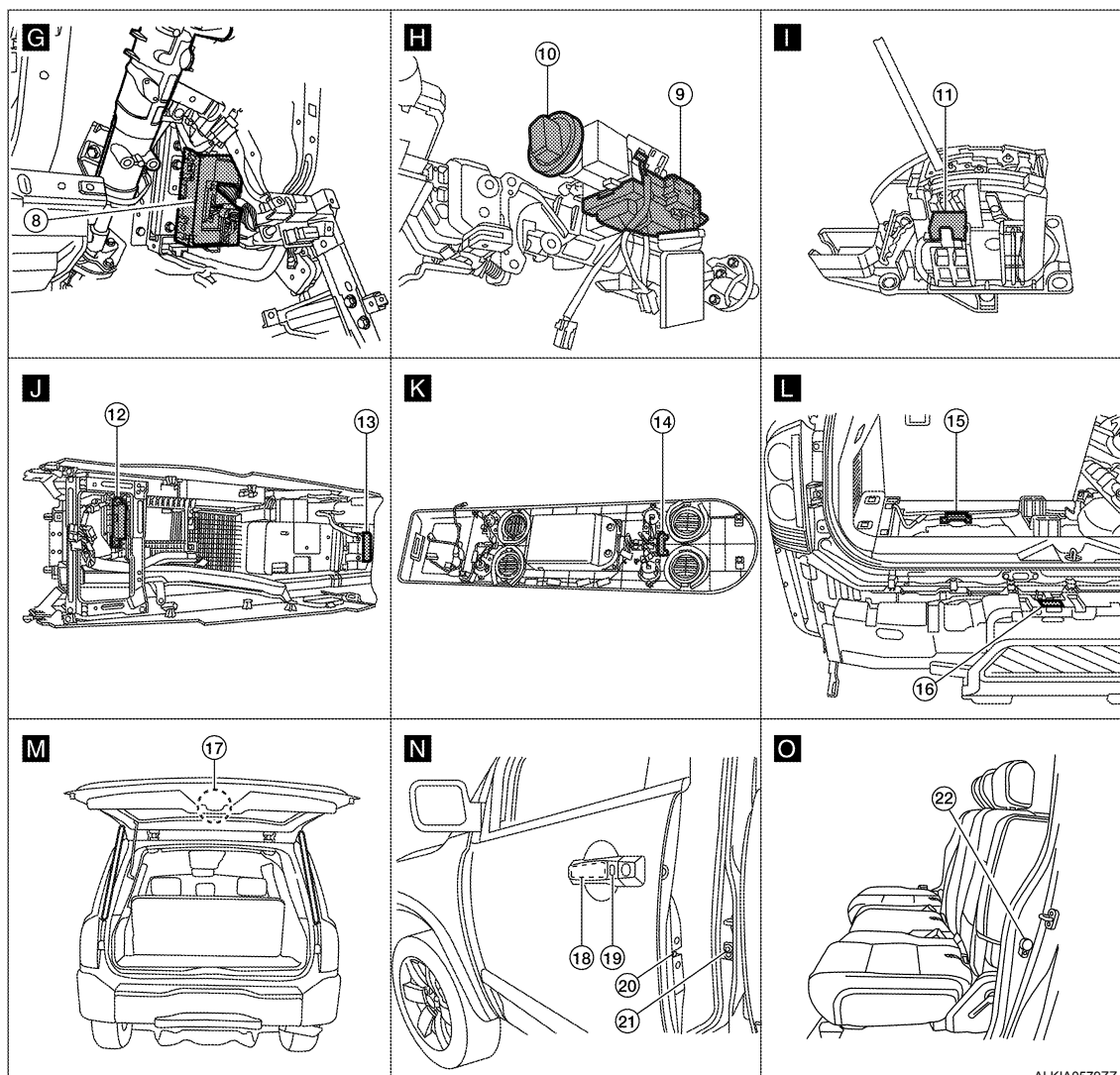


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DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



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

DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DOOR REQUEST SWITCH : Component Description

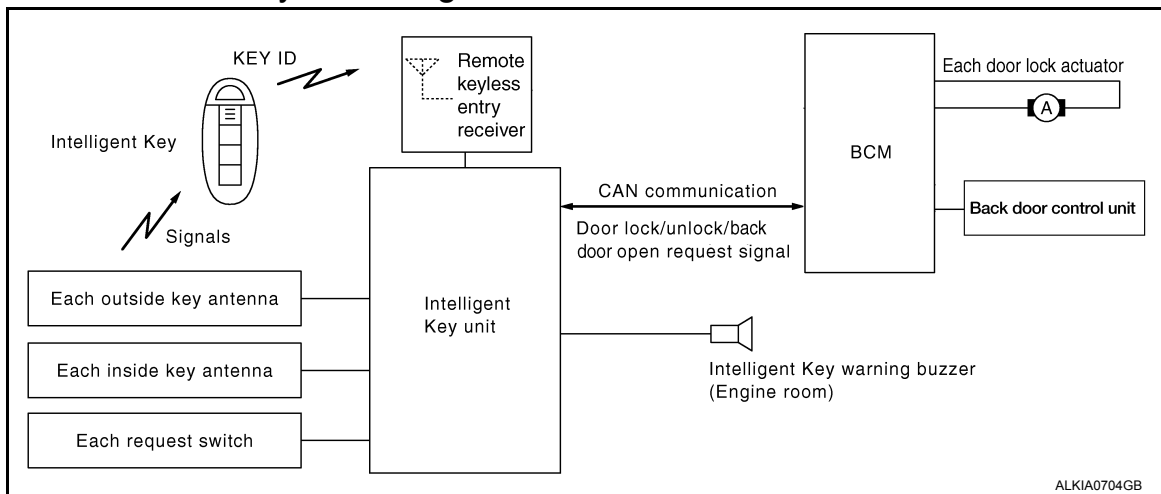
INFOID:000000009822742

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

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INTELLIGENT KEY : System Description

INFOID:000000009822744

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

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

- 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

Refer to [DLK-57, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)"](#).

Without CONSULT

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-55, "DOOR LOCK : CONSULT 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-57, "INTELLIGENT KEY : CONSULT 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

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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-57, "INTELLIGENT KEY : CONSULT 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-23, "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	×	×		×				×	×			×	×	×

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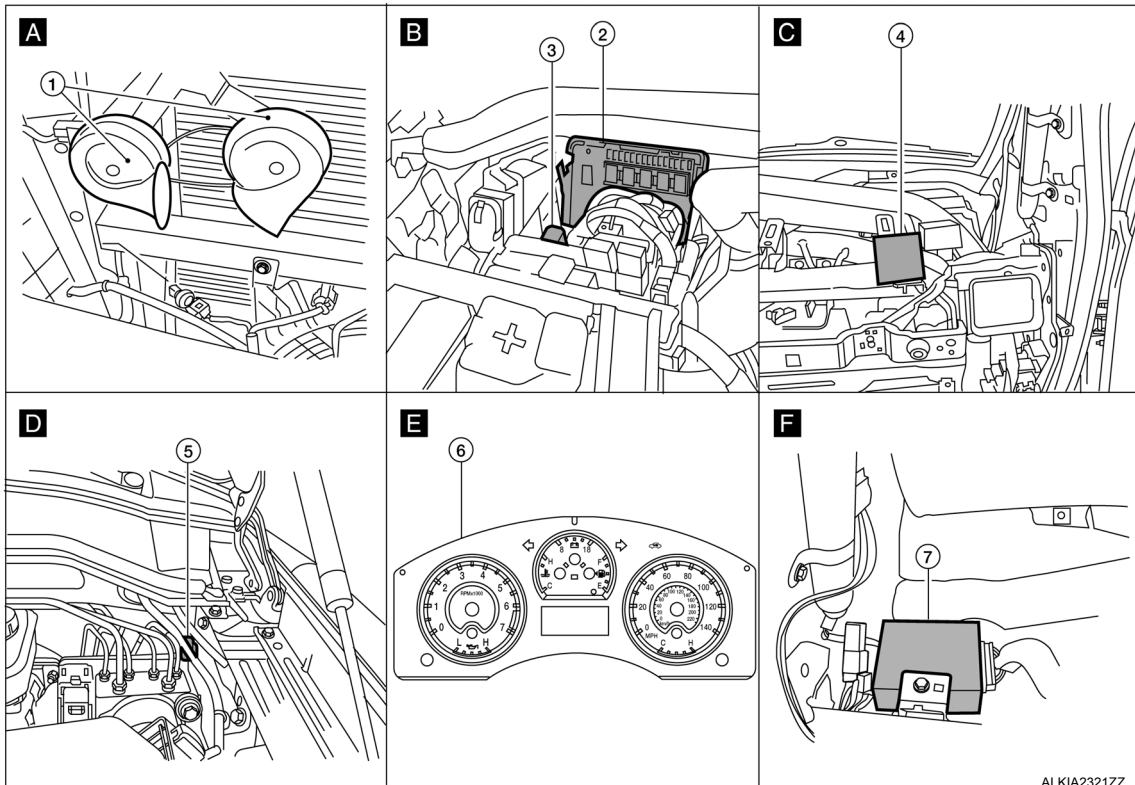
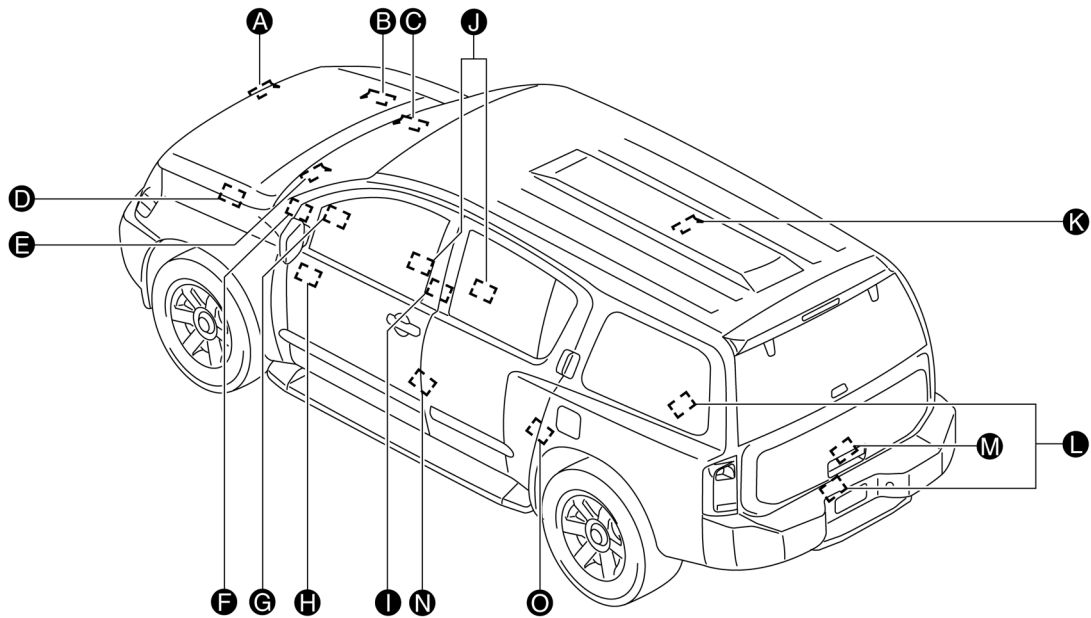
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY : Component Parts Location

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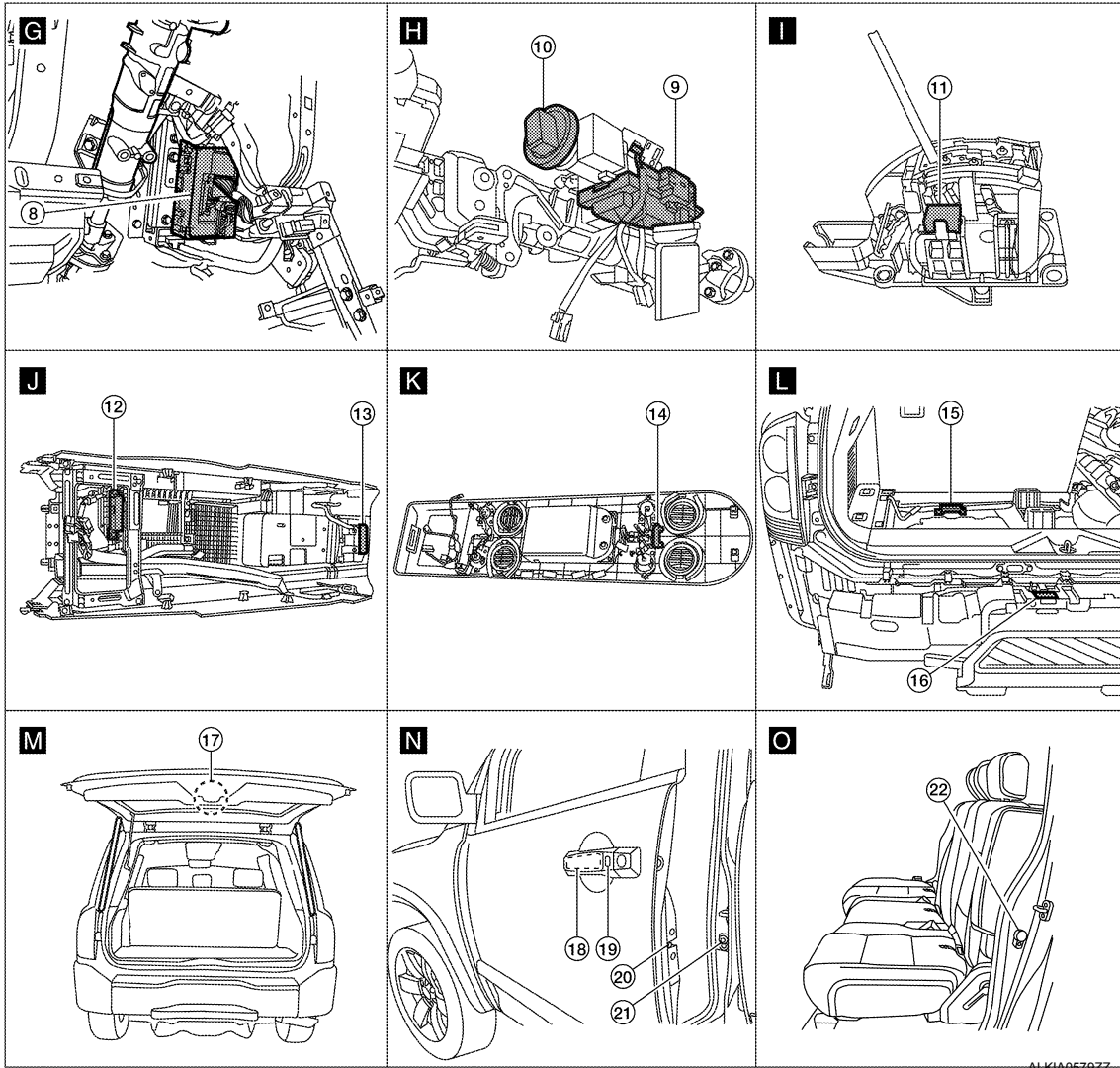


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DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



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

INTELLIGENT KEY : Component Description

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DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

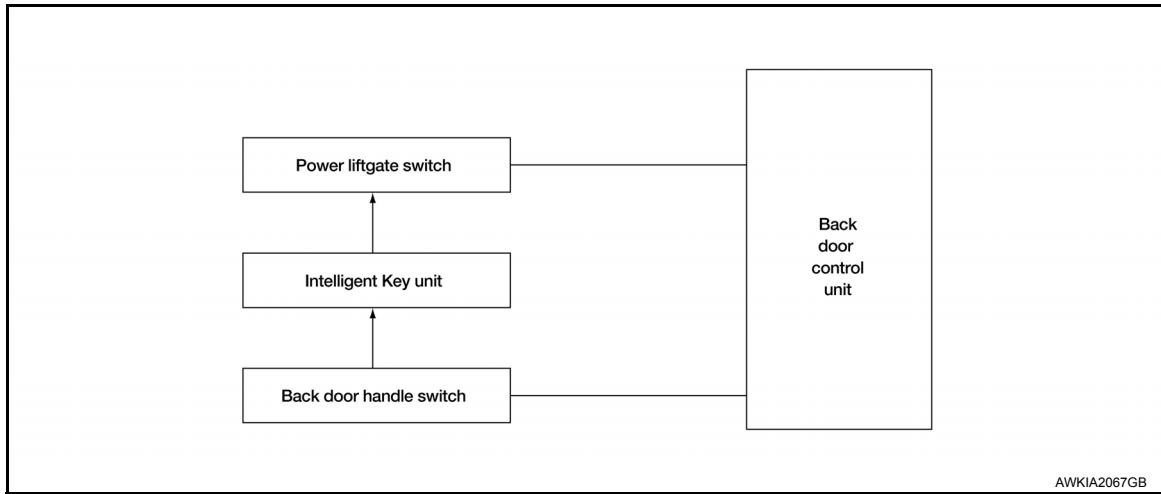
[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

BACK DOOR OPENER FUNCTION

BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH : System Diagram



BACK DOOR OPENER SWITCH : System Description

INFOID:000000009822748

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. Refer to [DLK-11, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

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

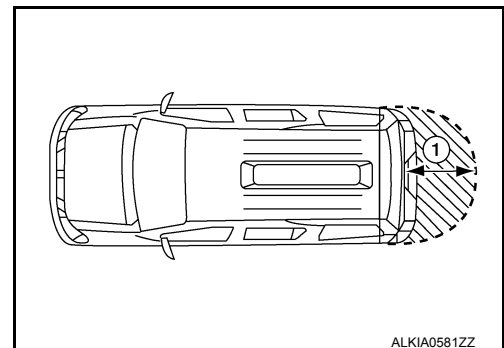
With the back door closed, if you press the power liftgate switch or press the keyfob button, or pull the back door handle with the back door unlocked, the back door latch motor drives the open the locking plate and releases the latch. The back door motor then raises the door to the full open position.

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 back door open function is in the range of approximately 80 cm (31.50 in) surrounding back door opener request switch (1). However, this operating range depends on the ambient conditions.



OPERATION DESCRIPTION

BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM 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.

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.)

BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

- 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. A
- 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. B

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. C
- 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. D
- 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.) E
- 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. F
- 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. G

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. H
- 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. I
- 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.) J
- 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. DLK
- 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. L

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. M

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. N
- 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. O

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. P
- 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.

BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Auto Back Door Operation Enable Conditions

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"> • Motor stopped • Clutch may slip • Control not possible because microcomputer being reset 	Control not possible because microcomputer being reset

BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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	
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"> For about 0.5 seconds immediately after drive motor operation starts Between full open and approx. 7° from full open Closure operation area (half switch - close switch)
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).

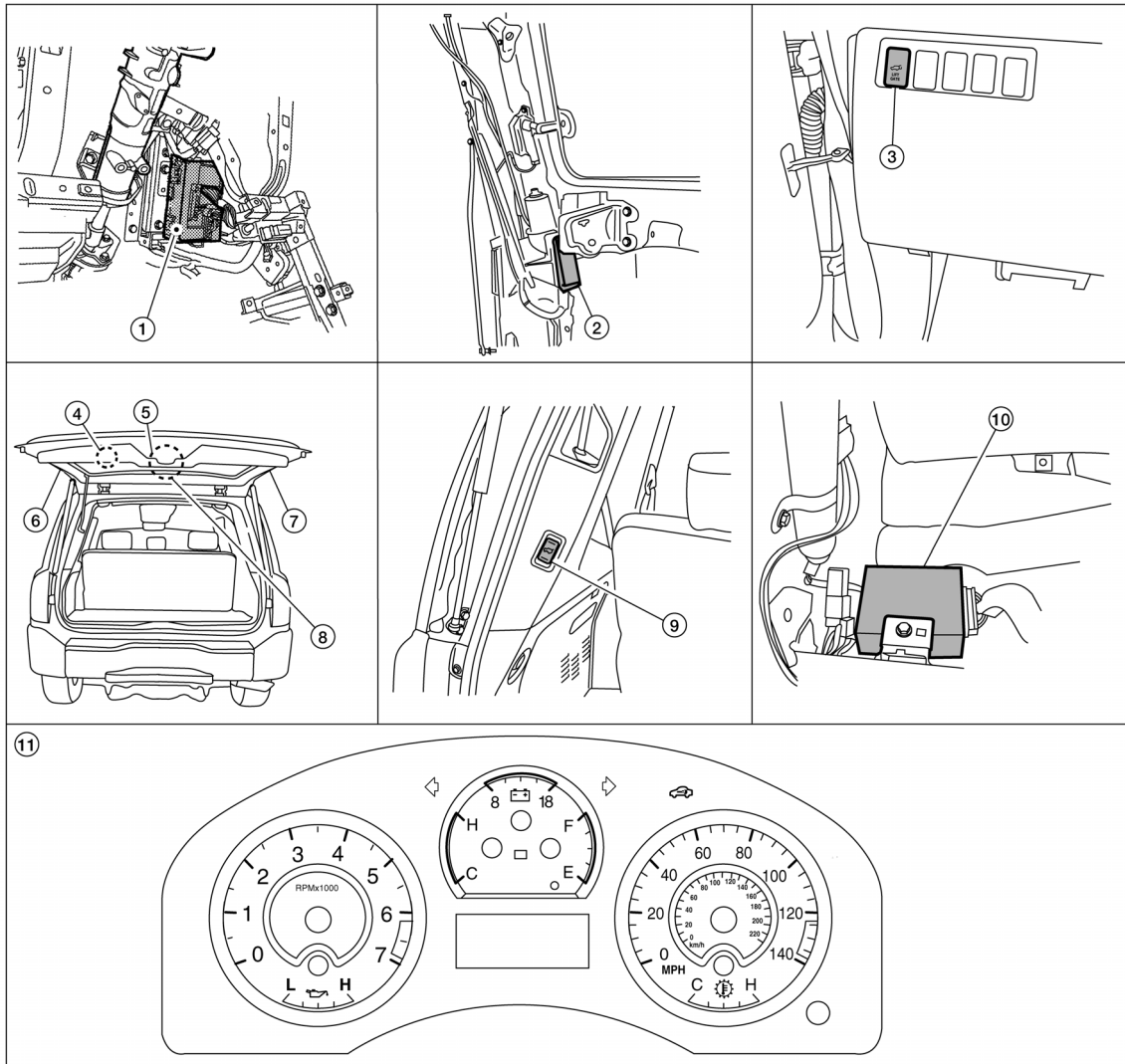
BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR OPENER SWITCH : Component Parts Location

INFOID:000000009822749



ALKIA232ZZZ

- | | | |
|---|---|-------------------------------|
| 1. BCM M18, M19, M20
(view with instrument panel LH removed) | 2. Back door control unit B55
(view with right rear panel removed) | 3. Power liftgate switch M92 |
| 4. Back door warning chime D514 | 5. Back door latch D503
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
(view with instrument panel RH removed) | 11. Combination meter M24 | |

BACK DOOR OPENER SWITCH : Component Description

INFOID:000000009822750

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.

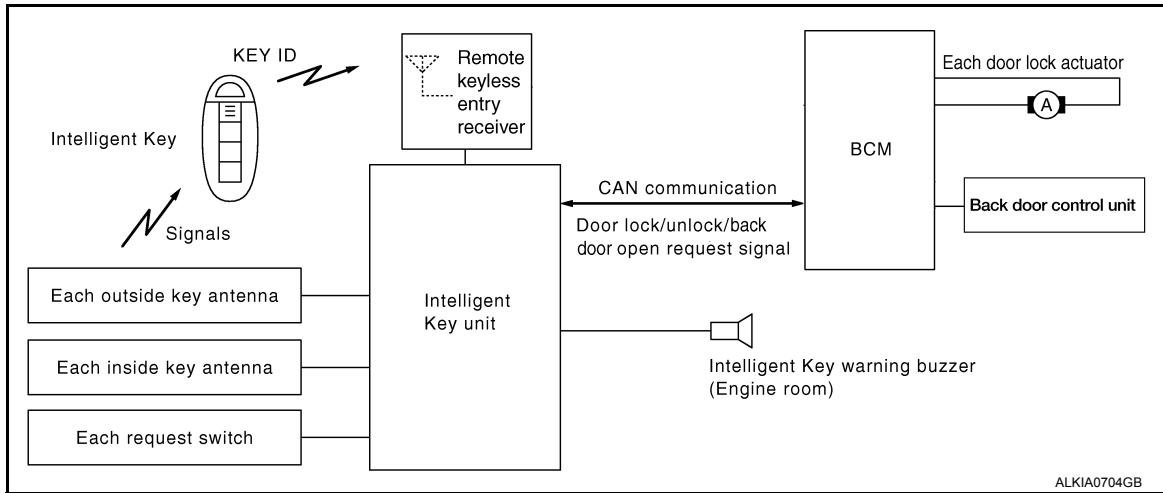
BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

INTELLIGENT KEY

INTELLIGENT KEY : System Diagram



INTELLIGENT KEY : System Description

INFOID:000000009822752

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	Back door open	Lock	Unlock	Back door open
Intelligent Key operation	Lock	Unlock	Back door open	Lock	Unlock	Back door 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

① With CONSULT

Refer to [DLK-57, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)".](#)

⊗ Without CONSULT

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

< SYSTEM DESCRIPTION >

[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

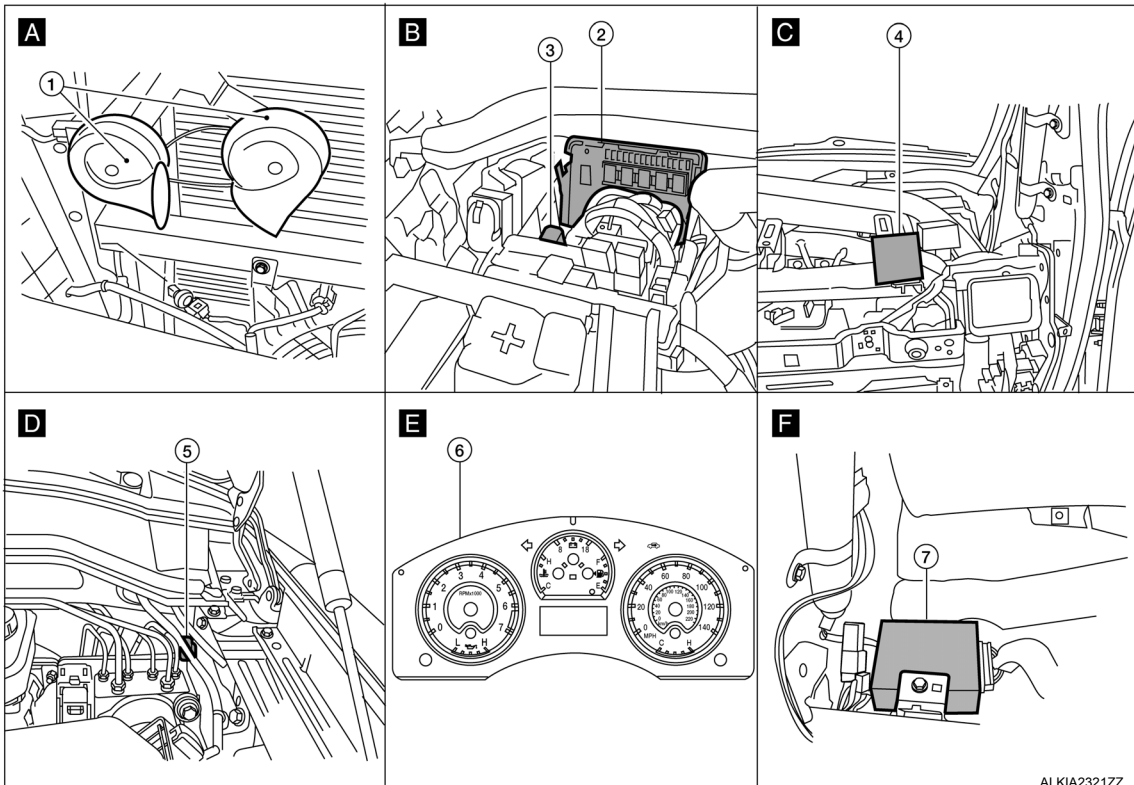
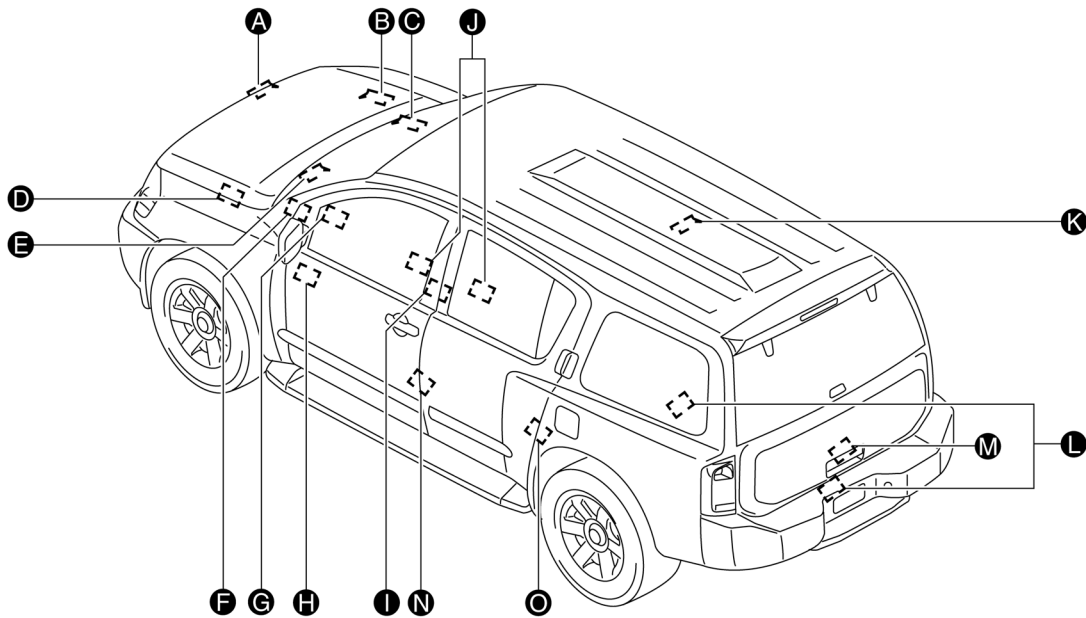
BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY : Component Parts Location

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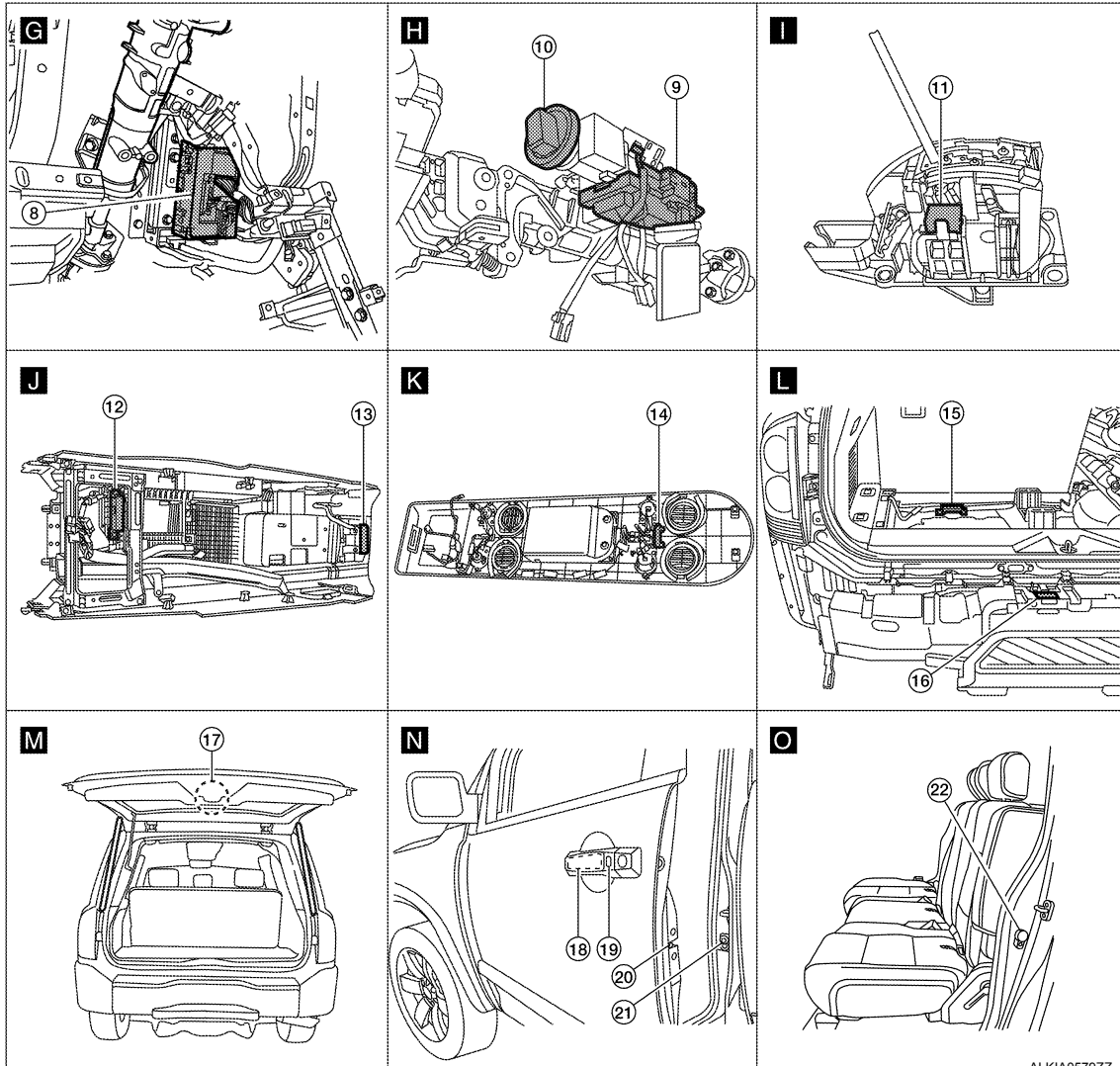


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BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



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

INTELLIGENT KEY : Component Description

INFOID:000000009822754

BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

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

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

WARNING FUNCTION

System Description

INFOID:000000009822755

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	When condition A, B or condition C is satisfied <ul style="list-style-type: none"> • Condition A <ul style="list-style-type: none"> - Ignition switch: ACC position - Door switch (driver side): ON (Door is open) • Condition B <ul style="list-style-type: none"> - Turn ignition switch from ON to OFF while door is open • Condition C <ul style="list-style-type: none"> - Intelligent Key backside is contacted to ignition switch while brake pedal is depressed and ignition switch is LOCK or OFF (When the Intelligent Key battery is discharge) - Door switch (driver side): ON (Door is open)
	For external	OFF position warning (For internal) is in active mode, driver side door has been closed. NOTE: 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"> • Shift position: Except P position • Engine is running to stopped (Ignition switch is ON to OFF)
Take away warning	Door is open to close	<ul style="list-style-type: none"> • Ignition switch: Except LOCK position. • Door switch: ON to OFF (Door is open to close). • Intelligent Key can not be detected inside the vehicle.
	Door is open	<ul style="list-style-type: none"> • Door switch: ON (Door is open) • Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle.
	Take away through window	<ul style="list-style-type: none"> • Engine is running. • Key ID verification every 30 seconds when registered Intelligent Key can not be detected inside the vehicle. • After vehicle speed verification, the registered Intelligent Key can not be detected inside the vehicle.

WARNING FUNCTION



< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions		Operation procedure
Door lock operation warning	Request switch operation	When request switch is pushed (lock operation) under the following conditions. <ul style="list-style-type: none"> • Door switch: ON (Any door is open). • Intelligent Key is inside vehicle.
	Intelligent Key button operation	When Intelligent Key button is pushed (lock operation) under the following conditions. <ul style="list-style-type: none"> • Door switch: ON (Any door is open). • Intelligent Key is inside vehicle.
Key warning		<ul style="list-style-type: none"> • Ignition switch is OFF position. • Driver side door switch: ON (Driver side door is open). • Keyfob is pressed inside the vehicle.
Intelligent Key insert information		<ul style="list-style-type: none"> • Door switch: ON to OFF (Door is open to close). • Ignition switch: OFF to ON position. • Intelligent Key can not be detected inside the vehicle.
Engine start information	Ignition switch is ON position	<ul style="list-style-type: none"> • Ignition switch: ON position. • Shift position: P position • Engine is stopped
	Ignition switch is except ON position	<ul style="list-style-type: none"> • Ignition switch: Except ON position. • Shift position: P position • Intelligent Key can be detected inside the vehicle.
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.


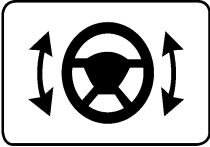

Warning/Information functions		Combination meter display	Warning chime	
			Combination meter buzzer	Intelligent Key warning buzzer
Intelligent Key system malfunction		—	—	—
OFF position warning	For internal	—	Activate	—
	For external	—	—	Activate
P position warning			Activate	—
Take away warning	Door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

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WARNING FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions	Combination meter display	Warning chime	
		Combination meter buzzer	Intelligent Key warning buzzer
Key ID warning	 <small>JMKIA0036GB</small>	—	—
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	×	×	×			×				×	×	×		

WARNING FUNCTION

< SYSTEM DESCRIPTION >

[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
Key warning		×	×		×					×	×	×	×		
Intelligent Key insert information		×	×	×	×		×				×	×	×		
Engine start information	Ignition switch is ON position	×	×	×			×				×	×	×	×	
	Ignition switch is except ON position	×	×	×			×				×	×	×		
Steering lock information			×	×							×		×		
Intelligent Key low battery warning		×	×				×				×		×		

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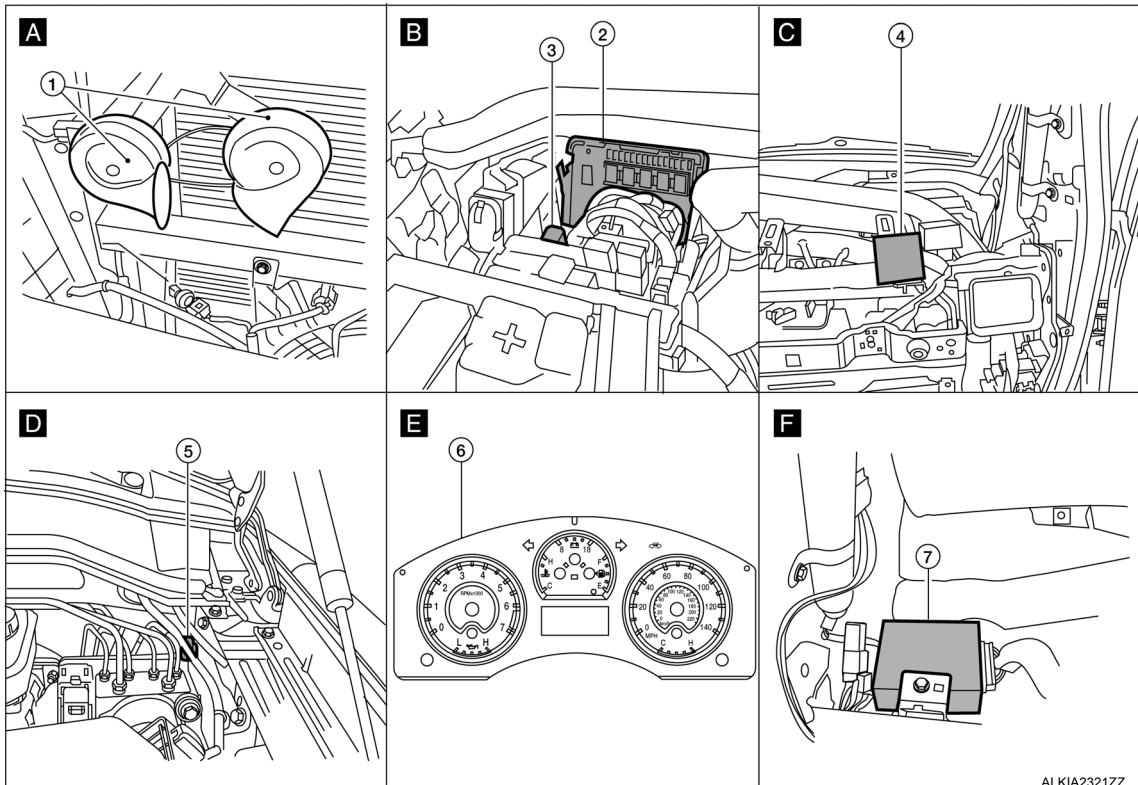
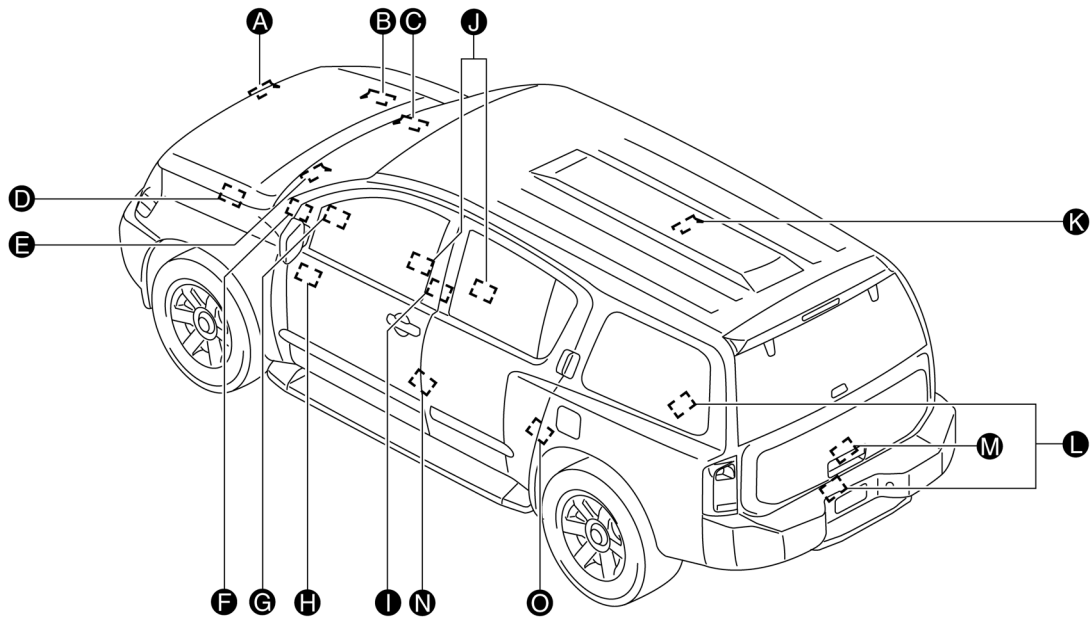
WARNING FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

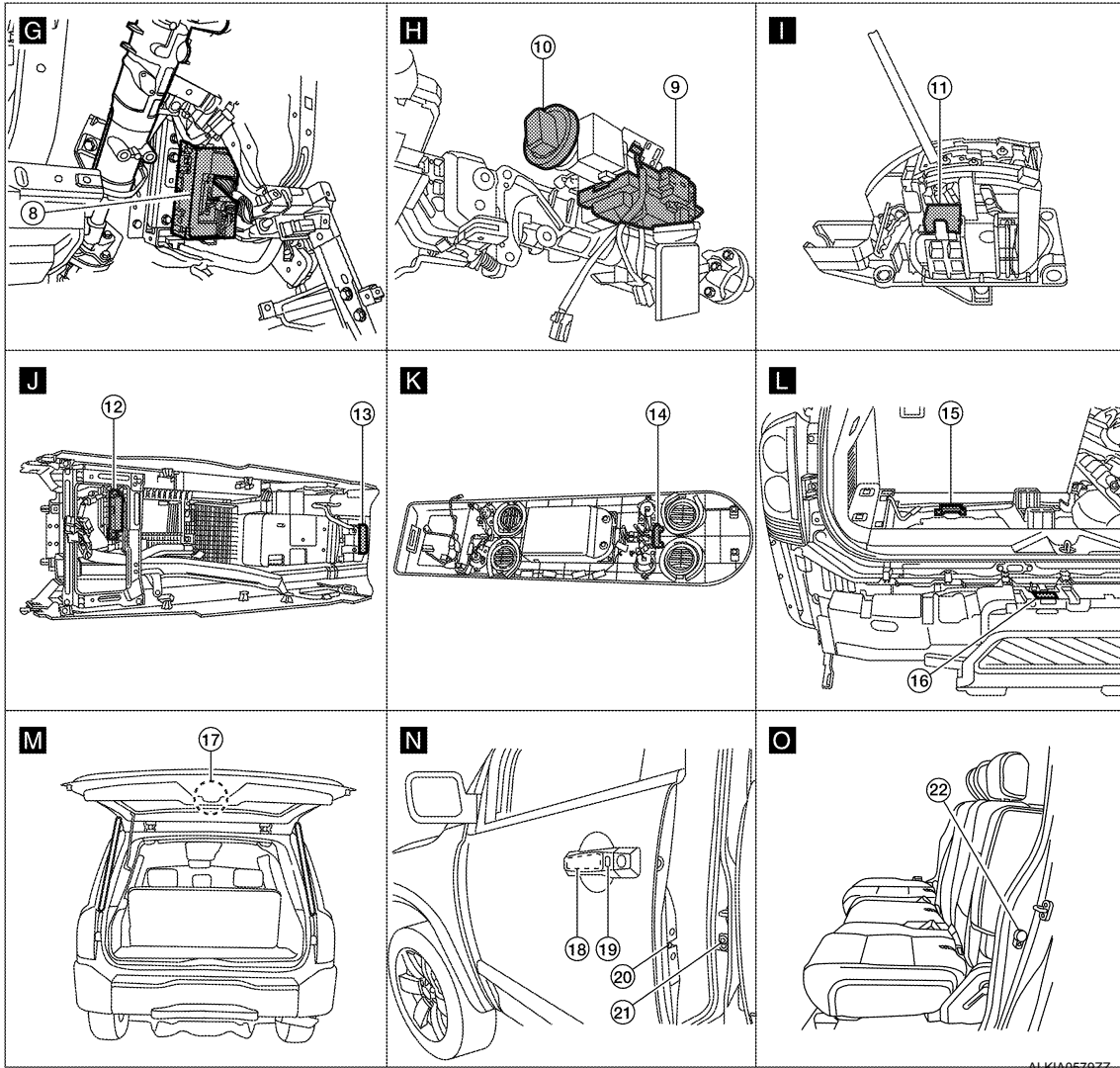
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WARNING FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



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

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KEY REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

KEY REMINDER FUNCTION

System Description

INFOID:000000009822757

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

*: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 back door 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

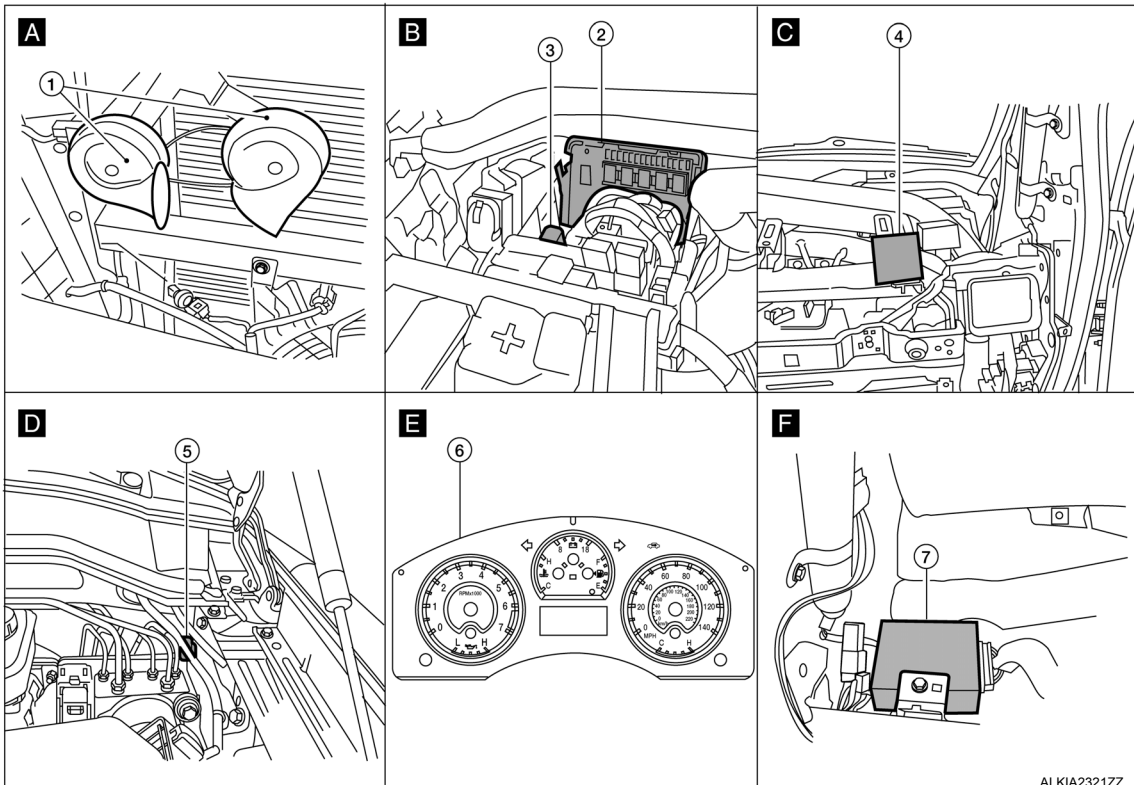
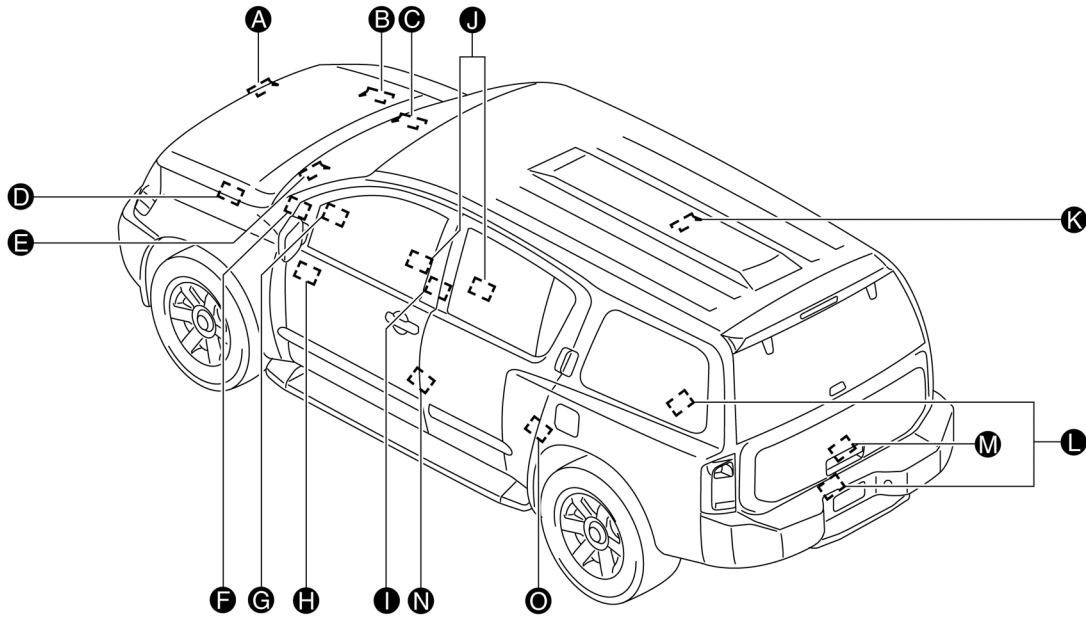
KEY REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

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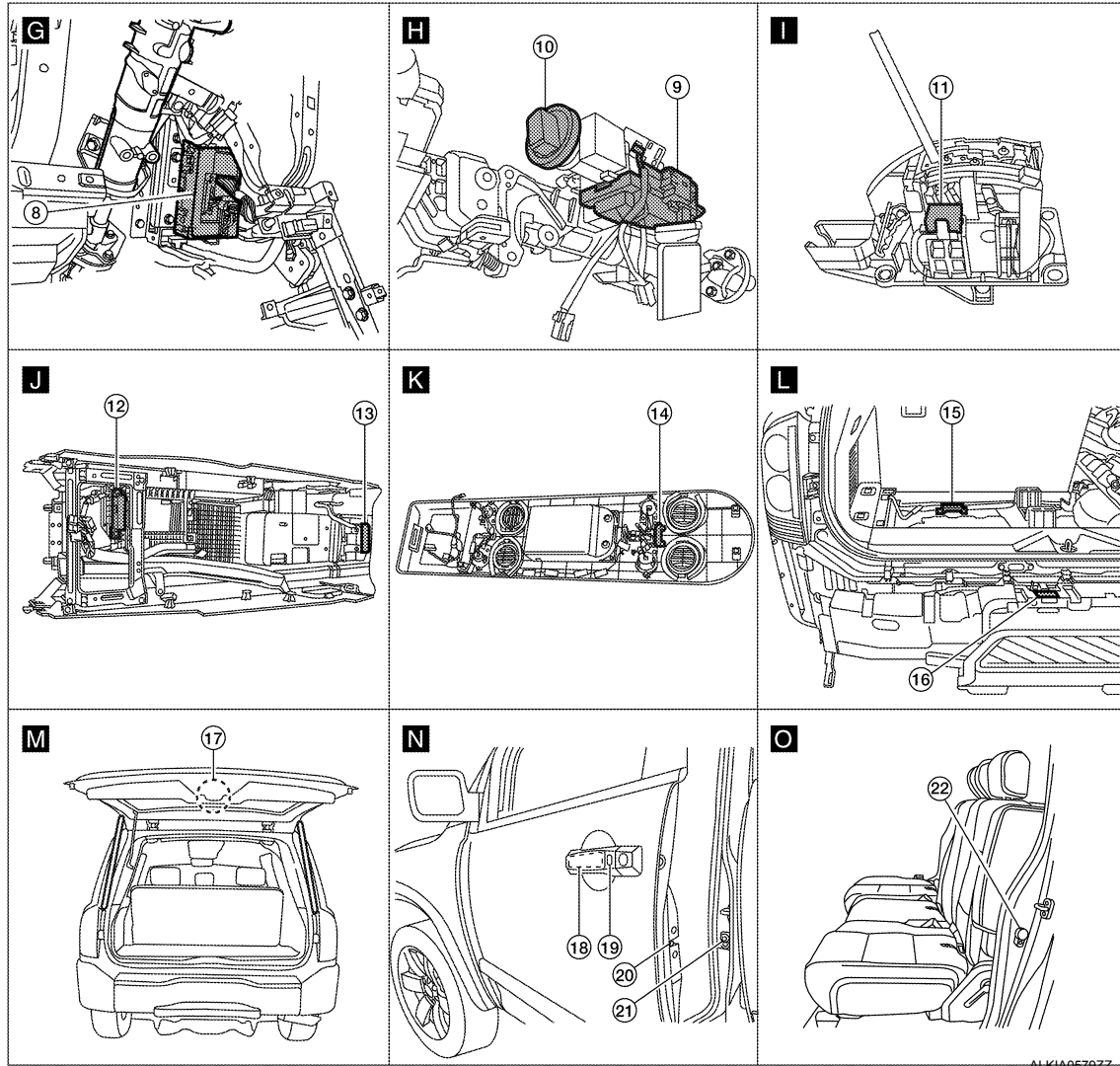


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KEY REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



ALKIA0579ZZ

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

HAZARD AND BUZZER REMINDER FUNCTION

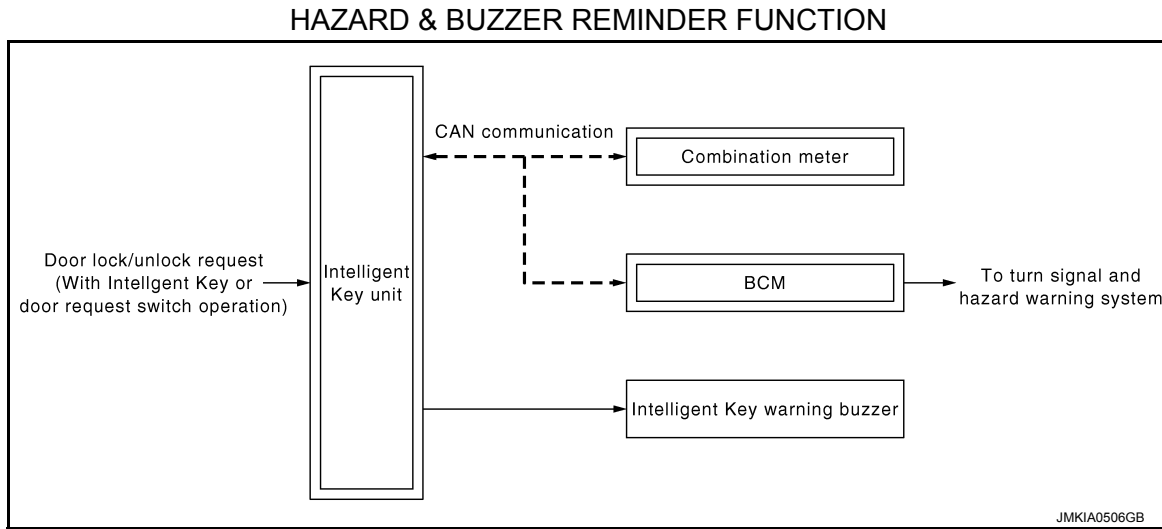
< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

HAZARD AND BUZZER REMINDER FUNCTION

System Diagram

INFOID:000000009822759



System Description

INFOID:000000009822760

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. Refer to [DLK-57, "INTELLIGENT KEY : CONSULT Function \(BCM - INTELLIGENT KEY\)"](#).

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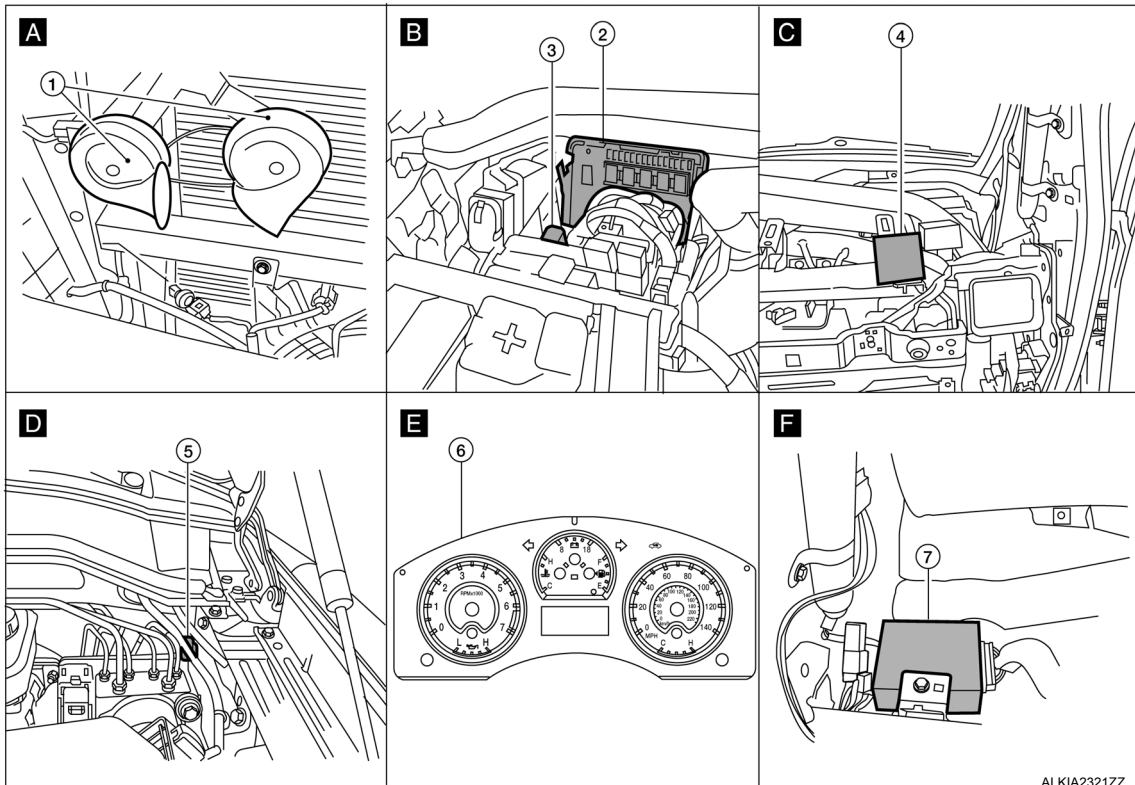
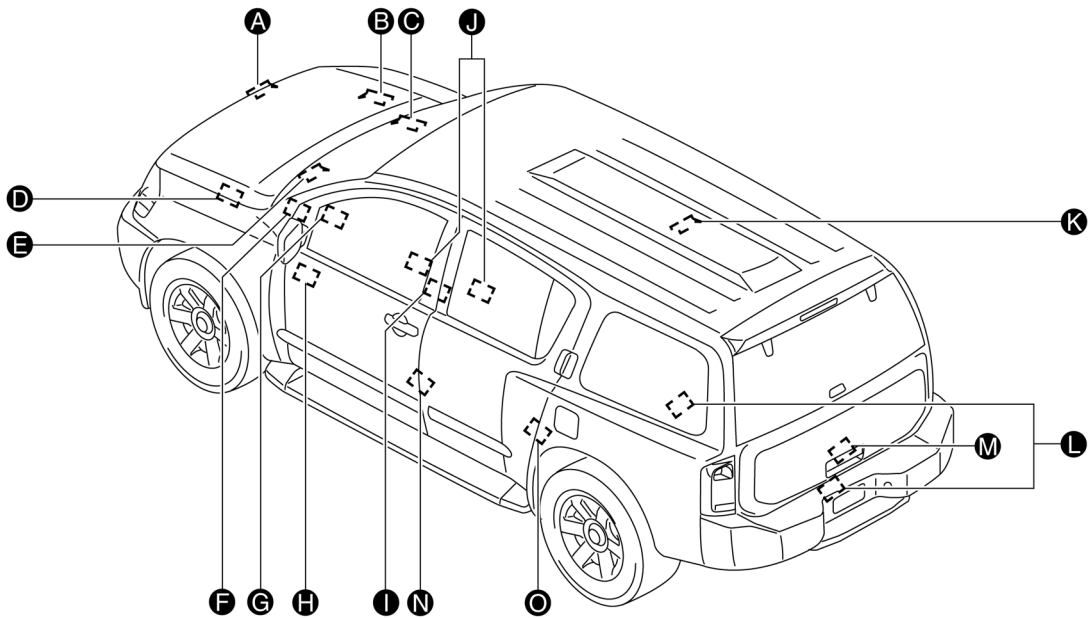
HAZARD AND BUZZER REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Parts Location

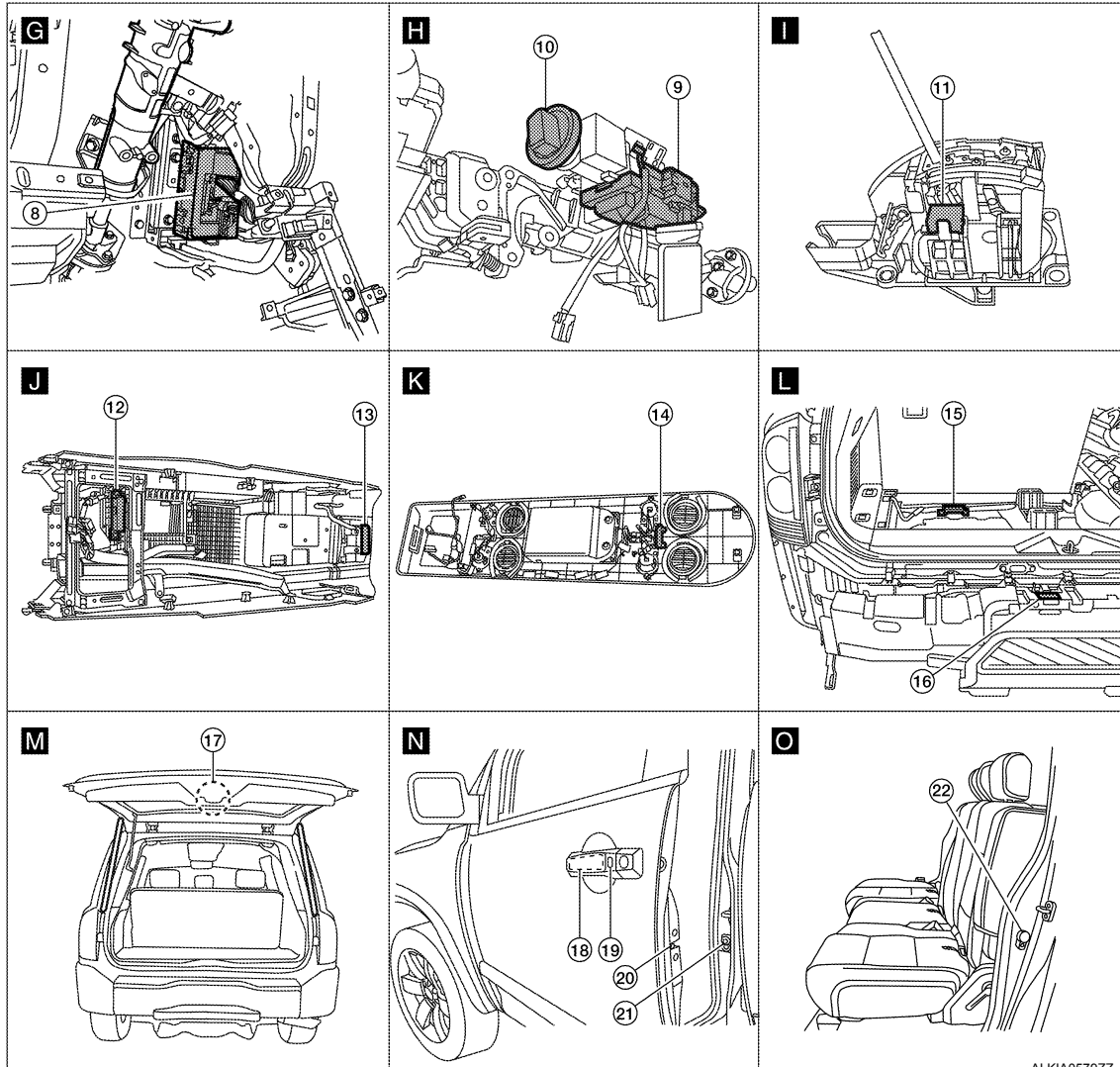
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HAZARD AND BUZZER REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]



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

HAZARD AND BUZZER REMINDER FUNCTION

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Component Description

INFOID:000000009822762

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

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Component Description

INFOID:000000009822763

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)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000009822764

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> • The vehicle specification can be read and saved. • The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		x	x	x	x		
Rear window defogger	REAR DEFOGGER			x	x			
Warning chime	BUZZER			x	x			
Interior room lamp timer	INT LAMP			x	x	x		
Remote keyless entry system	MULTI REMOTE ENT			x	x	x		
Exterior lamp	HEADLAMP			x	x	x		
Wiper and washer	WIPER			x	x	x		
Turn signal and hazard warning lamps	FLASHER			x	x			
Air conditioner	AIR CONDITIONER			x				
Intelligent Key system	INTELLIGENT KEY			x				
Combination switch	COMB SW			x				
BCM	BCM	x	x			x	x	x
Immobilizer	IMMU		x	x	x			
Interior room lamp battery saver	BATTERY SAVER			x	x	x		
Back door open	TRUNK			x	x			
Vehicle security system	THEFT ALM			x	x	x		
RAP system	RETAINED PWR			x	x	x		
Signal buffer system	SIGNAL BUFFER			x	x			
TPMS	AIR PRESSURE MONITOR		x	x	x	x		
Panic alarm system	PANIC ALARM				x			

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:000000009822765

SELF DIAGNOSTIC RESULT

Refer to [BCS-44, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
BACK DOOR SW [On/Off]	Indicates condition of back door switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
I-KEY LOCK* [On/Off]	Indicates condition of lock signal from Intelligent Key.
I-KEY UNLOCK* [On/Off]	Indicates condition of unlock signal from Intelligent Key.
KEYLESS LOCK** [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK** [On/Off]	Indicates condition of unlock signal from keyfob.

* : with Intelligent Key

** : without Intelligent Key

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
DOOR LOCK-UNLOCK SET	On*	Automatic door locks function ON.
	Off	Automatic door locks function OFF.
ANTI-LOCK OUT SET	Off	Anti lock out function OFF.
	On*	Anti lock out function ON.
AUTOMATIC DOOR LOCK SELECT	SHIFT OUT OF PARK	Doors lock automatically when shifted out of park (P).
	VH SPD*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).
AUTOMATIC DOOR UNLOCK SELECT	MODE6	Drivers door unlocks automatically when key is removed.
	MODE5	Drivers door unlocks automatically when shifted into park (P).
	MODE4	Drivers door unlocks automatically when ignition is switched from ON to OFF.
	MODE3	Doors unlock automatically when key is removed.
	MODE2***	Doors unlock automatically when shifted into park (P).
MODE1**	Doors unlock automatically when ignition is switched from ON to OFF.	

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Support Item	Setting	Description
AUTOMATIC LOCK/UNLOCK SELECT	On*	Automatic lock/unlock function ON.
	Off	Automatic lock/unlock function OFF.

* : Initial setting all vehicles

** : Initial setting vehicles with Intelligent Key

*** : Initial setting vehicles without Intelligent Key

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT Function (BCM - MULTI REMOTE ENT)

INFOID:000000009822766

DATA MONITOR

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

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [OTR ULK/DR UNLK/ALL UNLK/ALL LCK].
PW REMOTO DOWN SET	This test is able to check keyfob power window down operation [Off/On].
FLASHER	This test is able to check hazard reminder operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].

WORK SUPPORT

Support Item	Setting	Description	
HORN CHIRP SET	Off	Horn chirp function can be changed in this mode.	
	On*		
HAZARD LAMP SET	MODE4*	Lock and Unlock	Hazard warning lamp function can be changed in this mode.
	MODE3	Lock Only	
	MODE2	Unlock Only	
	MODE1	OFF	

DIAGNOSIS SYSTEM (BCM)

[WITH INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Support Item	Setting		Description
MULTI ANSWER BACK SET	MODE2	Lock	Hazard warning lamps flash twice and horn does not sound.
		Unlock	Hazard warning lamps do not flash and horn does not sound.
	MODE1*	Lock	Hazard warning lamps flash twice and horn sounds once.
		Unlock	Hazard warning lamps flash once and horn does not sound.
AUTO LOCK SET	MODE3	1 min	Auto locking function can be changed in this mode.
	MODE2	OFF	
	MODE1*	5 min	
PANIC ALRM SET	MODE3	1.5 sec	Panic alarm operation can be changed in this mode.
	MODE2	OFF	
	MODE1*	0.5 sec	
PW DOWN SET	MODE3	5 sec	Keyfob power window down can be changed in this mode.
	MODE2	OFF	
	MODE1*	3 sec	
REMO CONT ID REGIST	—		Keyfob ID code can be registered.
REMO CONT ID ERASUR	—		Keyfob ID code can be erased.
REMO CONT ID CONFIR	—		Keyfob ID code is registration is displayed.

*: Initial setting

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:000000009822767

DATA MONITOR

Monitor Item [Unit]	Description
I-KEY LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
I-KEY UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
I-KEY PW DWN [On/Off]	Indicates condition of power window down signal from Intelligent Key.
I-KEY TRUNK*	Indicates condition of back door signal from Intelligent Key.
I-KEY PANIC [On/Off]	Indicates condition of panic signal from Intelligent Key.
PUSH SW [On/Off]	Indicates condition of ignition knob switch.

*: With power back door

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

CONSULT Function (INTELLIGENT KEY)

INFOID:000000009822768

APPLICATION ITEM

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

Diagnosis mode	Function Description
ECU Identification	The Intelligent Key unit part number is displayed.
Self Diagnostic Result	Displays the diagnosis results judged by 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.
Work support	Changes the setting for each system function.
Can Diag Support Mntr	Monitors the reception status of CAN communication viewed from Intelligent Key unit.

SELF-DIAG RESULT

Refer to [DLK-157, "DTC Index"](#).

DATA MONITOR

Monitor Item	Condition
PUSH SW	Indicates [ON (pushed)/OFF (released)] condition of ignition knob switch.
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch.
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side).
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side).
IGN SW	Indicates [ON (ON or START position)/OFF (other than ON and START position)] condition of ignition switch ON position.
ACC SW	Indicates [ON/OFF] condition of ignition switch ACC position.
STOP LAMP SW	Indicates [ON/OFF] condition of stop lamp switch.
P RANGE SW	Indicates [ON/OFF] position of shift lever park position switch.
DOOR LOCK SIG	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
DOOR UNLOCK SIG	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
KEYLESS PANIC	Indicates [ON (pressed)/OFF (released)] condition of Intelligent Key panic button.
KEYLS PBD SIG	Indicates [ON (pressed)/OFF (released)] condition of Intelligent Key back door button.
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

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Test item	Description
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation. <ul style="list-style-type: none"> • ALL UNLK: All door lock actuators are unlocked. • DR UNLK: Door lock actuator (driver side) is unlocked. • AS UNLK: Door lock actuator (passenger side) is unlocked. • BK UNLK: This item is indicated, but inactive. • LOCK: All door lock actuator is locked.
ANTENNA	This test is able to check Intelligent Key antenna operation. When the following condition are met, hazard warning lamps flash. <ul style="list-style-type: none"> • ROOM ANT1: Center console area antenna (rear) and luggage area antenna detect Intelligent Key, when "ROOM ANT1" is selected. • ROOM ANT2: Center console area antenna (front) and overhead console area antenna detect Intelligent Key, when "ROOM ANT2" is selected. • LUG Ant: This selection is not used. • DR ANT: Outside key antenna (driver side) detects Intelligent Key, when "DR ANT" is selected. • AS ANT: Outside key antenna (passenger side) detects Intelligent Key, when "AS ANT" is selected. • BK DR ANT: Outside key antenna (rear bumper) detects Intelligent Key, when "BK DR ANT" is selected.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. <ul style="list-style-type: none"> • On • Off
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. <ul style="list-style-type: none"> • Take Out: Take away warning chime sounds. • Knob: Ignition knob switch warning chime sounds. • Key: Key warning chime sounds. • Off

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
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
ANTI KEY LOCK IN FUNCTION	Key reminder function mode can be changed to operation with this mode.	ON	Active
		OFF	Inactive
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be selected with this mode.	ON	Active
		OFF	Inactive
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed.	LOCK/UNLOCK	Active
		LOCK ONLY	
		UNLOCK ONLY	
ANSWER BACK WITH I-KEY LOCK	Buzzer reminder operation (lock operation) mode by each door request switch can be changed.	OFF	Inactive
		HORN CHIRP	Active
		BUZZER	
ANSWER BACK WITH I-KEY UNLOCK	Buzzer reminder operation (unlock operation) mode by each door request switch can be changed.	OFF	Inactive
		ON	Active
		OFF	Inactive

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< SYSTEM DESCRIPTION >

[WITH INTELLIGENT KEY SYSTEM]

Support item	Description	Selection item	Condition
AUTO RELOCK TIMER	Auto door lock operation mode can be changed.	1 min	Active
		5 min	
		OFF	Inactive
PANIC ALARM DELAY	Panic alarm button pressing time on Intelligent Key button can be selected from the following with this mode.	0.5 sec	Active
		1.5 sec	
		OFF	Inactive
P/W DOWN DELAY	Unlock button pressing time on Intelligent Key button can be selected from the following with this mode.	3 sec	Active
		5 sec	
		OFF	Inactive
ENGINE START BY I-KEY	Engine start function (by Intelligent Key) mode can be changed.	ON	Active
		OFF	Inactive
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can be changed.	ON	Active
		OFF	Inactive

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000009822769

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:000000009822770

DTC DETECTION LOGIC

DTC	CONSULT 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">• Transmission• Receiving (ECM)• Receiving (VDC/TCS/ABS)• Receiving (METER/M&A)• Receiving (TCM)• Receiving (MULTI AV)• Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000009822771

1.PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-87, "Diagnosis Procedure"](#).
NO >> Refer to [GI-42, "Intermittent Incident"](#).

DLK

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000009822772

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000009822773

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

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

Special Repair Requirement

INFOID:000000009822774

1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to [BCS-4, "CONFIGURATION \(BCM\) : Description"](#) for BCM configuration.

Initialize NVIS by CONSULT. Refer to CONSULT Immobilizer mode and follow the on-screen instructions.

>> Work End.

CENTER CONSOLE AREA ANTENNA (REAR)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

CENTER CONSOLE AREA ANTENNA (REAR)

Description

INFOID:000000009822775

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:000000009822776

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT

1. Check "ANTENNA" in "Active Test" mode with CONSULT.
2. Touch "ROOM ANT1".
3. When Intelligent Key is in center console area antenna (rear) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> • Center console area antenna (rear) • Between Intelligent Key unit and center console area antenna (rear)

Is the inspection result normal?

- YES >> Center console area antenna (rear) is OK.
 NO >> Refer to [DLK-63, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822777

NOTE:

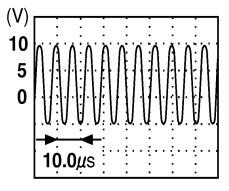
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

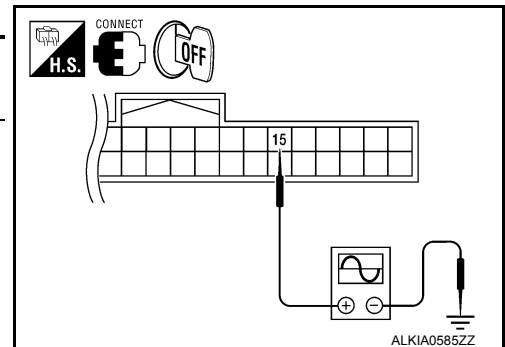
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

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.	 <p>PIIB7441E</p>



Is the inspection result normal?

- YES >> Center console area antenna (rear) is OK.
 NO >> GO TO 2

2. CHECK INSIDE KEY ANTENNA

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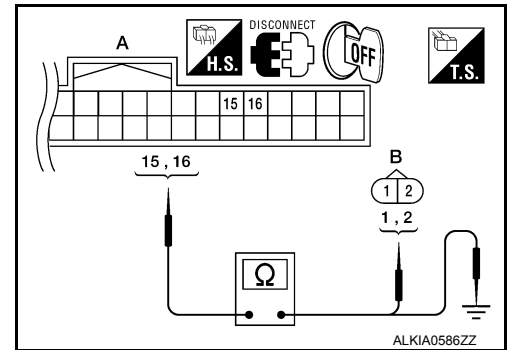
CENTER CONSOLE AREA ANTENNA (REAR)

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

Intelligent Key unit connector	Terminals	Center console area antenna (rear) 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.

Item	Connector	Terminals	Continuity
Intelligent Key unit	A: M70	15	Ground
		16	

Is the inspection result normal?

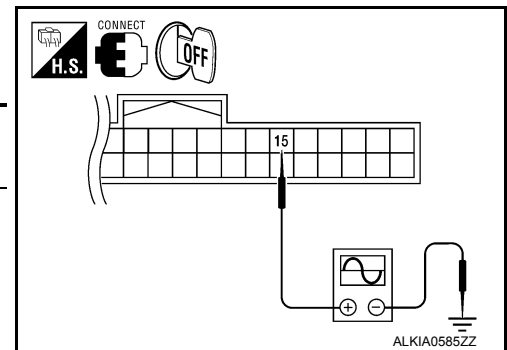
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and center console area antenna (rear).

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 center console area antenna (rear).

NO >> Replace Intelligent Key unit. Refer to [SEC-122. "Removal and Installation"](#).

CENTER CONSOLE AREA ANTENNA (FRONT)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

CENTER CONSOLE AREA ANTENNA (FRONT)

Description

INFOID:000000009822778

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:000000009822779

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT

1. Check "ANTENNA" in "Active Test" mode with CONSULT.
2. Touch "ROOM ANT2".
3. When Intelligent Key is in center console area antenna (front) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> • Center console area antenna (front) • Between Intelligent Key unit and center console area antenna (front)

Is the inspection result normal?

- YES >> Center console area antenna (front) is OK.
 NO >> Refer to [DLK-65, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822780

NOTE:

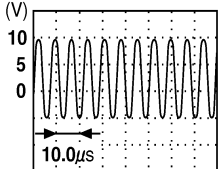
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

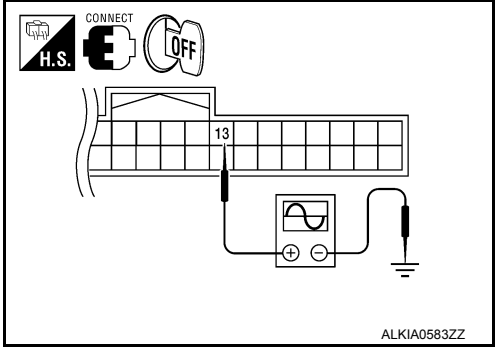
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

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 style="text-align: right; font-size: small;">PIIB7441E</p>



ALKIA0583ZZ

Is the inspection result normal?

- YES >> Center console area antenna (front) is OK.
 NO >> GO TO 2

2. CHECK INSIDE KEY ANTENNA

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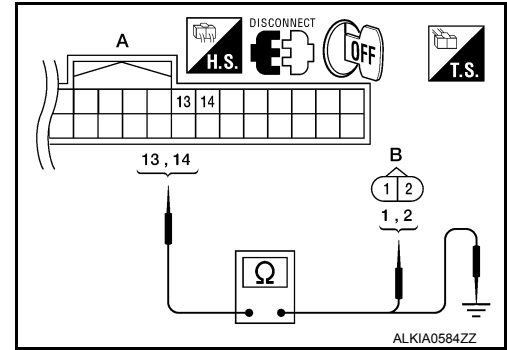
CENTER CONSOLE AREA ANTENNA (FRONT)

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

Intelligent Key unit connector	Terminals	Center console area antenna (front) connector	Terminals	Continuity
A: M70	13	B: M210	1	Yes
	14		2	



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

Item	Connector	Terminals	Continuity
Intelligent Key unit	A: M70	13	Ground
		14	

Is the inspection result normal?

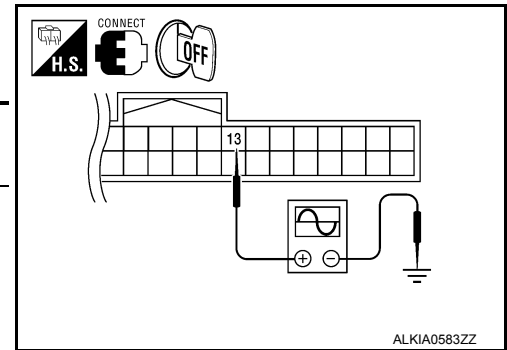
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and center console area antenna (front).

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 center console area antenna (front).

NO >> Replace Intelligent Key unit. Refer to [SEC-122, "Removal and Installation"](#).

OVERHEAD CONSOLE AREA ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

OVERHEAD CONSOLE AREA ANTENNA

Description

INFOID:000000009822781

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:000000009822782

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT

1. Check "ANTENNA" in "Active Test" mode with CONSULT.
2. Touch "ROOM ANT2".
3. When Intelligent Key is in overhead console area antenna detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> • Overhead console area antenna • Between Intelligent Key unit and overhead console area antenna

Is the inspection result normal?

- YES >> Overhead console area antenna is OK.
 NO >> Refer to [DLK-67, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822783

NOTE:

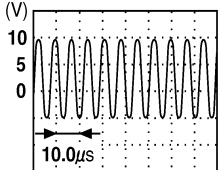
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

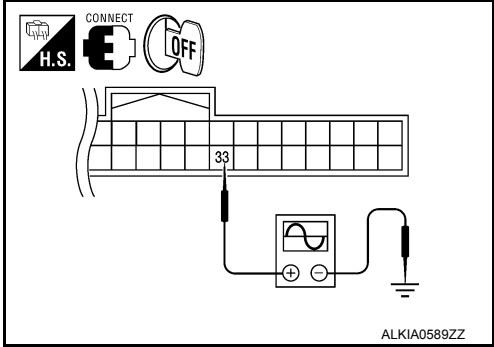
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

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>



ALKIA0589ZZ

Is the inspection result normal?

- YES >> Overhead console area antenna is OK.
 NO >> GO TO 2

2. CHECK INSIDE KEY ANTENNA

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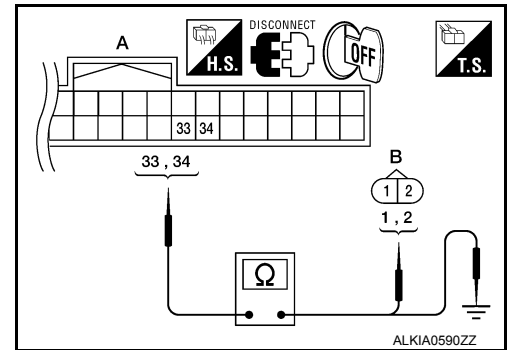
OVERHEAD CONSOLE AREA ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

Intelligent Key unit connector	Terminals	Overhead console area antenna connector	Terminals	Continuity
A: M70	33	B: R210	1	Yes
	34		2	



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

Item	Connector	Terminals	Continuity
Intelligent Key unit	A: M70	33	Ground
		34	

Is the inspection result normal?

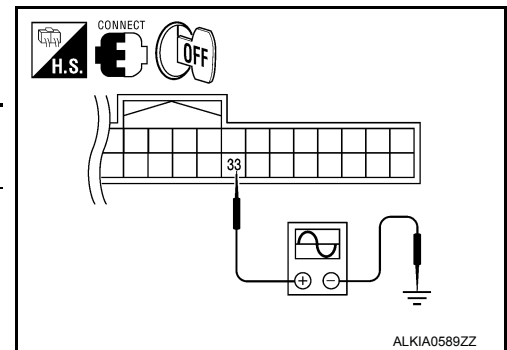
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and overhead console area antenna.

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.	



Is the inspection result normal?

YES >> Replace overhead console area antenna.

NO >> Replace Intelligent Key unit. Refer to [SEC-122. "Removal and Installation"](#).

LUGGAGE AREA ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

LUGGAGE AREA ANTENNA

Description

INFOID:000000009822784

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:000000009822785

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT

1. Check "ANTENNA" in "Active Test" mode with CONSULT.
2. Touch "ROOM ANT1".
3. When Intelligent Key is in luggage area antenna detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key unit	<ul style="list-style-type: none"> • Luggage area antenna • Between Intelligent Key unit and luggage area antenna

Is the inspection result normal?

- YES >> Luggage area antenna is OK.
 NO >> Refer to [DLK-69. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822786

NOTE:

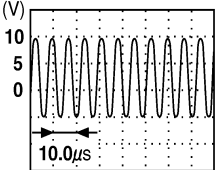
The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

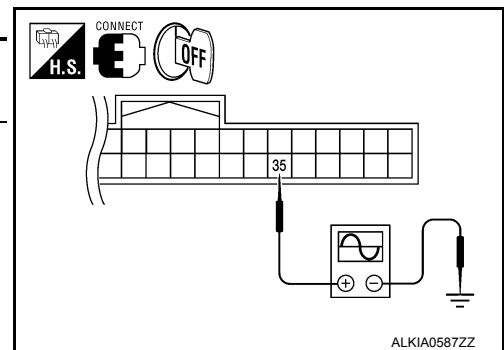
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

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.	 PIIB7441E



Is the inspection result normal?

- YES >> Luggage area antenna is OK.
 NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

LUGGAGE AREA ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

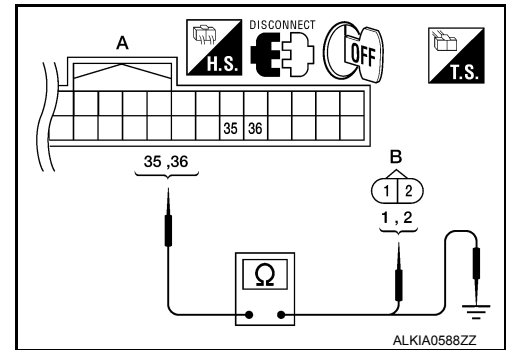
< DTC/CIRCUIT DIAGNOSIS >

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

Intelligent Key unit connector	Terminals	Luggage area antenna connector	Terminals	Continuity
A: M70	35	B: B76	1	Yes
	36		2	

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

Item	Connector	Terminals	Continuity
Intelligent Key unit	A: M70	35	Ground
		36	



Is the inspection result normal?

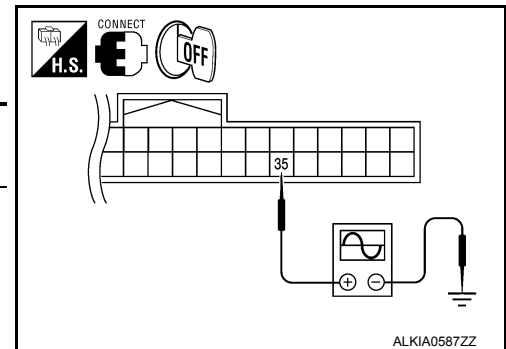
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and luggage area antenna.

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>The oscilloscope shows a square wave signal with a peak-to-peak voltage of approximately 10V and a period of 10.0μs. The vertical axis is labeled (V) with markings at 0, 5, and 10. The horizontal axis is labeled 10.0μs.</p>



Is the inspection result normal?

YES >> Replace luggage area antenna.

NO >> Replace Intelligent Key unit. Refer to [SEC-122. "Removal and Installation"](#).

POWER SUPPLY AND GROUND CIRCUIT

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

INTELLIGENT KEY UNIT : Diagnosis Procedure

INFOID:000000009822787

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

1. CHECK POWER SUPPLY CIRCUIT

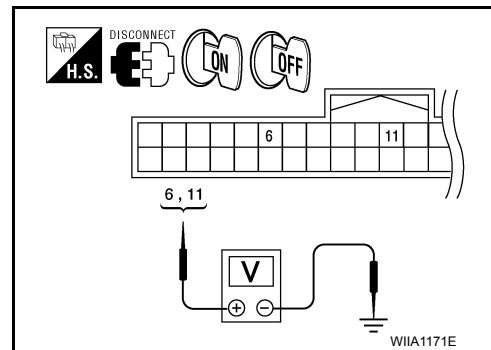
1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M70 terminals 6, 11 and ground.

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

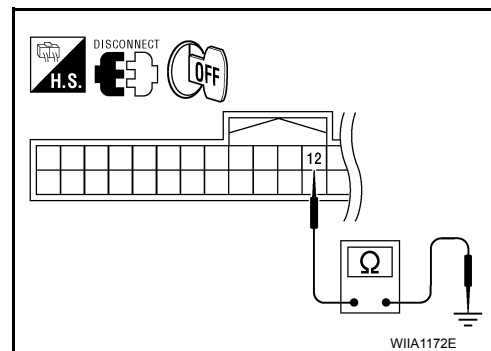
Check continuity between Intelligent Key unit harness connector M70 terminal 12 and ground.

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:000000009822788

Regarding Wiring Diagram information, refer to [BCS-46. "Wiring Diagram"](#).

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

Is the fuse blown?

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

POWER SUPPLY AND GROUND CIRCUIT

[WITH INTELLIGENT KEY SYSTEM]

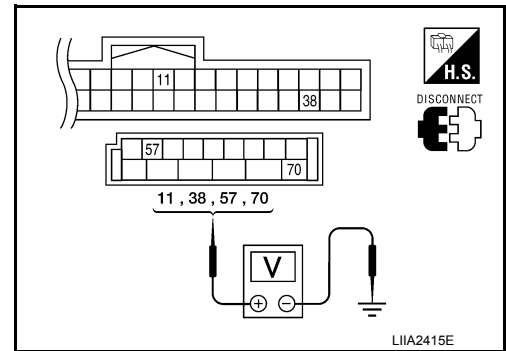
< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

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



Is the measurement value normal?

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

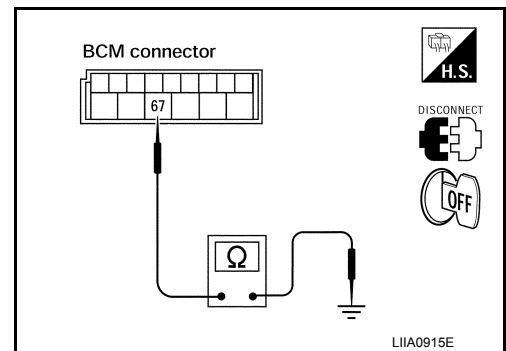
3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

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



BACK DOOR

BACK DOOR : Diagnosis Procedure

INFOID:000000009822789

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

1. BACK DOOR POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door control unit connector.

POWER SUPPLY AND GROUND CIRCUIT

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

3. Check voltage between back door control unit connector B55 terminals 3, 10 and ground.

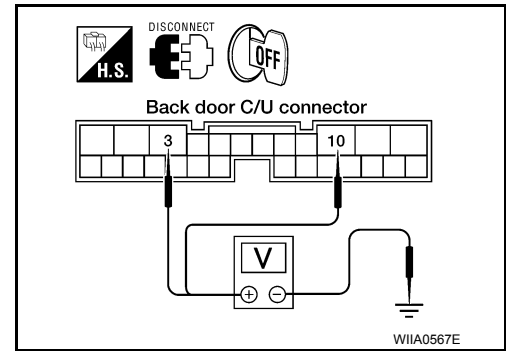
3 - Ground : Approx. battery voltage

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.

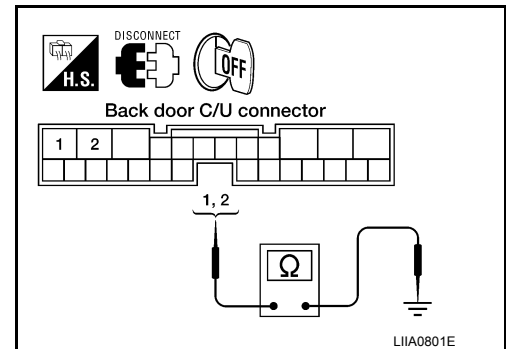
1 - Ground : Continuity should exist.

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.



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DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DOOR SWITCH

Description

INFOID:000000009822790

Detects door open/close condition.

Component Function Check

INFOID:000000009822791

1. CHECK FUNCTION

With CONSULT

Check door switches in data monitor mode with CONSULT.

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-74, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822792

Regarding Wiring Diagram information, refer to [DLK-162, "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT

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

- 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

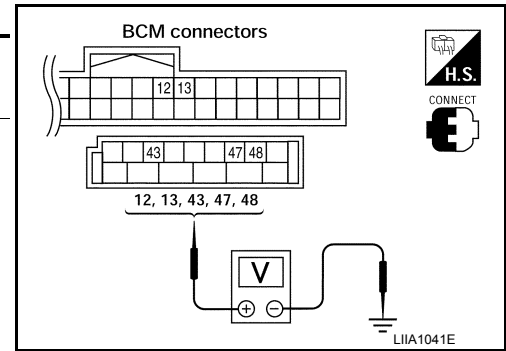
Check voltage between BCM connector M18 or M19 terminals 12, 13, 43, 47, 48 and ground.

DOOR SWITCH

< DTC/CIRCUIT 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			
	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.

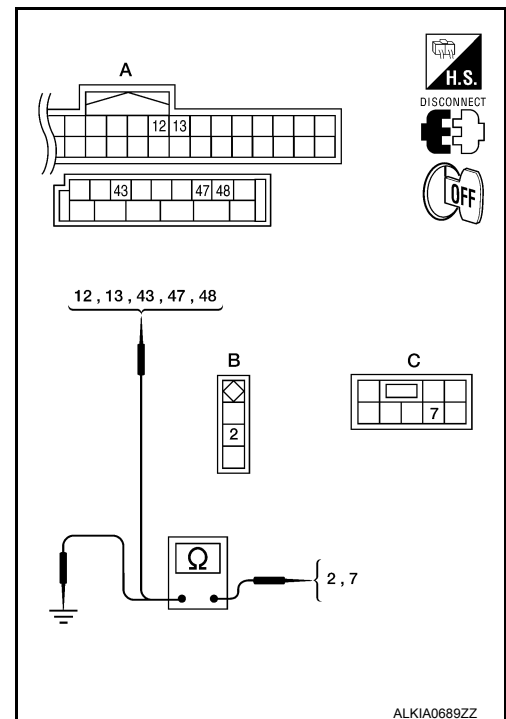
- 2 - 47 :Continuity should exist**
2 - 12 :Continuity should exist
2 - 48 :Continuity should exist
2 - 13 :Continuity should exist
7 - 43 :Continuity should exist

- 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

< DTC/CIRCUIT 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

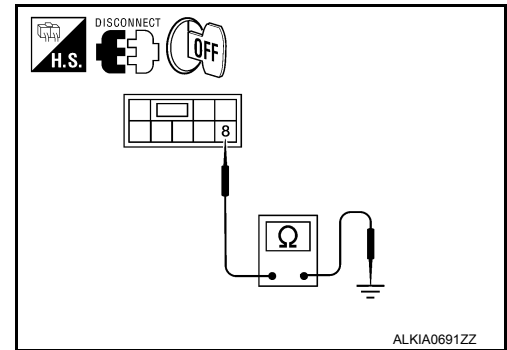
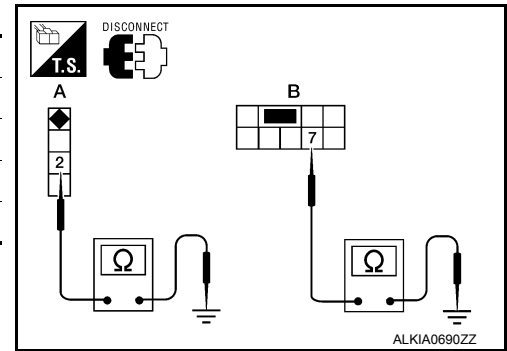
4. CHECK BACK DOOR SWITCH CIRCUIT

- 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.



DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DOOR LOCK AND UNLOCK SWITCH

DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000009822793

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

INFOID:000000009822794

1. CHECK FUNCTION

With CONSULT

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

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-77, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:000000009822795

Regarding Wiring Diagram information, refer to [DLK-162, "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT

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

- 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

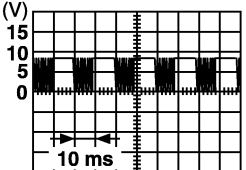
Without CONSULT

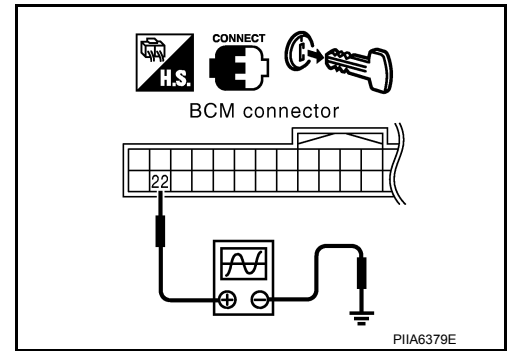
1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during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

DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 PIIA1297E



Is the inspection result normal?

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

2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Using the vehicle operational Intelligent Key, press and hold the UNLOCK button for more than 3 seconds.

The front windows should be lowered.

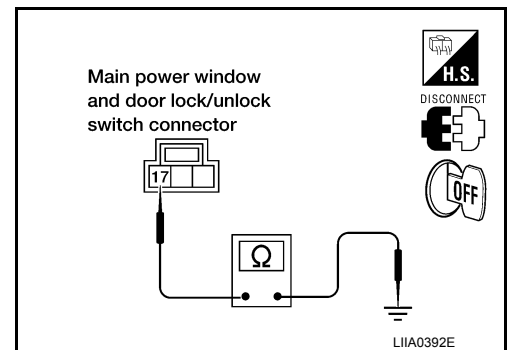
Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

3.CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Disconnect main power window and door lock/unlock switch.
2. 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.

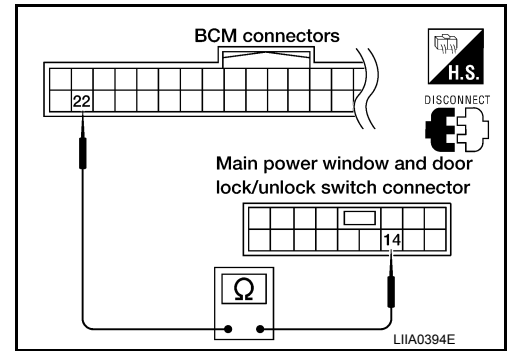
DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

22 - 14

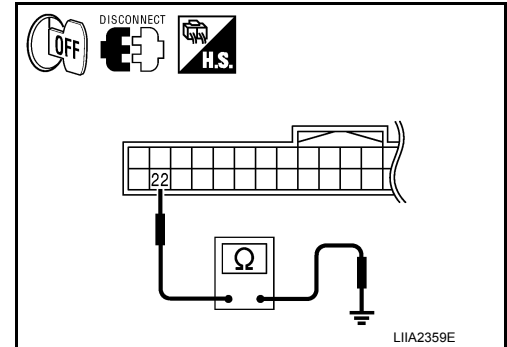
: Continuity should exist.



3. Check continuity between BCM connector M18 terminal 22 and ground.

22 - Ground

: Continuity should not 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:000000009822796

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000009822797

DLK

1.CHECK FUNCTION

④ With CONSULT

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

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-79, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000009822798


Regarding Wiring Diagram information, refer to [DLK-162, "Wiring Diagram - With Intelligent Key System"](#).

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

 With CONSULT

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

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

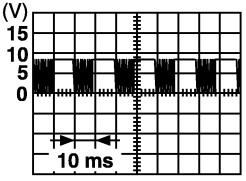
CDL LOCK SW :ON

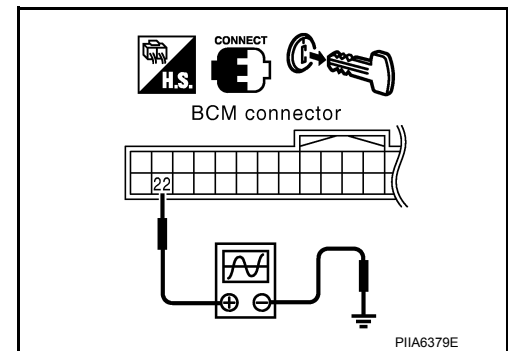
- When power window and door lock/unlock switch RH is turned to UNLOCK:

CDL UNLOCK SW :ON

 Without CONSULT

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

1. Turn ignition switch OFF.
2. Using the vehicle operational Intelligent Key, press and hold the UNLOCK button for more than 3 seconds.

The front windows should be lowered.

Is the inspection normal?

- YES >> GO TO 3
 NO >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

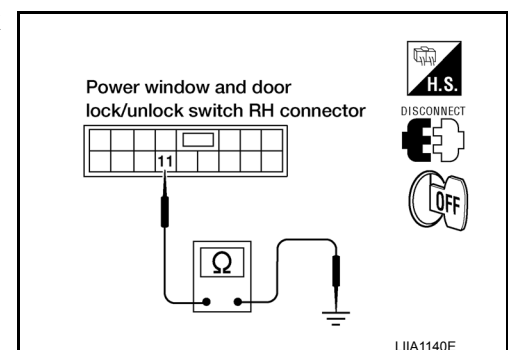
3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Disconnect power window and door lock/unlock switch RH.
2. 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.



DOOR LOCK AND UNLOCK SWITCH

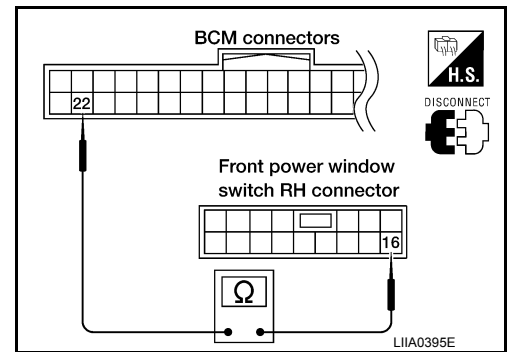
< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

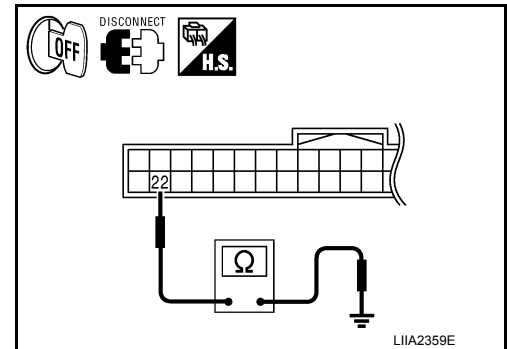
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 - 16 : Continuity should exist.



3. Check continuity between BCM connector M18 terminal 22 and ground.

22 - ground : Continuity should not 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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

KEY CYLINDER SWITCH

Description

INFOID:000000009822799

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:000000009822800

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.

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-82, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822801

Regarding Wiring Diagram information, refer to [DLK-162, "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT

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

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

KEY CYL LK-SW : ON

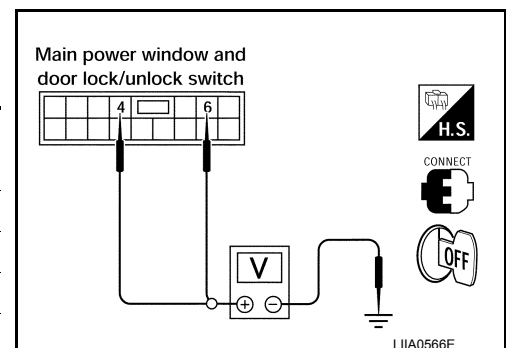
- When key inserted in left front key cylinder is turned to UNLOCK:

KEY CYL UN-SW : ON

Without CONSULT

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.

KEY CYLINDER SWITCH

[WITH INTELLIGENT KEY SYSTEM]

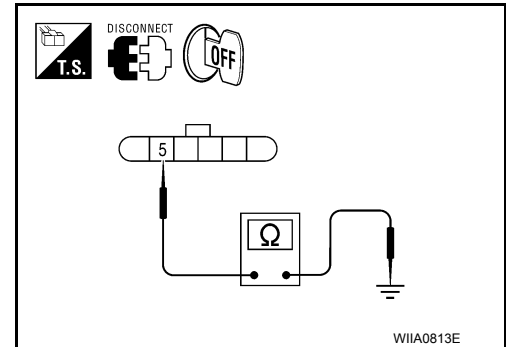
< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly LH (key cylinder switch).
3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



WIIA0813E

Is the inspection result normal?

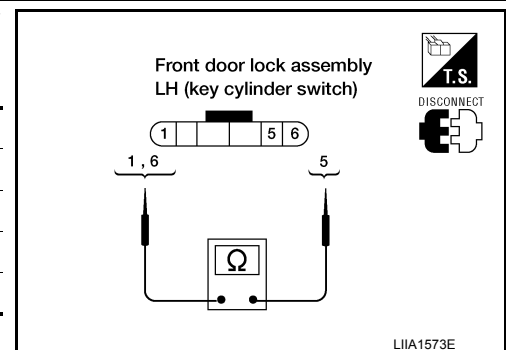
YES >> GO TO 3

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



LIIA1573E

Is the inspection result normal?

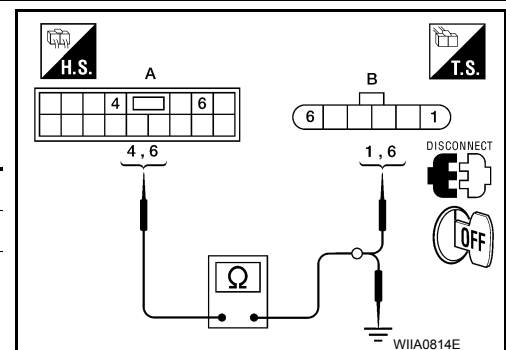
YES >> GO TO 4

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-235. "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	



WIIA0814E

Is the inspection result normal?

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

NO >> Repair or replace harness.

FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

Description

INFOID:000000009822802

Detects door lock condition of driver door.

Diagnosis Procedure

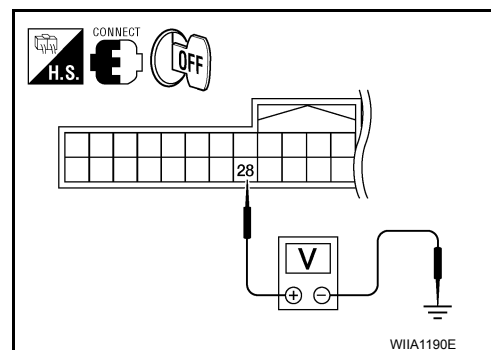
INFOID:000000009822803

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

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

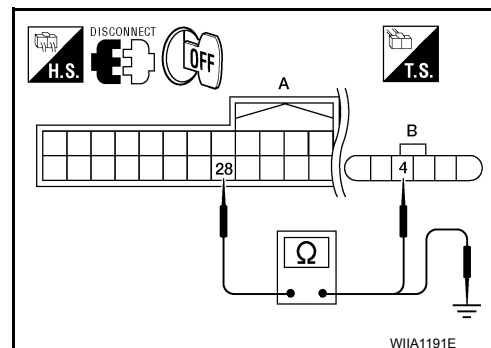
2. CHECK UNLOCK SENSOR CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit and front door lock assembly LH (door unlock sensor) connector.
3. 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.

4. 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)

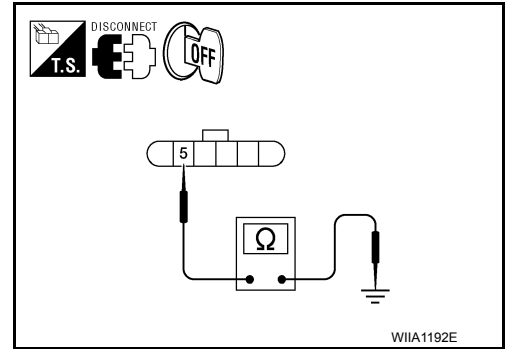
< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

5 – Ground : Continuity should exist.

Is the inspection result normal?

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



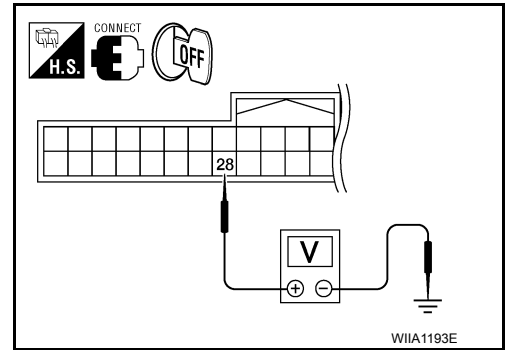
4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

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-85, "Component Inspection"](#).
- NO >> Replace Intelligent Key unit. Refer to [IP-12, "Removal and Installation"](#).



INFOID:000000009822804

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-235, "Removal and Installation"](#).

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DOOR REQUEST SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DOOR REQUEST SWITCH

Description

INFOID:000000009822805

Transmits lock/unlock operation to Intelligent Key unit.

Component Function Check

INFOID:000000009822806

1.CHECK FUNCTION

With CONSULT

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

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

Is the inspection result normal?

- YES >> Door request switch is OK.
- NO >> Refer to [DLK-86, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822807

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

1.CHECK FRONT DOOR REQUEST SWITCH

With CONSULT

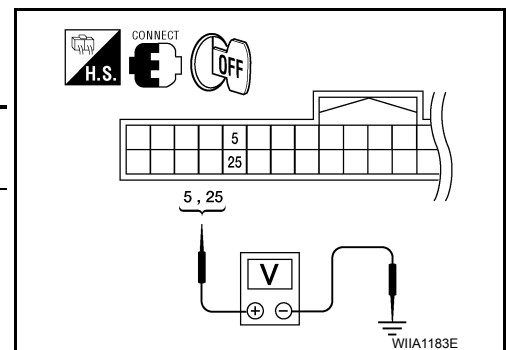
Check front door request switch ("DR REQ SW" or "AS REQ SW") in "DATA MONITOR" mode.

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

Without CONSULT

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.

DOOR REQUEST SWITCH

[WITH INTELLIGENT KEY SYSTEM]

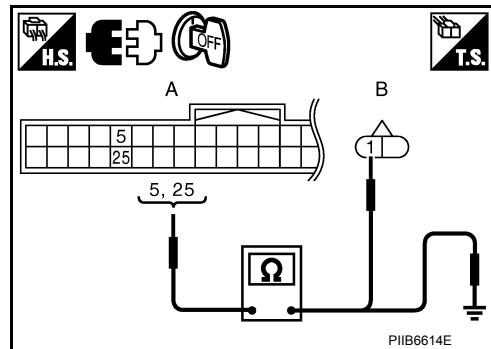
< DTC/CIRCUIT DIAGNOSIS >

- 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.

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

- 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

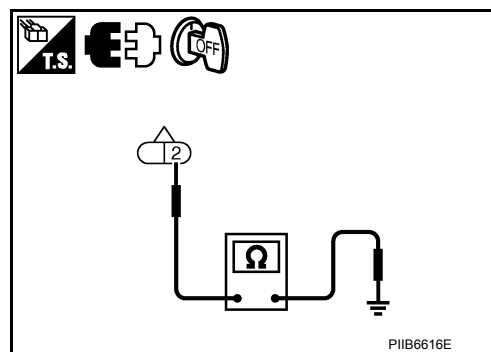
Check continuity between front door request switch harness connector D16 (driver door), D116 (passenger door) terminal 2 and ground.

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-88, "Component Inspection"](#).

Is the inspection result normal?

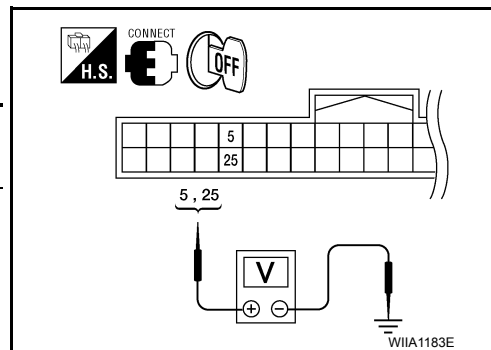
YES >> GO TO 5

NO >> Replace front door request switch.

5. CHECK FRONT DOOR REQUEST SWITCH SIGNAL

- Connect Intelligent Key unit connector.
- 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
	Front door request switch RH	25		Door request switch is released	Battery voltage



Is the inspection result normal?

YES >> Refer to Intermittent Incident.

NO >> Replace Intelligent Key unit. Refer to [SEC-122, "Removal and Installation"](#).

DOOR REQUEST SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000009822808

Component Inspection

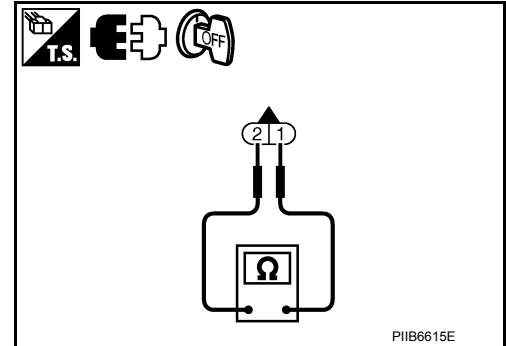
1. CHECK FRONT DOOR REQUEST SWITCH OPERATION

1. Turn ignition switch OFF.
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]

< DTC/CIRCUIT DIAGNOSIS >

DOOR LOCK ACTUATOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000009822809

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:000000009822810

1. CHECK FUNCTION

1. Use CONSULT 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-89. "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

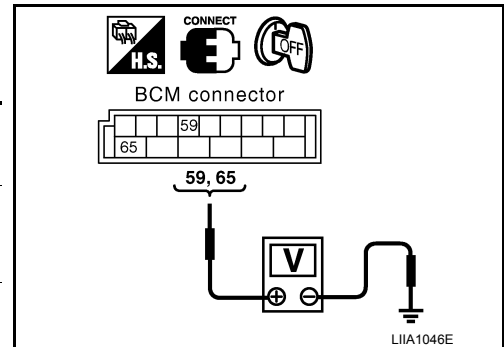
INFOID:000000009822811

Regarding Wiring Diagram information, refer to [DLK-162. "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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



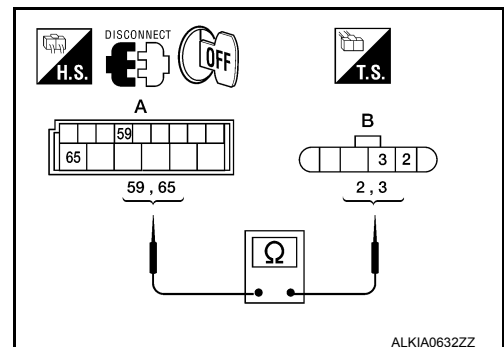
Is the inspection result normal?

- 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.

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DOOR LOCK ACTUATOR

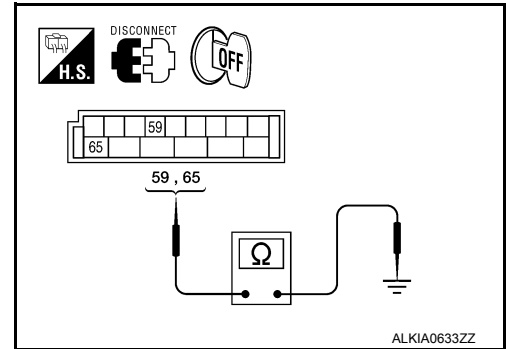
< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Terminals		Continuity
	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:000000009822812

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000009822813

1. CHECK FUNCTION

1. Use CONSULT 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-90, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

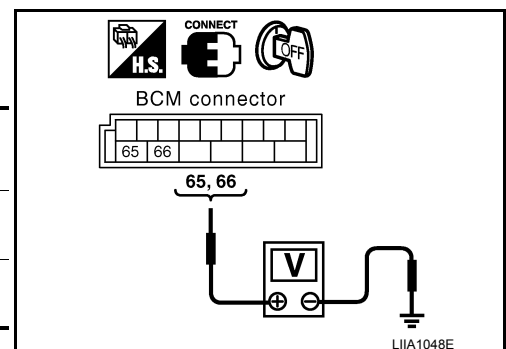
INFOID:000000009822814

Regarding Wiring Diagram information, refer to [DLK-162, "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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

DOOR LOCK ACTUATOR

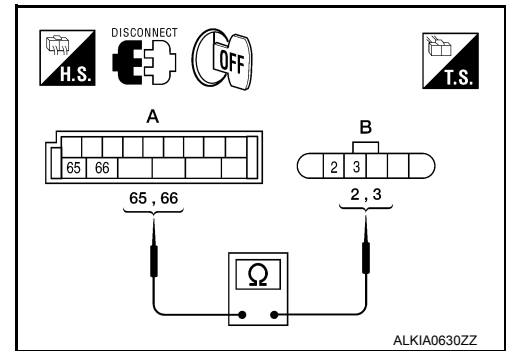
< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminal		Continuity
65	3	Yes
66	2	Yes



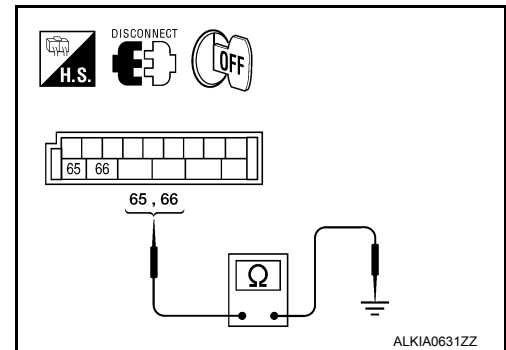
Is the inspection result normal?

- YES >> Replace front door lock actuator RH. Refer to [DLK-235. "Removal and Installation"](#).
 NO >> Repair or replace harness.

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		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

1. Use CONSULT 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-91. "REAR LH : Diagnosis Procedure"](#).

REAR LH : Diagnosis Procedure

Regarding Wiring Diagram information, refer to [DLK-162. "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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INFOID:000000009822816

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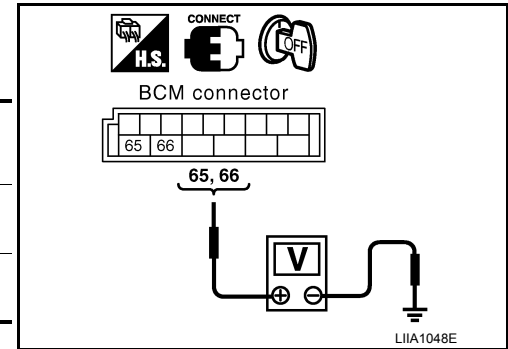
DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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?

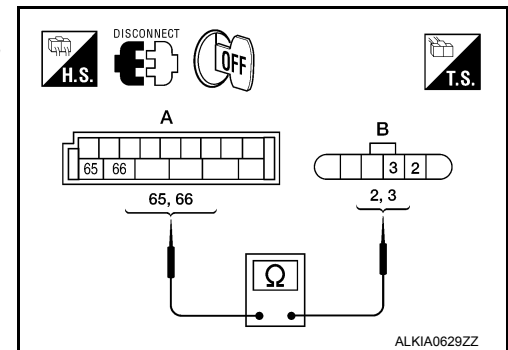
YES >> GO TO 2

NO >> GO TO 3

2. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator LH.
2. 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?

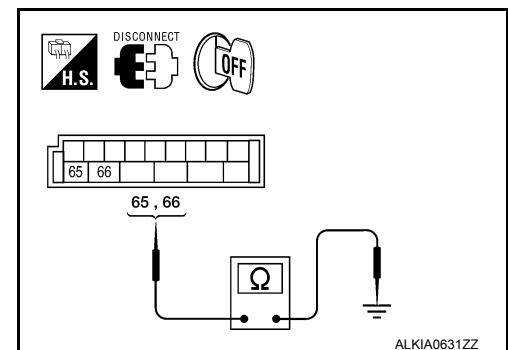
YES >> Replace rear door lock actuator LH.

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

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-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:000000009822818

DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

REAR RH : Component Function Check

INFOID:000000009822819

1.CHECK FUNCTION

1. Use CONSULT 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-93. "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

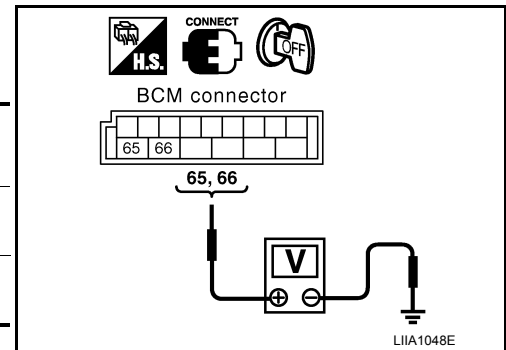
INFOID:000000009822820

Regarding Wiring Diagram information, refer to [DLK-162. "Wiring Diagram - With Intelligent Key System"](#).

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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



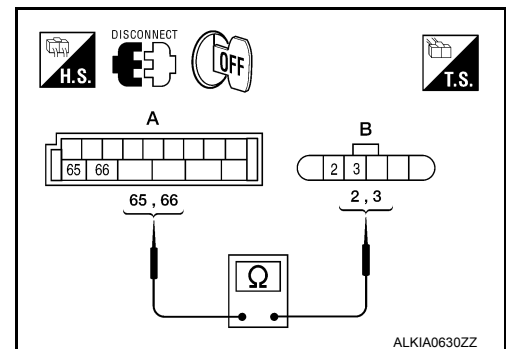
Is the inspection result normal?

- 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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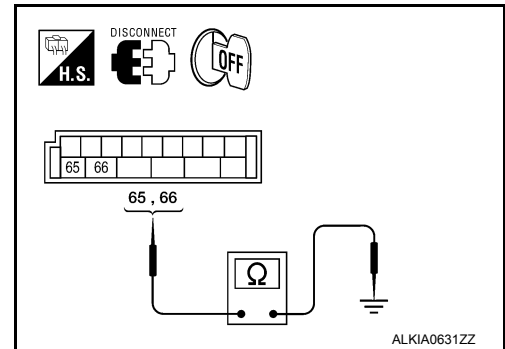
DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT 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 [BCS-54. "Removal and Installation"](#).

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

BACK DOOR

BACK DOOR : Description

INFOID:000000009822821

All vehicles equipped with an automatic back door system are not equipped with a back door lock actuator. Opening and closing the back door is accomplished through the back door control unit assembly. Refer to [DLK-122. "Self-Diagnosis Procedure"](#).

PASSENGER SELECT UNLOCK RELAY

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

PASSENGER SELECT UNLOCK RELAY

Description

INFOID:000000009822822

Controls the operation of both rear door lock actuators.

Component Function Check

INFOID:000000009822823

1. CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Passenger select unlock relay is OK.
NO >> Refer to [DLK-95. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822824

Regarding Wiring Diagram information, refer to [DLK-162. "Wiring Diagram - With Intelligent Key System"](#).

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 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.

66 - 2 : Continuity should exist.

4. Check continuity between BCM connector M20 terminal 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 3.

66 - 3 : Continuity should exist.

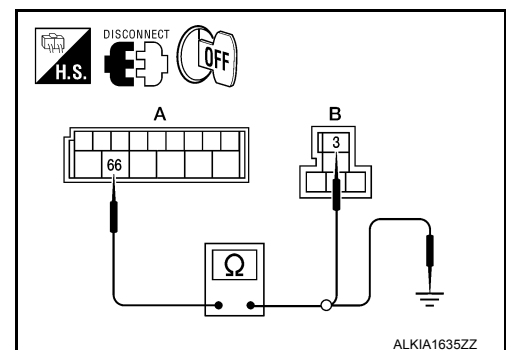
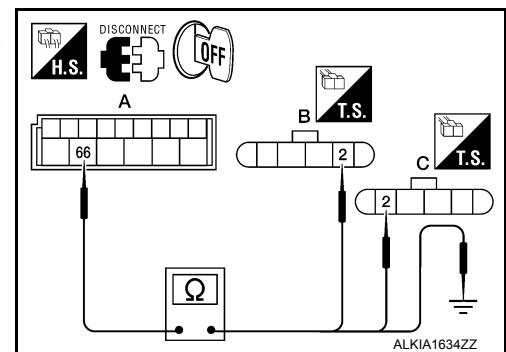
3. Check continuity between BCM connector (A) M20 terminal 66 and body ground.

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



PASSENGER SELECT UNLOCK RELAY

[WITH INTELLIGENT KEY SYSTEM]

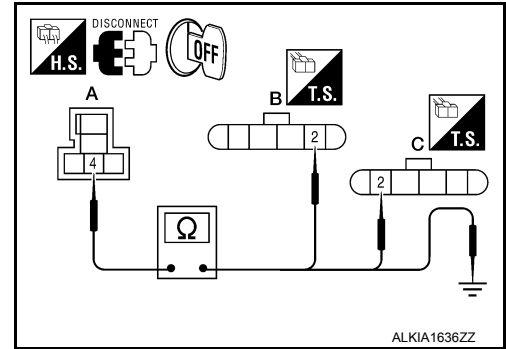
< DTC/CIRCUIT DIAGNOSIS >

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

4 - 2 : Continuity should exist.

2. Check continuity between passenger select unlock relay connector (A) M7 terminal 4 and ground.

4 - Ground : Continuity should not exist.



Is the inspection result normal?

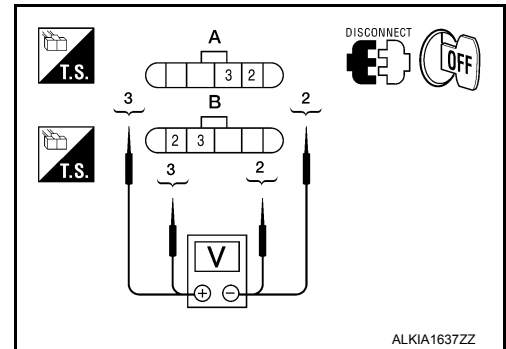
YES >> Replace passenger select unlock relay.

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

4. CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

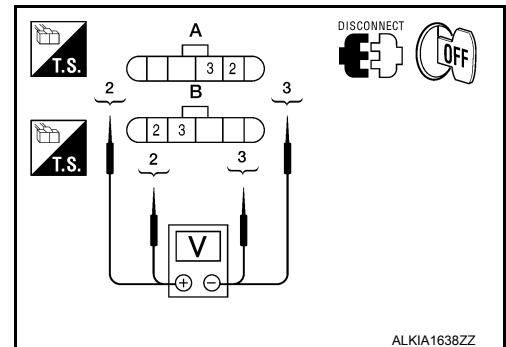
1. Reconnect BCM.
2. Check voltage between rear door lock actuator connector LH (A) D205 terminals 2 and 3 or rear door lock actuator connector RH (B) D305 terminals 2 and 3.

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



3. 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)	2	3	Main power window and door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 msec.
B: D305 (RH)	2	3		



Is the inspection result normal?

YES >> Replace rear door lock actuator.

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

INTELLIGENT KEY WARNING BUZZER

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

INTELLIGENT KEY WARNING BUZZER

Description

INFOID:000000009822825

Answers back and warns for an inappropriate operation.

Component Function Check

INFOID:000000009822826

1.CHECK FUNCTION

With CONSULT

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-97, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822827

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

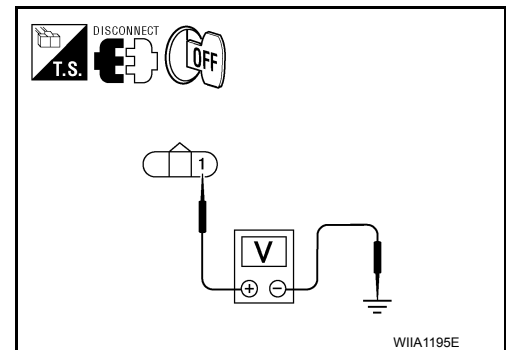
1.CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) POWER SUPPLY CIRCUIT

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.

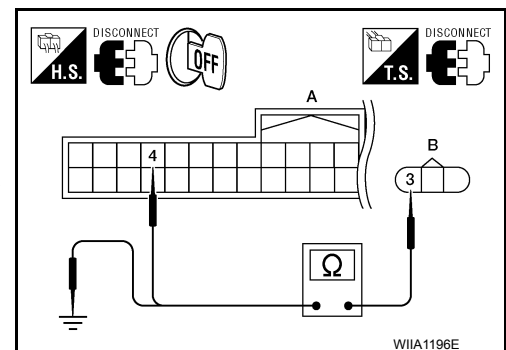
4 - 3 : Continuity should exist.

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-98, "Component Inspection"](#).

Is the inspection normal?

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INTELLIGENT KEY WARNING BUZZER

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

YES >> Check intermittent incident. Refer to [GI-42, "Intermittent Incident"](#).

NO >> Replace Intelligent Key warning buzzer.

Component Inspection

INFOID:000000009822828

1. CHECK INTELLIGENT KEY WARNING BUZZER

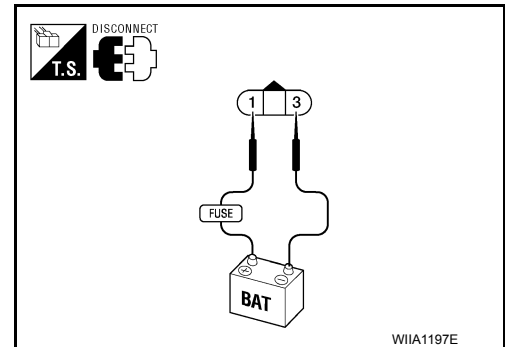
Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 3, and check the operation.

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

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace Intelligent Key warning buzzer.



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OUTSIDE KEY ANTENNA

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

OUTSIDE KEY ANTENNA

Description

INFOID:000000009822829

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:000000009822830

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-86, "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 >> GO TO 3

NO >> Refer to [DLK-99, "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 >> Outside key antennas are OK.

NO >> Refer to [DLK-99, "Diagnosis Procedure"](#).

Diagnosis Procedure

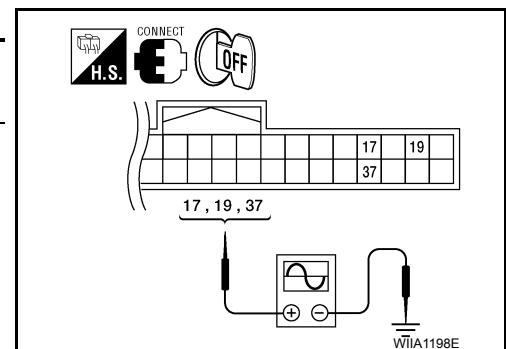
INFOID:000000009822831

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

1. Turn ignition switch OFF.
2. 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	
	Front outside antenna LH	19			
	Front outside antenna RH	37			



Is the inspection result normal?

YES >> Outside key antenna is OK.

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OUTSIDE KEY ANTENNA

[WITH INTELLIGENT KEY SYSTEM]

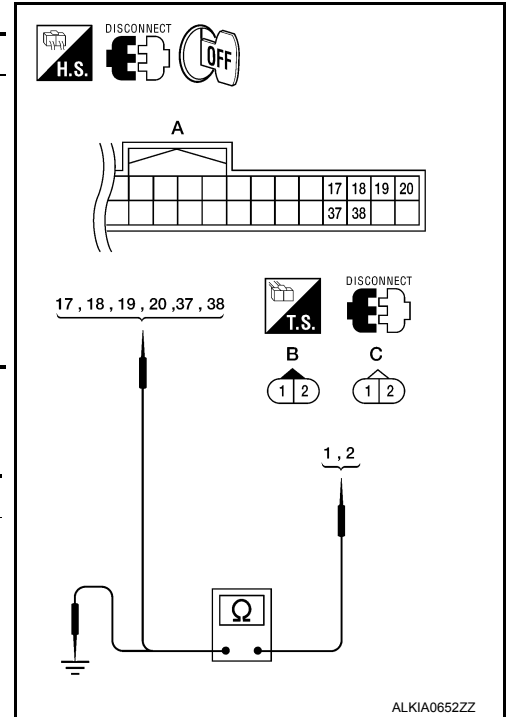
< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 2

2. CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and outside key antenna connector.
2. 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	



3. 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?

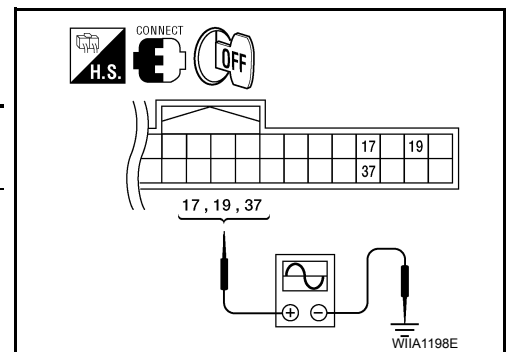
YES >> GO TO 3

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

3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

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



Is the inspection result normal?

YES >> Replace outside key antenna.

NO >> Replace Intelligent Key unit. Refer to [SEC-122. "Removal and Installation"](#).

STEERING LOCK UNIT

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

STEERING LOCK UNIT

Diagnosis Procedure

INFOID:000000009822832

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

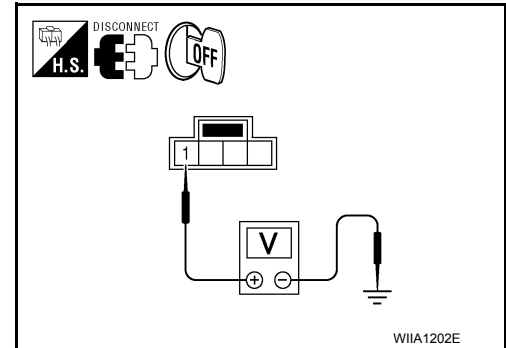
1. CHECK STEERING LOCK SOLENOID POWER SUPPLY

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.



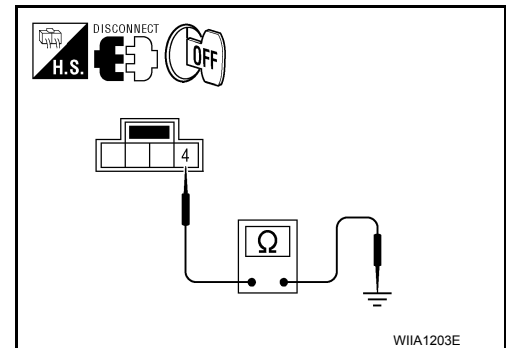
2. CHECK STEERING LOCK SOLENOID GROUND CIRCUIT

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.



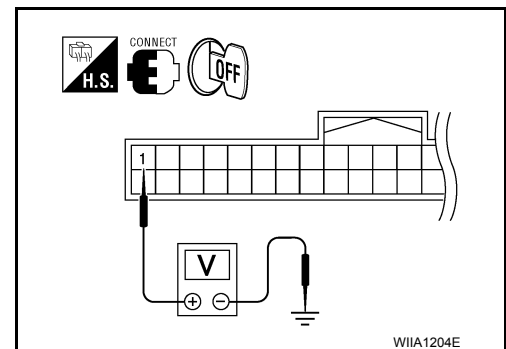
3. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

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



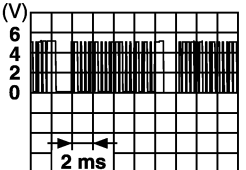
4. CHECK STEERING LOCK COMMUNICATION SIGNAL

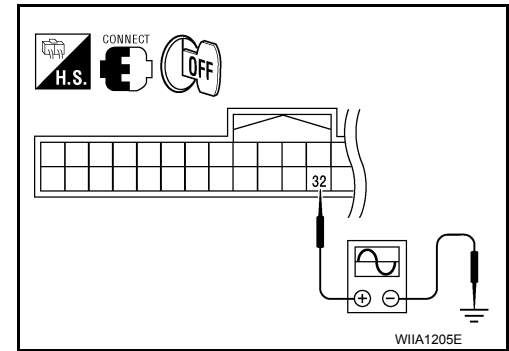
Check signal between Intelligent Key unit connector M70 terminal 32 and ground with oscilloscope.

STEERING LOCK UNIT

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector	Terminals		Condition	Signal (V) (Reference value)
	(+)	(-)		
M70	32	Ground	Ignition switch is pushed	 SIIA1911J



Is the inspection result normal?

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

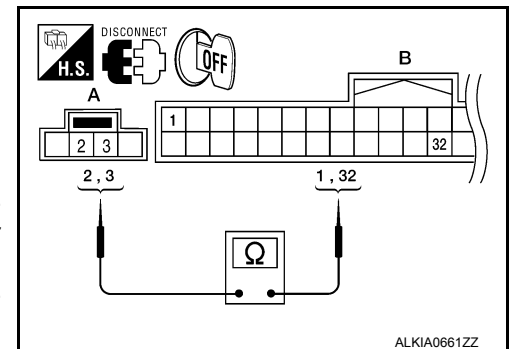
5. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR OPEN

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 CONSULT Immobilizer mode and follow the on-screen instructions.
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.



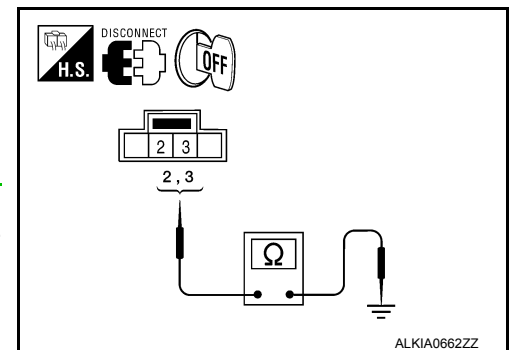
6. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR SHORT

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-122](#), "[Removal and Installation](#)".
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.



A/T SHIFT SELECTOR (PARK POSITION SWITCH)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

A/T SHIFT SELECTOR (PARK POSITION SWITCH)

Diagnosis Procedure

INFOID:00000009822833

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

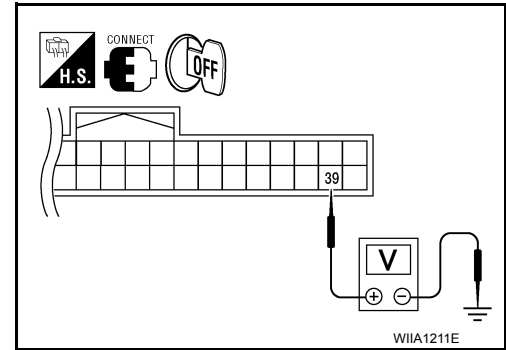
1. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) INPUT SIGNAL

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?

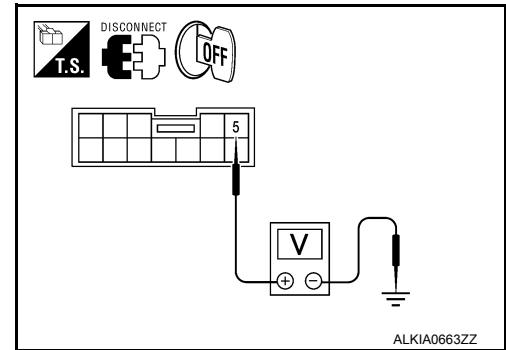
- YES >> Replace Intelligent Key unit. Refer to [SEC-122. "Removal and Installation"](#).
- NO >> GO TO 2



2. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) POWER SUPPLY CIRCUIT

1. Disconnect A/T shift selector (park position switch) connector.
2. While pressing the ignition knob switch, check voltage between A/T shift selector (park position switch) 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.

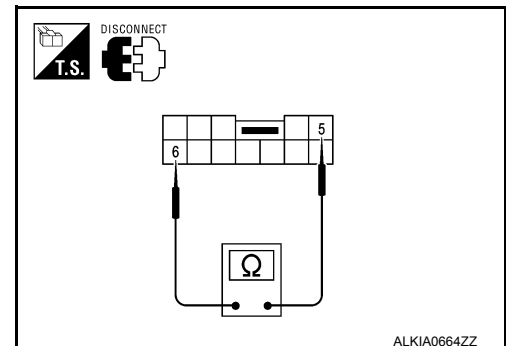
3. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH)

Check continuity between A/T shift selector (park position switch) terminals 5 and 6.

Component	Terminals		Condition	Continuity
A/T shift selector (park position switch)	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 shift selector (park position switch).



4. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) CIRCUIT

1. Disconnect Intelligent Key unit connector.

A/T SHIFT SELECTOR (PARK POSITION SWITCH)

< DTC/CIRCUIT DIAGNOSIS >

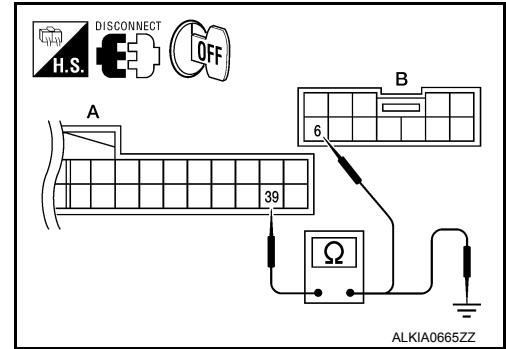
[WITH INTELLIGENT KEY SYSTEM]

2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 39 and A/T shift selector (park position switch) 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 shift selector (park position switch) circuit is OK.

NO >> Repair or replace harness.

REMOTE KEYLESS ENTRY RECEIVER

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

REMOTE KEYLESS ENTRY RECEIVER

Description

INFOID:000000009822834

Receives Intelligent Key operation and transmits to Intelligent Key unit.

Component Function Check

INFOID:000000009822835

1. CHECK FUNCTION

With CONSULT

Check remote keyless entry receiver "I-KEY LOCK, I-KEY UNLOCK, I-KEY TRUNK, I-KEY PANIC" in Data Monitor mode with CONSULT.

Monitor item	Condition
I-KEY LOCK I-KEY UNLOCK I-KEY TRUNK I-KEY PANIC	Checks whether value changes when operating Intelligent Key.

Is the inspection result normal?

- YES >> Remote keyless entry receiver is OK.
- NO >> Refer to [DLK-105. "Diagnosis Procedure"](#).

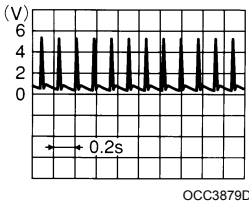
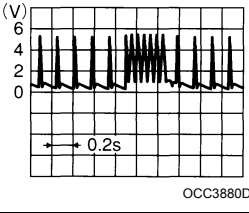
Diagnosis Procedure

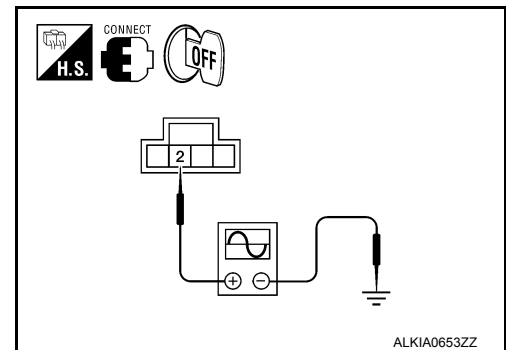
INFOID:000000009822836

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

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	
		Any button is pressed	



Is the inspection result normal?

- YES >> GO TO 2

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DLK

REMOTE KEYLESS ENTRY RECEIVER

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

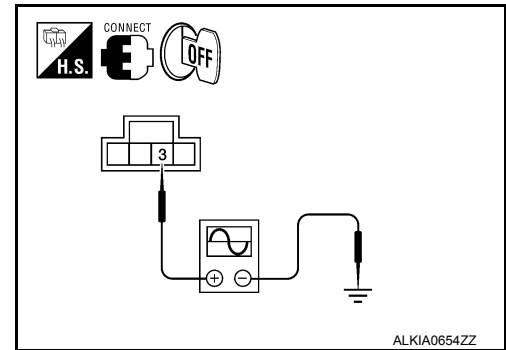
NO >> GO TO 5

2. REMOTE KEYLESS ENTRY RECEIVER VOLTAGE CIRCUIT INSPECTION

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

Terminals		Signal (Reference value)
(+)	(-)	
Remote keyless entry receiver connector	Terminal	
M25	3	Ground

PIIA2344E



Is the inspection result normal?

YES >> GO TO 3

NO >> GO TO 5

3. REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

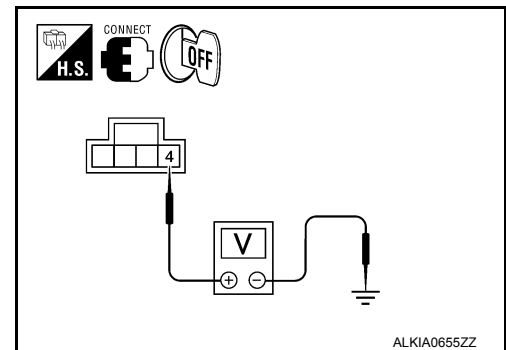
Check voltage between remote keyless entry receiver connector M25 terminal 4 and ground.

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

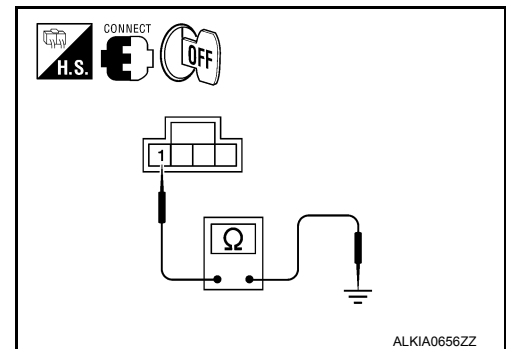
Check continuity between remote keyless entry receiver connector M25 terminal 1 and ground.

1 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to [IP-18, "Exploded View"](#).

NO >> GO TO 5



5. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

1. Disconnect remote keyless entry receiver and Intelligent Key unit connectors.

REMOTE KEYLESS ENTRY RECEIVER

[WITH INTELLIGENT KEY SYSTEM]

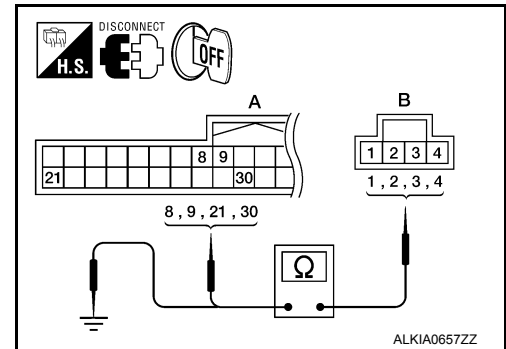
< DTC/CIRCUIT DIAGNOSIS >

2. 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.

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

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



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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY BATTERY AND FUNCTION

Description

INFOID:000000009822837

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:000000009822838

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1. CHECK FUNCTION

④ With CONSULT

Check remote keyless entry receiver "I-KEY LOCK, I-KEY UNLOCK, I-KEY TRUNK, I-KEY PANIC" in DATA MONITOR mode with CONSULT.

Monitor item	Condition
I-KEY LOCK I-KEY UNLOCK I-KEY TRUNK I-KEY PANIC	Checks whether value changes when operating Intelligent Key.

Is the inspection result normal?

- YES >> Intelligent Key is OK.
NO >> Refer to [DLK-108. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822839

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

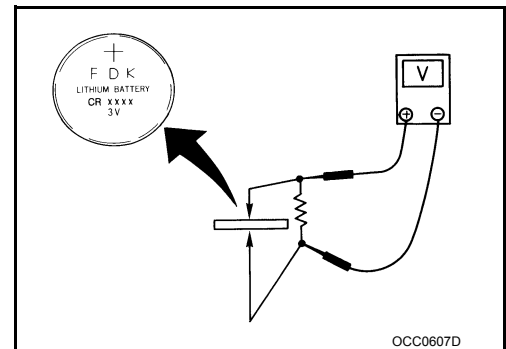
1. CHECK INTELLIGENT KEY BATTERY

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

INTELLIGENT KEY BATTERY AND FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

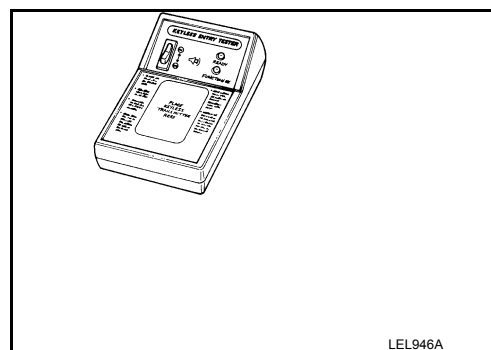
[WITH INTELLIGENT KEY SYSTEM]

Check keyfob function using Signal Tech II Tool J-50190 or Remote Keyless Entry Tester J-43241 (shown).

Does the test pass?

YES >> Keyfob is OK.

NO >> Replace keyfob. Refer to CONSULT Operation Manual.



INFOID:000000009822840

Component Inspection

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

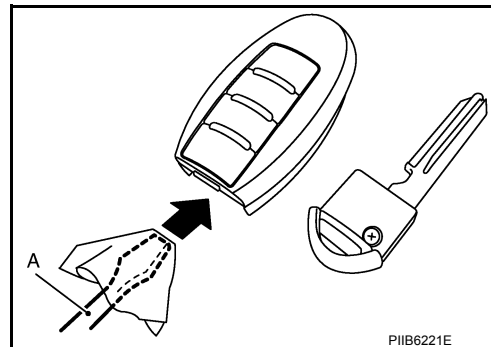
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength

1. REPLACE INTELLIGENT KEY BATTERY

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

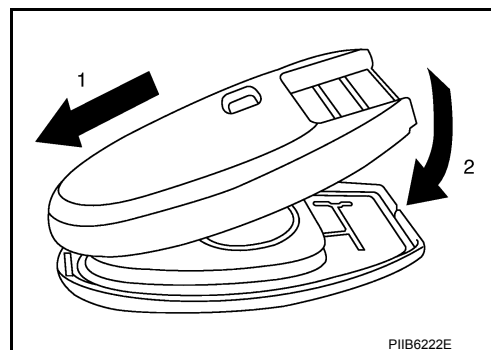
- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

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-105](#), "[Component Function Check](#)".



INFOID:000000009822841

Special Repair Requirement

Refer to CONSULT Operation Manual.

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HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HORN FUNCTION

Description

INFOID:000000009822842

Perform answer-back for each operation with horn.

Component Function Check

INFOID:000000009822843

1.CHECK FUNCTION

1. Select "HORN" in "ACTIVE TEST" mode with CONSULT.
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-110, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822844

Regarding Wiring Diagram information, refer to [DLK-173, "Wiring Diagram"](#).

1.CHECK HORN FUNCTION

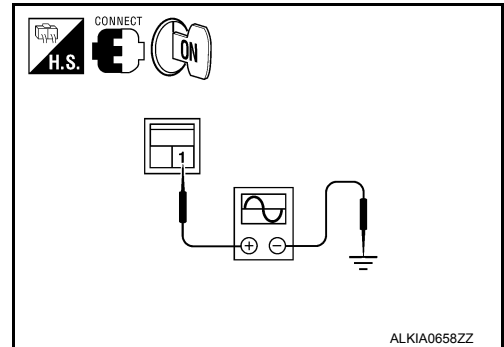
Check horn function with horn switch

Do the horns sound?

- YES >> GO TO 2
 NO >> Go to [HRN-4, "Wiring Diagram"](#).

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT.
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 3
 NO >> Replace IPDM E/R. Refer to [PCS-31, "Removal and Installation of IPDM E/R"](#).

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42, "Intermittent Incident"](#).

HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-31, "Removal and Installation of IPDM E/R"](#).

NO >> Repair or replace the malfunctioning part.

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COMBINATION METER DISPLAY FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

COMBINATION METER DISPLAY FUNCTION

Description

INFOID:000000009822845

Displays each operation method guide and warning for system malfunction.

Component Function Check

INFOID:000000009822846

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-112, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822847

1.CHECK COMBINATION METER

Refer to [MWI-44, "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-42, "Intermittent Incident"](#).

>> INSPECTION END.

WARNING CHIME FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

WARNING CHIME FUNCTION

Description

INFOID:000000009822848

Performs operation method guide and warning with buzzer.

Component Function Check

INFOID:000000009822849

1.CHECK FUNCTION

With CONSULT

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-113. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822850

1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to [MWI-98. "Removal and Installation"](#).

>> Inspection end.

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HAZARD FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HAZARD FUNCTION

Description

INFOID:000000009822851

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

Component Function Check

INFOID:000000009822852

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-114, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822853

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 [EXL-139, "Removal and Installation"](#).

KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

Diagnosis Procedure

INFOID:000000009822854

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

1. CHECK KEY SWITCH

With CONSULT

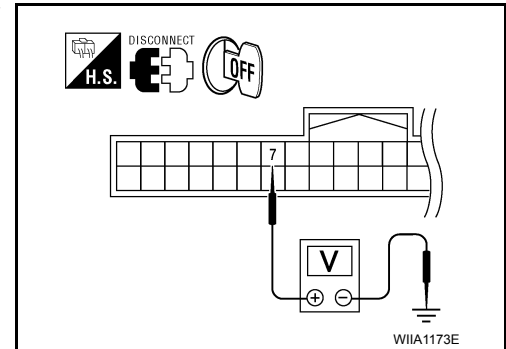
Check key switch ("KEY SW") in "DATA MONITOR" mode with CONSULT.

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

Without CONSULT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit harness connector.
3. 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

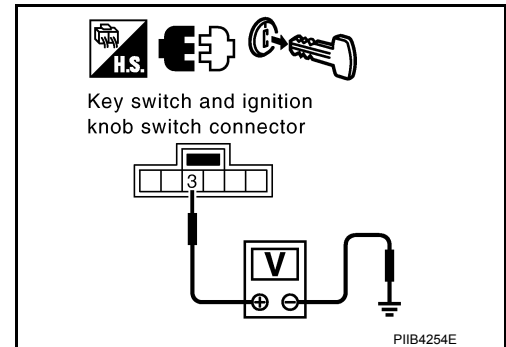
2. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

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 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)

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

- 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.

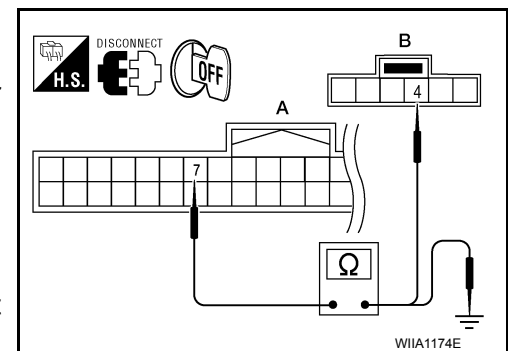
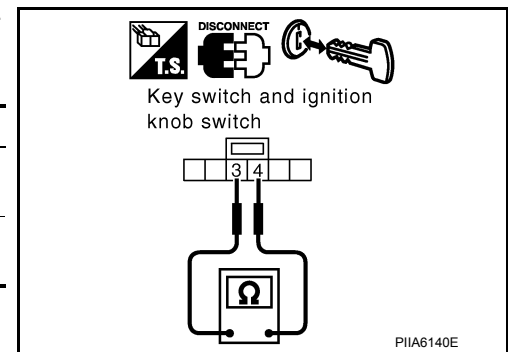
- Check continuity between Intelligent Key unit harness connector (A) M70 terminal 7 and ground.

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)

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

KEY SWITCH (BCM INPUT)

Diagnosis Procedure

INFOID:000000009822855

Regarding Wiring Diagram information, refer to [DLK-162. "Wiring Diagram - With Intelligent Key System"](#).

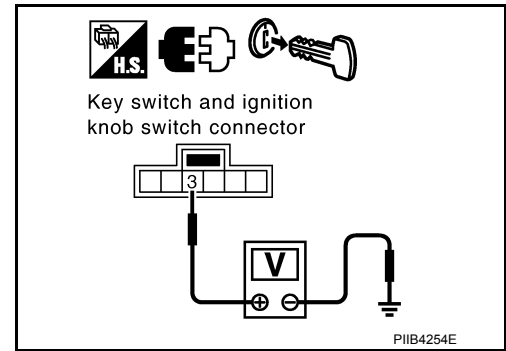
1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

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 inspection result normal?

- YES >> GO TO 2
 NO >> Check harness between key switch and ignition knob switch and fuse.



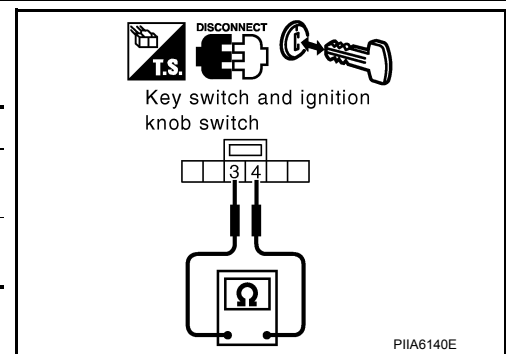
2. CHECK KEY SWITCH

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

Is the inspection result normal?

- YES >> GO TO 3
 NO >> 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.

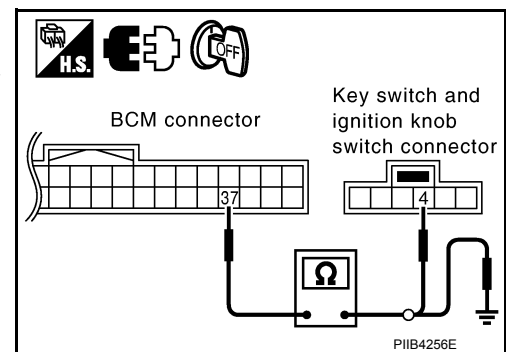
37 – 4 : Continuity should exist.

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

37 – Ground : Continuity should not exist.

Is the inspection result normal?

- YES >> Key switch (BCM input) circuit is OK.
 NO >> Repair or replace harness between key switch and ignition knob switch and BCM.



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DLK

IGNITION KNOB SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

IGNITION KNOB SWITCH

Diagnosis Procedure

INFOID:000000009822856

Regarding Wiring Diagram information, refer to [DLK-173. "Wiring Diagram"](#).

1. CHECK IGNITION KNOB SWITCH

④ With CONSULT

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

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. 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

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

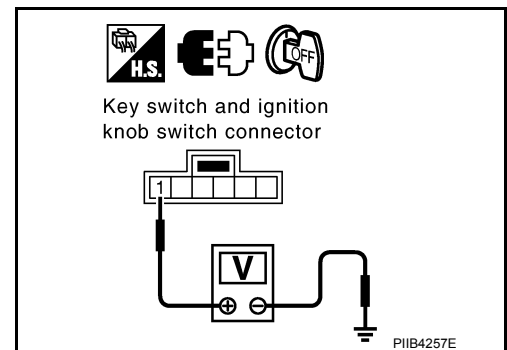
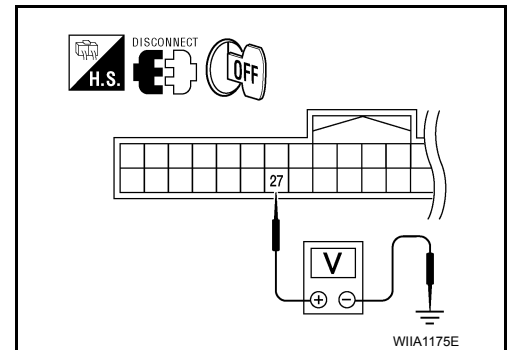
1 - Ground : **Battery voltage**

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

< DTC/CIRCUIT DIAGNOSIS >

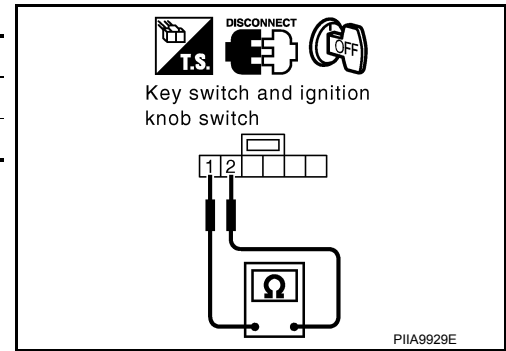
[WITH INTELLIGENT KEY SYSTEM]

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

- 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.

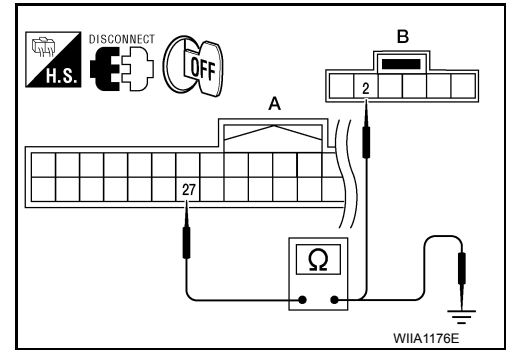
- Check continuity between Intelligent Key unit harness connector M70 terminal 27 and ground.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:000000009822857

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-36, "Diagnosis Procedure"](#)(HI) and [EXL-39, "Diagnosis Procedure"](#)(LO).

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

Diagnosis Procedure

INFOID:000000009822858

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-26. "Diagnosis Procedure"](#).

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AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

Self-Diagnosis Procedure

INFOID:00000009822859

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 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 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	DLK-126
Back door close switch (CLOSE)	OFF → ON	DLK-128
Back door close switch (CANCEL)	OFF → ON	DLK-129
Back door handle switch	OFF → ON	DLK-135
A/T shift selector (park switch)	P position → other than P position	DLK-103
Vehicle speed*	Vehicle speed	—
Remote keyless entry signal	Keyfob switch OFF → ON	DLK-105
Door lock/unlock signal	LOCK → UNLOCK	DLK-77
Pinch strip LH signal	OFF → ON	DLK-130
Pinch strip RH signal	OFF → ON	DLK-130

*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]

< DTC/CIRCUIT 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	DLK-240
3. Back door clutch diagnosis result	Back door clutch does not operate	DLK-240
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	DLK-240
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	DLK-240

Turn ignition switch OFF to end input signal check mode.

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POWER LIFTGATE SWITCH FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

POWER LIFTGATE SWITCH FUNCTION

Diagnosis Procedure

INFOID:000000009822860

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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

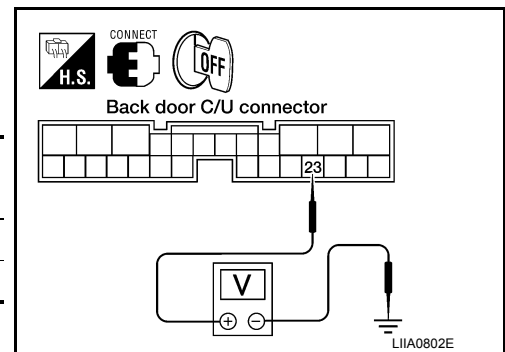
2. POWER LIFTGATE SWITCH SIGNAL INSPECTION

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.

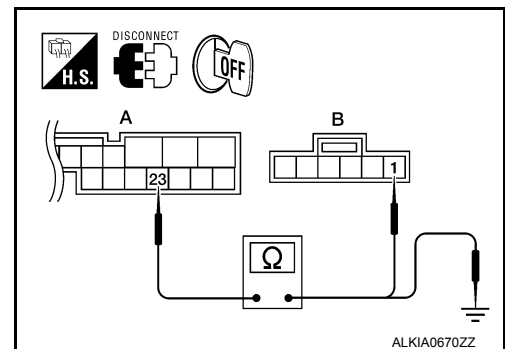
23 - 1 : Continuity should exist.

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.



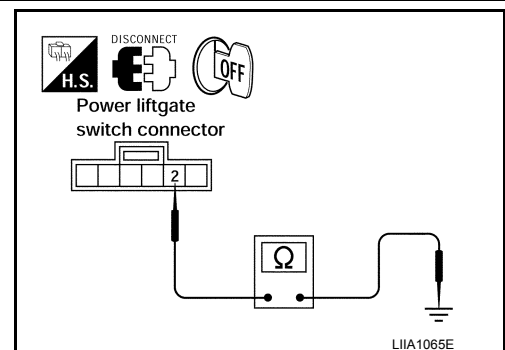
4. POWER LIFTGATE SWITCH GROUND INSPECTION

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.



POWER LIFTGATE SWITCH FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

5. POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

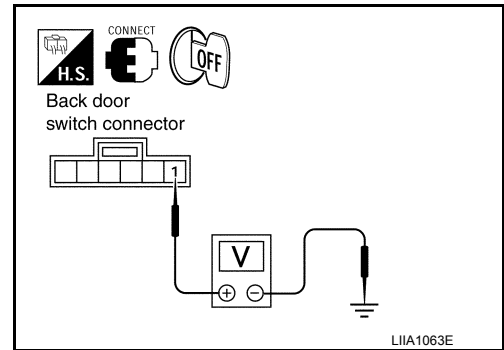
1. Reconnect back door control unit.
2. Ensure liftgate is closed.
3. Check voltage between power liftgate switch connector M92 terminal 1 and ground.

1 - Ground

:Approx. battery voltage

Is the inspection result normal?

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



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GLASS HATCH AJAR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

GLASS HATCH AJAR SWITCH

Diagnosis Procedure

INFOID:00000009822861

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

 With CONSULT


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

• When glass hatch is open:

TRNK OPN MNTR : ON

• When glass hatch is closed:

TRNK OPN MNTR : OFF

 Without CONSULT

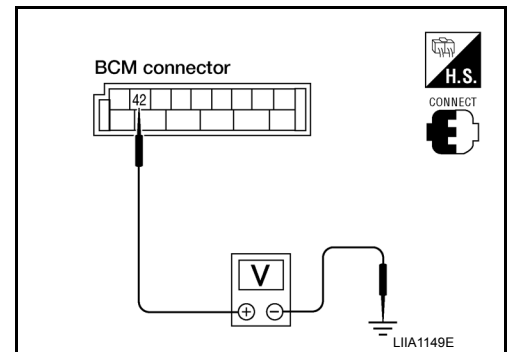
Check voltage between BCM connector M19 terminal 42 and ground.

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.

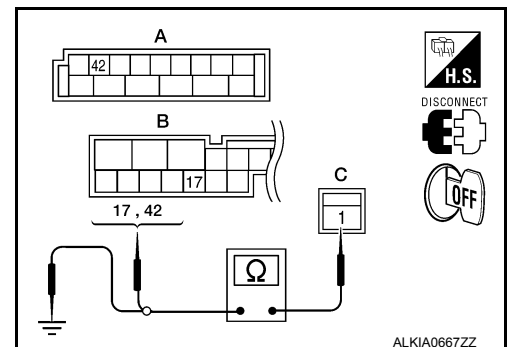
Is the inspection result normal?

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.



GLASS HATCH AJAR SWITCH

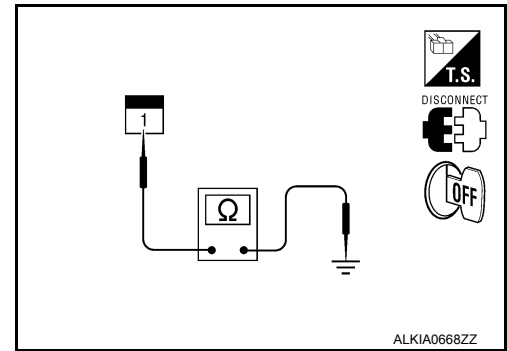
< DTC/CIRCUIT DIAGNOSIS >

[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.



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BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

Diagnosis Procedure

INFOID:00000009822862

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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

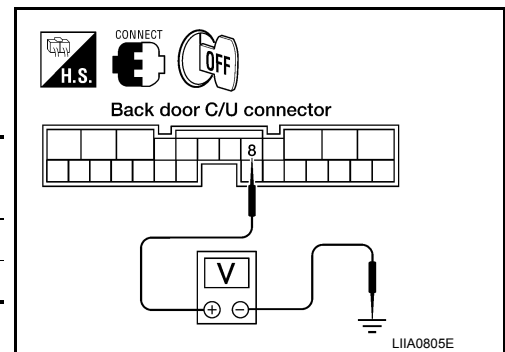
2. BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

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.

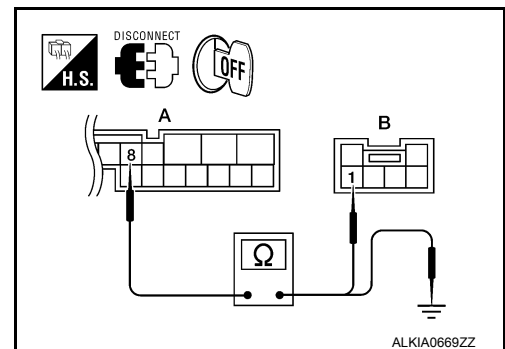
8 - 1 : Continuity should exist.

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.



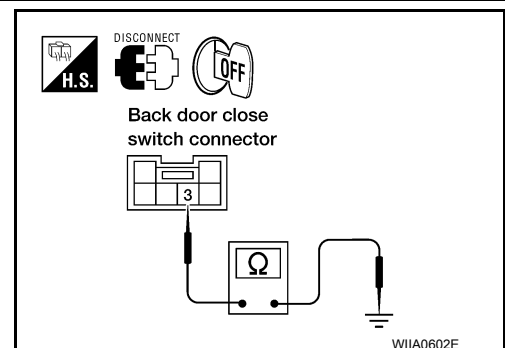
4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

Diagnosis Procedure

INFOID:000000009822863

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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

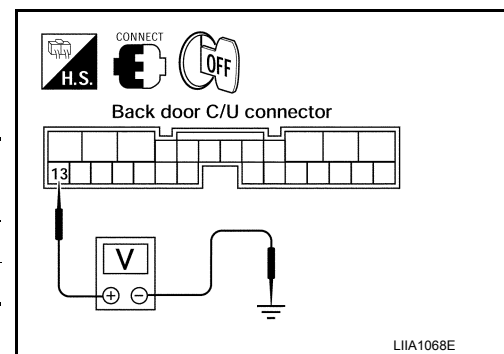
2. BACK DOOR CLOSE (CANCEL) SWITCH SIGNAL INSPECTION

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.

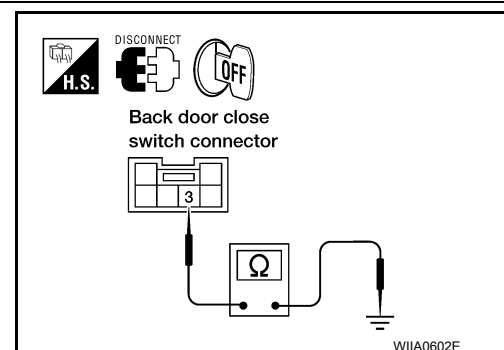
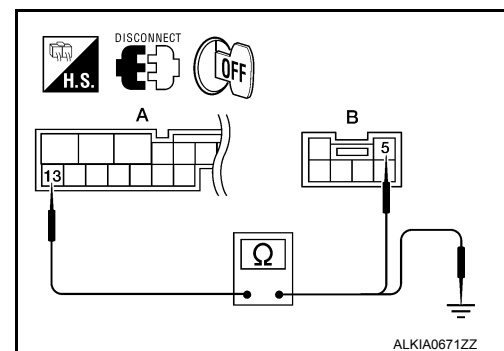
4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

PINCH STRIP SYSTEM

Diagnosis Procedure

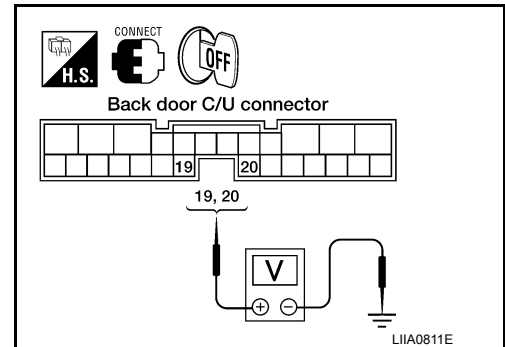
INFOID:00000009822864

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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	5
20	Ground	Pinch strip LH operation	0
		Other	5



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.

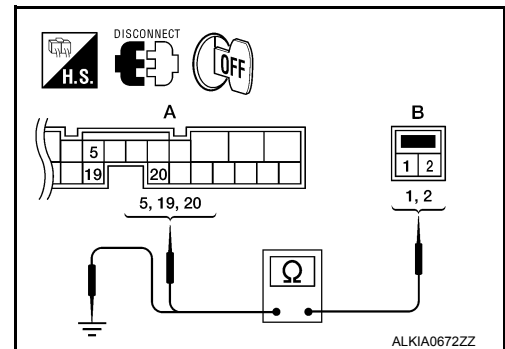
LH: 1 - 20 : Continuity should exist.

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.

BACK DOOR WARNING CHIME SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

BACK DOOR WARNING CHIME SYSTEM

Diagnosis Procedure

INFOID:000000009822865

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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.

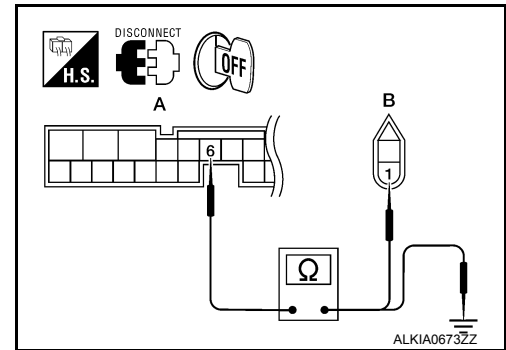
3. Check continuity between back door control unit connector (A) B55 terminal 6 and ground.

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.

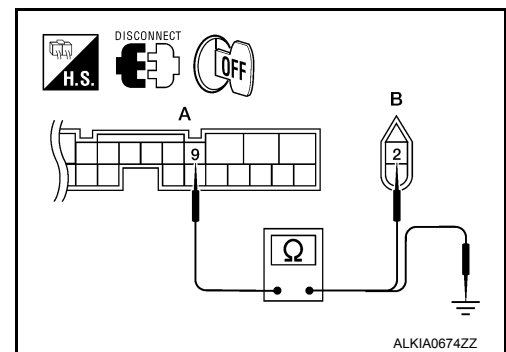
2. Check continuity between back door control unit connector (A) B55 terminal 9 and ground.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HALF-LATCH SWITCH SYSTEM

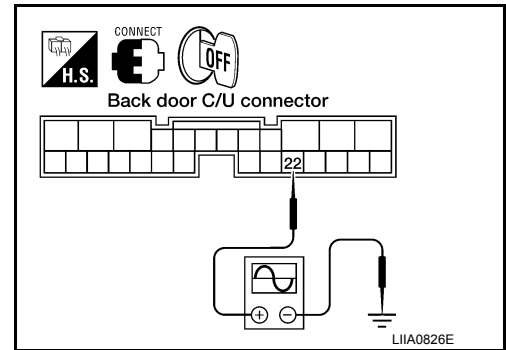
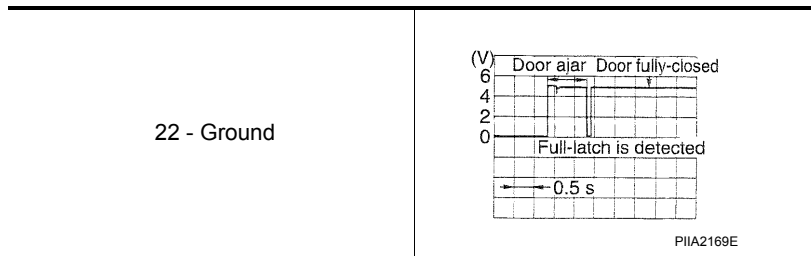
Diagnosis Procedure

INFOID:000000009822866

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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.

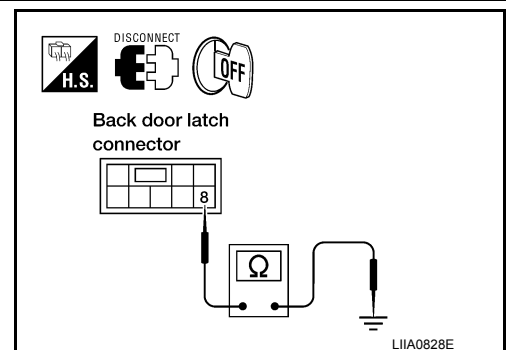
3. HALF-LATCH SWITCH GROUND INSPECTION

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.



BACK DOOR OPEN SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR OPEN SWITCH SYSTEM

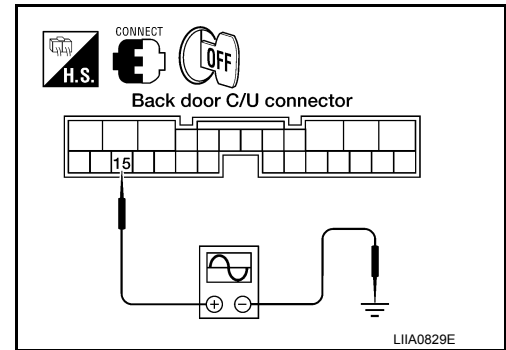
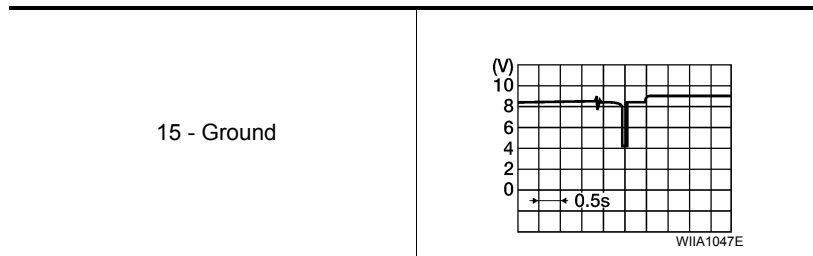
Diagnosis Procedure

INFOID:00000009822867

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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.

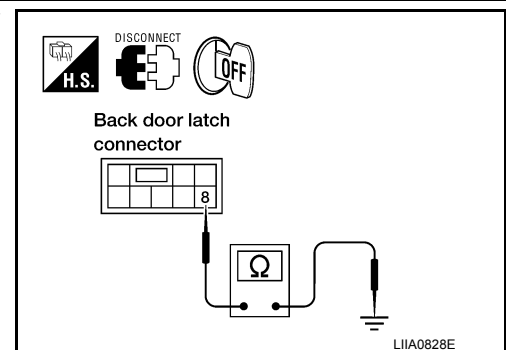
3. OPEN SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE SWITCH SYSTEM

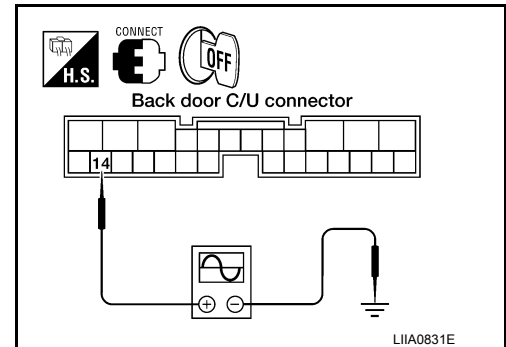
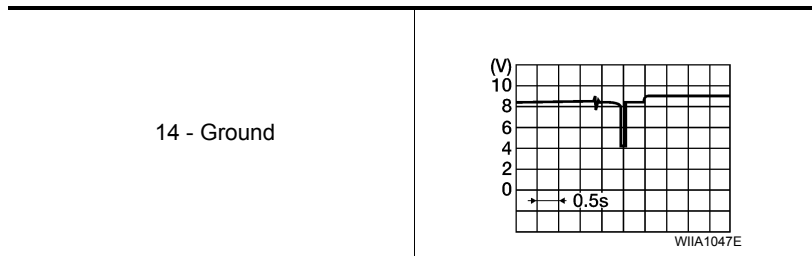
Diagnosis Procedure

INFOID:00000009822868

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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.

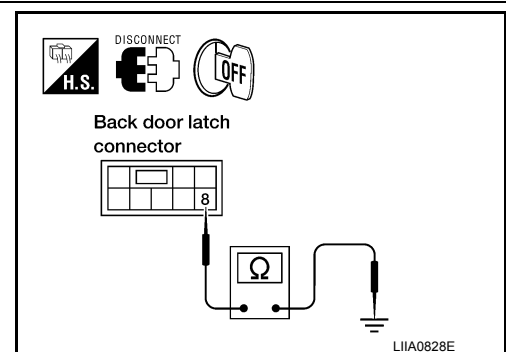
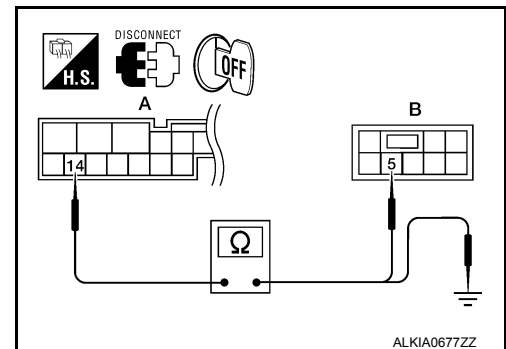
3. CLOSE SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR HANDLE SWITCH SYSTEM

Diagnosis Procedure

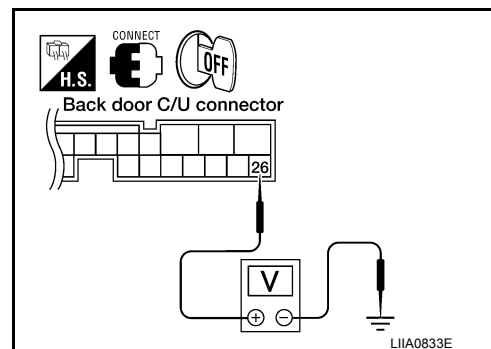
INFOID:00000009822869

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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 3
NO >> Repair the harness between the back door handle switch and the back door control unit.

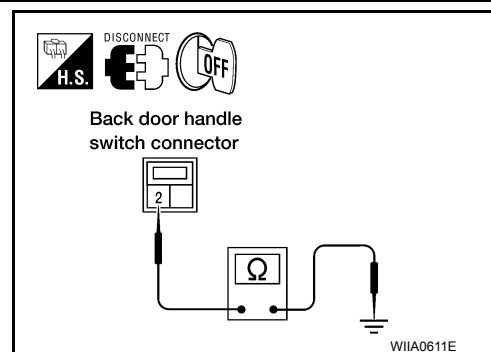
3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

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]

< DTC/CIRCUIT DIAGNOSIS >

CINCH LATCH MOTOR SYSTEM

Diagnosis Procedure

INFOID:000000009822870

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

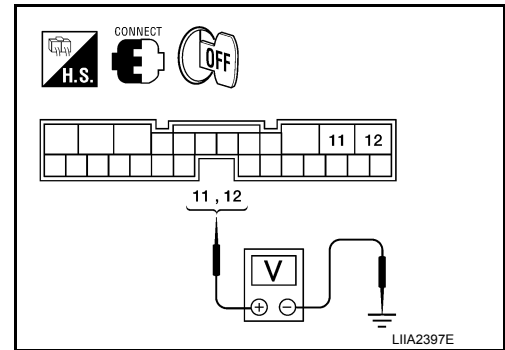
1. CINCH LATCH MOTOR SIGNAL INSPECTION

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.

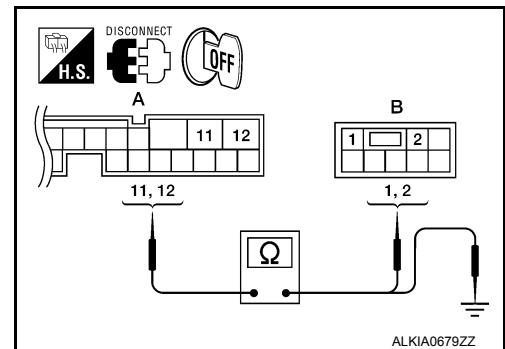
11 - 2 : Continuity should exist.

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

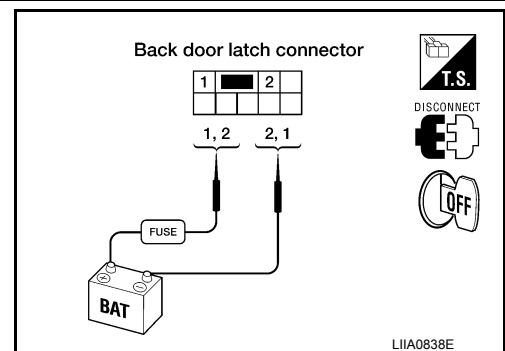
Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

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.



INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

Description

INFOID:000000009822871

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:000000009822872

Regarding Wiring Diagram information, refer to [DLK-192, "Wiring Diagram - With Intelligent Key System"](#).

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-135, "Diagnosis Procedure"](#).

2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob operate correctly?

YES >> GO TO 3

NO >> Refer to [DLK-108, "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.

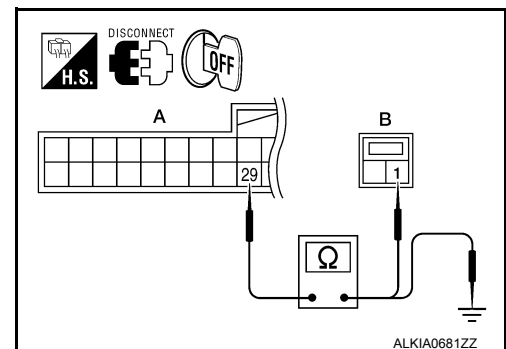
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 29 and ground.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL

Description

INFOID:000000009822873

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:000000009822874

Regarding Wiring Diagram information, refer to [DLK-192. "Wiring Diagram - With Intelligent Key System"](#).

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-124. "Diagnosis Procedure"](#).

2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob operate correctly?

YES >> GO TO 3

NO >> Refer to [DLK-108. "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.

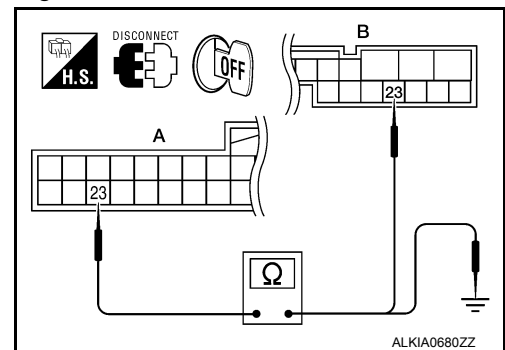
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 23 and ground.

23 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> Replace Intelligent Key unit.

NO >> Repair or replace the harness as necessary.



HOMELINK UNIVERSAL TRANSCEIVER

< DTC/CIRCUIT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Description

INFOID:000000009822875

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:000000009822876

1.CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

Is the inspection result normal?

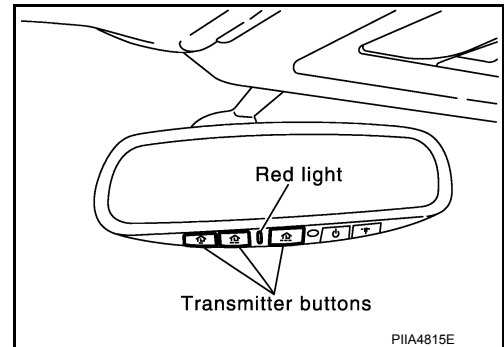
- YES >> GO TO 2
- NO >> Receiver or hand-held transmitter is malfunctioning.

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-139, "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).

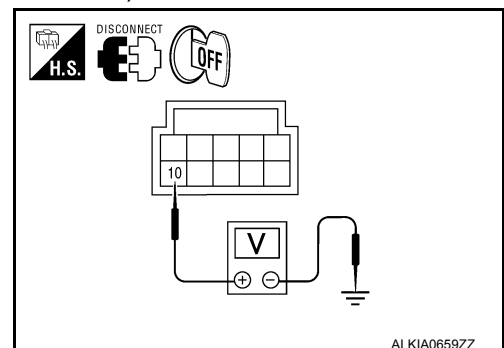
Diagnosis Procedure

INFOID:000000009822877

Regarding Wiring Diagram information, refer to [DLK-160, "Wiring Diagram"](#).

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

[WITH INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R7	10	Ground	Ignition switch position: LOCK	Battery voltage

Is the inspection result normal?

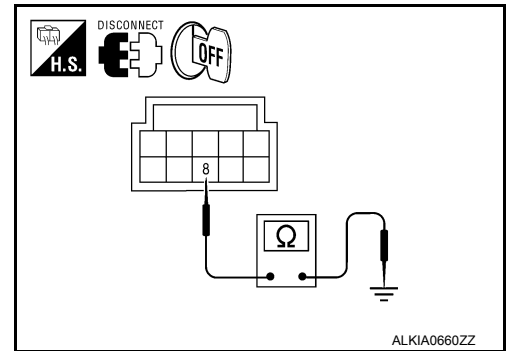
YES >> GO TO 2

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
R7	8		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> Inspection End.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000009822878

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength
- Test remote keyless entry keyfob relative signal strength

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF or ON	Off
	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm ² , psi
AUTO LIGHT SW	Lighting switch OFF	Off
	Lighting switch AUTO	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
BRAKE SW	Brake pedal released	Off
	Brake pedal applied	On
BUCKLE SW	Seat belt buckle unfastened	Off
	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
	Cargo lamp switch ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
	Front door RH opened	On
DOOR SW-DR	Front door LH closed	Off
	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
	Rear door LH opened	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
DOOR SW-RR	Rear door RH closed	Off
	Rear door RH opened	On
FAN ON SIG	Blower motor fan switch OFF	Off
	Blower motor fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
	When hazard switch is pressed	On
HEAD LAMP SW1	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HEAD LAMP SW2	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
	ID registration of rear right tire complete	DONE
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK ¹	LOCK button of Intelligent Key is not pressed	Off
	LOCK button of Intelligent Key is pressed	On
I-KEY PANIC ¹	PANIC button of Intelligent Key is not pressed	Off
	PANIC button of Intelligent Key is pressed	On
I-KEY PW DWN ¹	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed for greater than 3 seconds and driver's window operating in DOWN direction	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
I-KEY UNLOCK ¹	UNLOCK button of Intelligent Key is not pressed	Off	A
	UNLOCK button of Intelligent Key is pressed	On	
KEY CYL LK-SW	Door key cylinder LOCK position	Off	B
	Door key cylinder other than LOCK position	On	
KEY CYL UN-SW	Door key cylinder UNLOCK position	Off	C
	Door key cylinder other than UNLOCK position	On	
KEY ON SW	Mechanical key is removed from key cylinder	Off	
	Mechanical key is inserted to key cylinder	On	D
KEYLESS LOCK ²	LOCK button of key fob is not pressed	Off	
	LOCK button of key fob is pressed	On	E
KEYLESS PANIC ²	PANIC button of key fob is not pressed	Off	
	PANIC button of key fob is pressed	On	F
KEYLESS UNLOCK ²	UNLOCK button of key fob is not pressed	Off	
	UNLOCK button of key fob is pressed	On	G
LIGHT SW 1ST	Lighting switch OFF	Off	
	Lighting switch 1st	On	H
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	Off	
	Ignition switch ON	On	I
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5V	
	Dark outside of the vehicle	Close to 0V	J
PASSING SW	Other than lighting switch PASS	Off	
	Lighting switch PASS	On	K
PUSH SW ¹	Return to ignition switch to LOCK position	Off	
	Press ignition switch	On	L
REAR DEF SW	Rear window defogger switch OFF	Off	
	Rear window defogger switch ON	On	DLK
RR WASHER SW	Rear washer switch OFF	Off	
	Rear washer switch ON	On	M
RR WIPER INT	Rear wiper switch OFF	Off	
	Rear wiper switch INT	On	N
RR WIPER ON	Rear wiper switch OFF	Off	
	Rear wiper switch ON	On	O
RR WIPER STOP	Rear wiper stop position	Off	
	Other than rear wiper stop position	On	P
RR WIPER STP2	Rear wiper stop position	Off	
	Other than rear wiper stop position	On	
TURN SIGNAL L	Turn signal switch OFF	Off	
	Turn signal switch LH	On	
TURN SIGNAL R	Turn signal switch OFF	Off	
	Turn signal switch RH	On	
VEHICLE SPEED	While driving	Equivalent to speedometer reading	
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off	
	Low tire pressure warning lamp in combination meter ON	On	

1: With Intelligent Key

BCM (BODY CONTROL MODULE)

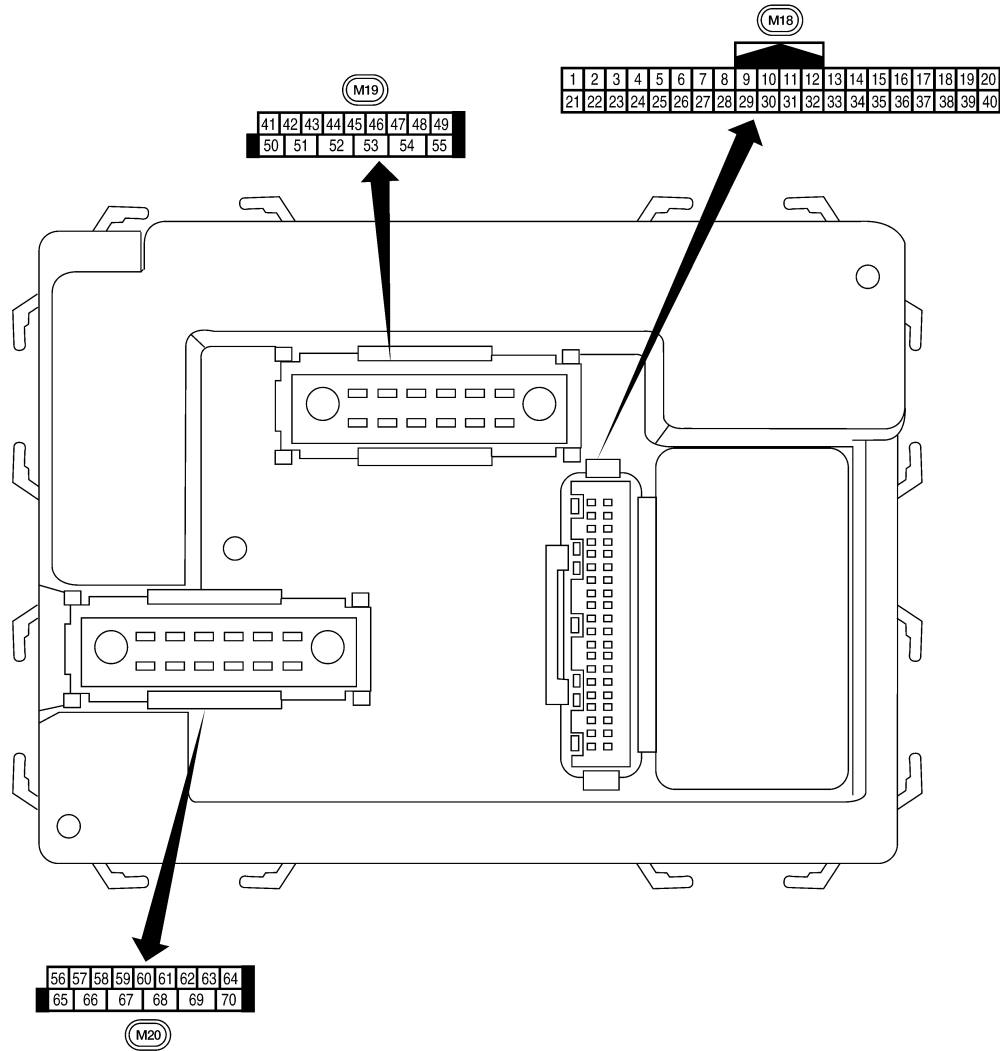
< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

2: With remote keyless entry system

Terminal Layout

INFOID:000000009822879



Physical Values


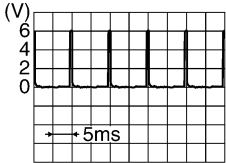

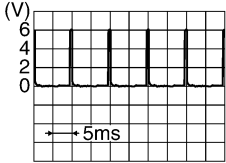
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INFOID:000000009822880

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	V	Combination switch input 1				
9	R/G	Stop lamp switch	Input	OFF	Brake pedal depressed	Battery voltage
					Brake pedal released	0V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

A
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DLK

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

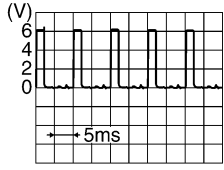
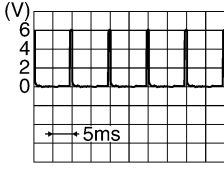
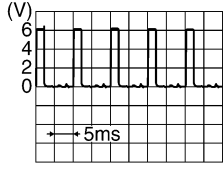

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	<p style="text-align: right;">LIA1893E</p>
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	<p style="text-align: right;">LIA1894E</p>
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	<p style="text-align: right;">LIA1895E</p>
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	<p style="text-align: right;">PIIA2344E</p>
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
36	R/W	Combination switch output 1				
37 ¹	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key removed	0V
37 ²	B/R	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
41	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery

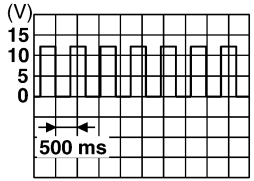
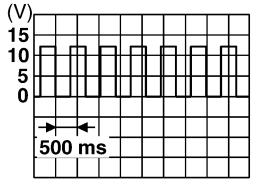
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

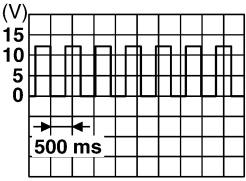
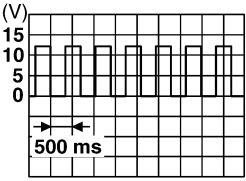
[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
43	R/B	Back door switch (without power back door) or back door latch (door ajar switch) (with power back door)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	Y/B	Trailer turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
56	R/G	Battery saver output	Output	OFF	10 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch	ON (open) 0V OFF (closed) Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

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DLK

1: With Intelligent Key system

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

2: With remote keyless entry system

Fail Safe

INFOID:000000009822881

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID:000000009822882

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">• U1000: CAN COMM CIRCUIT
2	<ul style="list-style-type: none">• B2190: NATS ANTENNA AMP• B2191: DIFFERENCE OF KEY• B2192: ID DISCORD BCM-ECM• B2193: CHAIN OF BCM-ECM• B2013: STRG COMM 1• B2552: INTELLIGENT KEY• B2590: NATS MALFUNCTION
3	<ul style="list-style-type: none">• C1729: VHCL SPEED SIG ERR• C1735: IGNITION SIGNAL
4	<ul style="list-style-type: none">• C1708: [NO DATA] FL• C1709: [NO DATA] FR• C1710: [NO DATA] RR• C1711: [NO DATA] RL• C1712: [CHECKSUM ERR] FL• C1713: [CHECKSUM ERR] FR• C1714: [CHECKSUM ERR] RR• C1715: [CHECKSUM ERR] RL• C1716: [PRESSDATA ERR] FL• C1717: [PRESSDATA ERR] FR• C1718: [PRESSDATA ERR] RR• C1719: [PRESSDATA ERR] RL• C1720: [CODE ERR] FL• C1721: [CODE ERR] FR• C1722: [CODE ERR] RR• C1723: [CODE ERR] RL• C1724: [BATT VOLT LOW] FL• C1725: [BATT VOLT LOW] FR• C1726: [BATT VOLT LOW] RR• C1727: [BATT VOLT LOW] RL

DTC Index

INFOID:000000009822883

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.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-29
B2013: STRG COMM 1	—	—	—	SEC-30
B2190: NATS ANTENNA AMP	—	—	—	SEC-33 (with I- Key), SEC-140 (without I-Key)
B2191: DIFFERENCE OF KEY	—	—	—	SEC-36 (with I- Key), SEC-143 (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-37 (with I- Key), SEC-144 (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-39 (with I- Key), SEC-146 (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	SEC-41
B2590: NATS MALFUNCTION	—	—	—	SEC-42
C1708: [NO DATA] FL	—	—	—	WT-13
C1709: [NO DATA] FR	—	—	—	WT-15
C1710: [NO DATA] RR	—	—	—	WT-15
C1711: [NO DATA] RL	—	—	—	WT-15
C1712: [CHECKSUM ERR] FL	—	—	—	WT-15
C1713: [CHECKSUM ERR] FR	—	—	—	WT-15
C1714: [CHECKSUM ERR] RR	—	—	—	WT-15
C1715: [CHECKSUM ERR] RL	—	—	—	WT-15
C1716: [PRESSDATA ERR] FL	—	—	—	WT-17
C1717: [PRESSDATA ERR] FR	—	—	—	WT-15
C1718: [PRESSDATA ERR] RR	—	—	—	WT-15
C1719: [PRESSDATA ERR] RL	—	—	—	WT-15
C1720: [CODE ERR] FL	—	—	—	WT-15
C1721: [CODE ERR] FR	—	—	—	WT-15
C1722: [CODE ERR] RR	—	—	—	WT-15
C1723: [CODE ERR] RL	—	—	—	WT-15
C1724: [BATT VOLT LOW] FL	—	—	—	WT-15
C1725: [BATT VOLT LOW] FR	—	—	—	WT-15
C1726: [BATT VOLT LOW] RR	—	—	—	WT-15
C1727: [BATT VOLT LOW] RL	—	—	—	WT-15
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19
C1735: IGN_CIRCUIT_OPEN	—	—	—	WT-20

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INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY UNIT

Reference Value

INFOID:000000009822884

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
PUSH SW	When ignition knob switch (push switch) is released	OFF
	When ignition knob switch (push switch) is pushed	ON
KEY SW	When ignition key is removed from ignition cylinder	OFF
	When ignition key is inserted into ignition cylinder	ON
DR REQ SW	When left door request switch is not pressed (driver side)	OFF
	When left door request switch is pressed (driver side)	ON
AS REQ SW	When right door request switch is not pressed (passenger side)	OFF
	When right door request switch is pressed (passenger side)	ON
IGN SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
ACC SW	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
STOP LAMP SW	When the brake pedal is not depressed	OFF
	When the brake pedal is depressed	ON
P RANGE SW	When selector lever is in any position other than P or N	OFF
	When selector lever is in P or N position	ON
DOOR LOCK SIG	Other than power door lock switch LOCK	OFF
	Power door lock switch LOCK	ON
DOOR UNLOCK SIG	Other than power door lock switch UNLOCK	OFF
	Power door lock switch UNLOCK	ON
KEYLESS-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
	When PANIC button of Intelligent Key is pressed	ON
KEYLS PBD SIG	When liftgate button of Intelligent Key is not pressed and held	OFF
	When liftgate button of Intelligent Key is pressed and held	ON
DOOR SW-DR	Driver door closed	CLOSE
	Driver door opened	OPEN
DOOR SW-AS	Passenger door closed	CLOSE
	Passenger door opened	OPEN
DOOR SW-RR	Rear door RH closed	CLOSE
	Rear door RH opened	OPEN
DOOR SW-RL	Rear door LH closed	CLOSE
	Rear door LH opened	OPEN
DOOR BK SW	Back door opener switch OFF	CLOSE
	While the back door opener switch is turned ON	OPEN
VEHICLE SPEED	While driving	Equivalent to speedometer reading

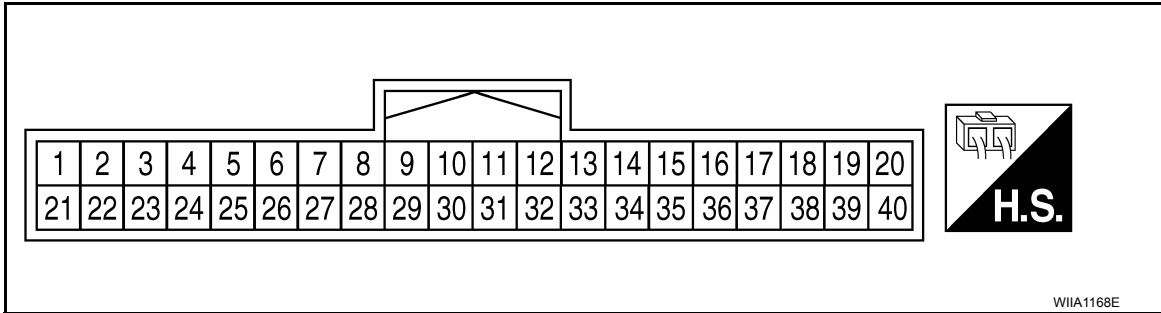
INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal Layout - Intelligent Key Unit

INFOID:000000009822885



Physical Values - Intelligent Key Unit

INFOID:000000009822886

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 key-fob.	
				Stand-by	
11	Y	Power source (Fuse)	—	—	Battery voltage
12	B	Ground	—	—	0

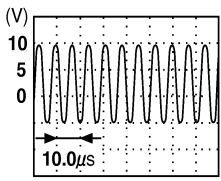
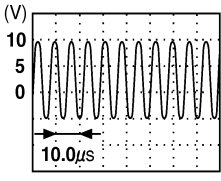
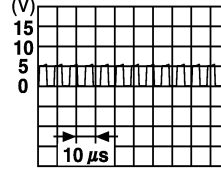
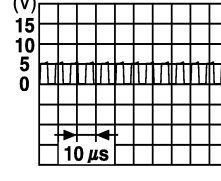
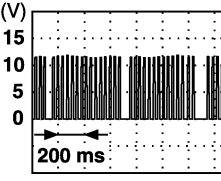
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INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

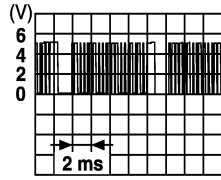
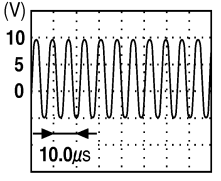
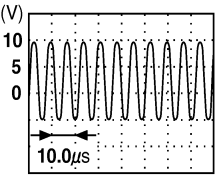
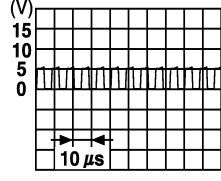
[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
13	B/W	Center console area antenna (front) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
14	W/G	Center console area antenna (front) (-) signal			
15	G	Center console area antenna (rear) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
16	L	Center console area antenna (rear) (-) signal			
17	W/L	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
26	R/G	Stop lamp switch	—	Brake pedal depressed	Battery voltage
				Brake pedal released	0
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

INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
29	LG/R	Back door open switch input	—	Back door handle switch ON.	0
				Back door handle switch OFF.	Battery voltage
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.	 <p style="text-align: right; font-size: small;">SIIA1911J</p>
				Other than above	5
33	W	Overhead console area antenna (+) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	 <p style="text-align: right; font-size: small;">PIIB7441E</p>
34	BR	Overhead console area antenna (-) signal			
35	O	Luggage area antenna (+) signal	LOCK	Back door open → all doors closed	 <p style="text-align: right; font-size: small;">PIIB7441E</p>
36	R	Luggage area antenna (-) signal			
37	LG	Front outside antenna (+) signal RH	LOCK	Press front door request switch RH.	 <p style="text-align: right; font-size: small;">SIIA1910J</p>
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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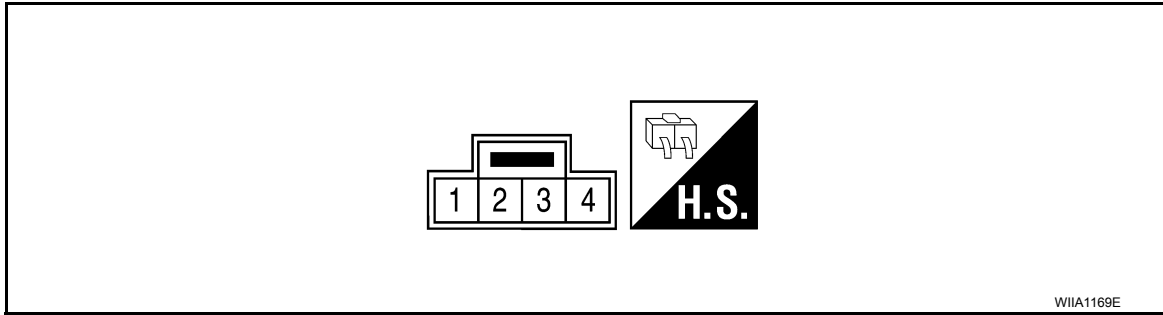
INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal Layout - Steering Lock Solenoid

INFOID:000000009822887



Physical Values - Steering Lock Solenoid

INFOID:000000009822888

Terminal	Wire Color	Signal Designation	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
1	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.	
				Other than the above	5
4	B	Steering lock solenoid ground	—	—	0

Fail Safe

INFOID:000000009822889

Fail-safe operation

The Intelligent Key system operation will be interrupted if the Intelligent Key unit loses power or communication with the BCM.

DTC Inspection Priority Chart

INFOID:000000009822890

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"> U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)

INTELLIGENT KEY UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Priority	DTC
2	<ul style="list-style-type: none"> • B2190: NATS ANTENNA AMP • B2191: DIFFERENCE OF KEY • B2192: ID DISCORD BCM-ECM • B2193: CHAIN OF BCM-ECM • B2194: ID DISCORD IMMU-I-KEY
3	<ul style="list-style-type: none"> • B2013: ID DISCORD BCM-S/L • B2552: INTELLIGENT KEY • B2590: ID DISCORD BCM-I-KEY • P1610: LOCK MODE • P1611: ID DISCORD, IMMU-ECM • P1612: CHAIN OF ECM-IMMU • P1614: CHAIN OF IMMU-KEY • P1615: DIFFERENCE OF KEY

DTC Index

INFOID:000000009822891

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 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	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warn- ing lamp ON	Reference page
No DTC is detected. Further testing may be required.	—	—	—	—
U1000: CAN COMM	—	—	—	DLK-61
U1010: CONTROL UNIT(CAN)	—	—	—	DLK-62
B2013: ID DISCORD BCM-S/L	×	×	—	SEC-30
B2190: NATS ANTENNA AMP	×	—	—	SEC-33
B2191: DIFFERENCE OF KEY	×	—	—	SEC-36
B2192: ID DISCORD BCM-ECM	×	—	—	SEC-37
B2193: CHAIN OF BCM-ECM	×	—	—	SEC-39
B2194: ID DISCORD IMMU-I-KEY	×	—	—	SEC-40
B2552: INTELLIGENT KEY	—	×	×	SEC-41
B2590: IID DISCORD BCM-I-KEY	—	×	×	SEC-42
P1610: LOCK MODE	—	×	×	SEC-43
P1611: ID DISCORD, IMMU-ECM	—	×	×	SEC-44
P1612: CHAIN OF ECM-IMMU	—	—	×	SEC-46
P1614: CHAIN OF IMMU-KEY	×	×	×	SEC-47
P1615: DIFFERENCE OF KEY	—	×	×	SEC-50

BACK DOOR CONTROL UNIT

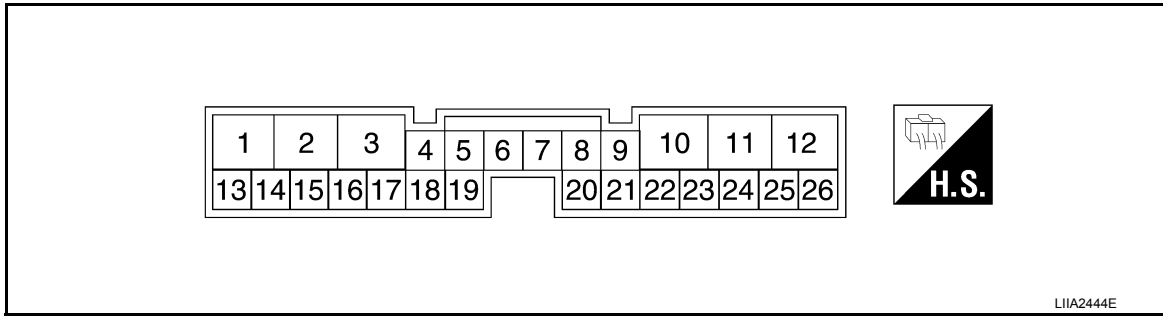
< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

BACK DOOR CONTROL UNIT

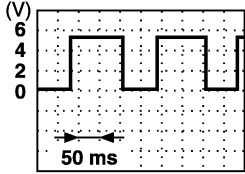
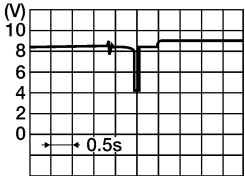
Terminal Layout

INFOID:000000009822892



Physical Values

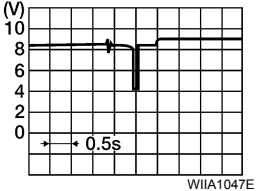
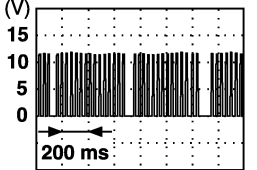
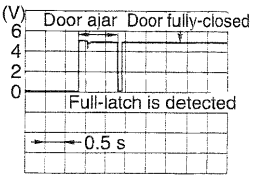
INFOID:000000009822893

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  PIIA3278E
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	 WIIA1047E

BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
15	O/L	Open switch signal	While fully closing back door	 <p style="font-size: small; text-align: right;">WIIA1047E</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	V/G	Pinch strip LH	Detecting obstruction	0
			Other	5
21	W/V	Power window serial link	—	 <p style="font-size: small; text-align: right;">PIIA2344E</p>
22	BR	Half switch signal	Back door half latch position	 <p style="font-size: small; text-align: right;">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

Fail Safe

INFOID:000000009822894

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.

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DLK

INTEGRATED HOMELINK TRANSMITTER

< WIRING DIAGRAM >

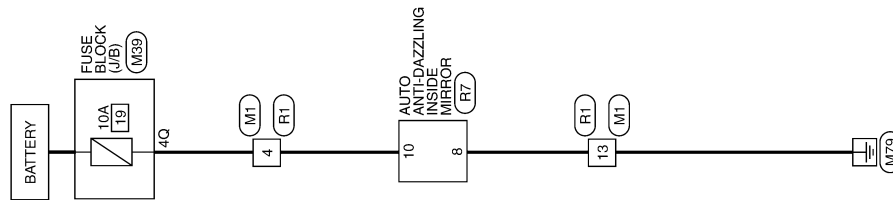
[WITH INTELLIGENT KEY SYSTEM]

WIRING DIAGRAM

INTEGRATED HOMELINK TRANSMITTER

Wiring Diagram

INFOID:000000009822895



INTEGRATED HOMELINK TRANSMITTER

ABKWA1518GB

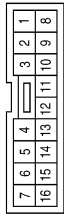
INTEGRATED HOMELINK TRANSMITTER

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

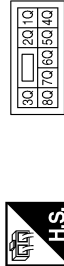
INTEGRATED HOMELINK TRANSMITTER CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



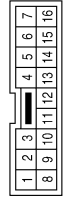
Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



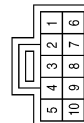
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

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.	R7
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
8	B	-
10	Y/R	-

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POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

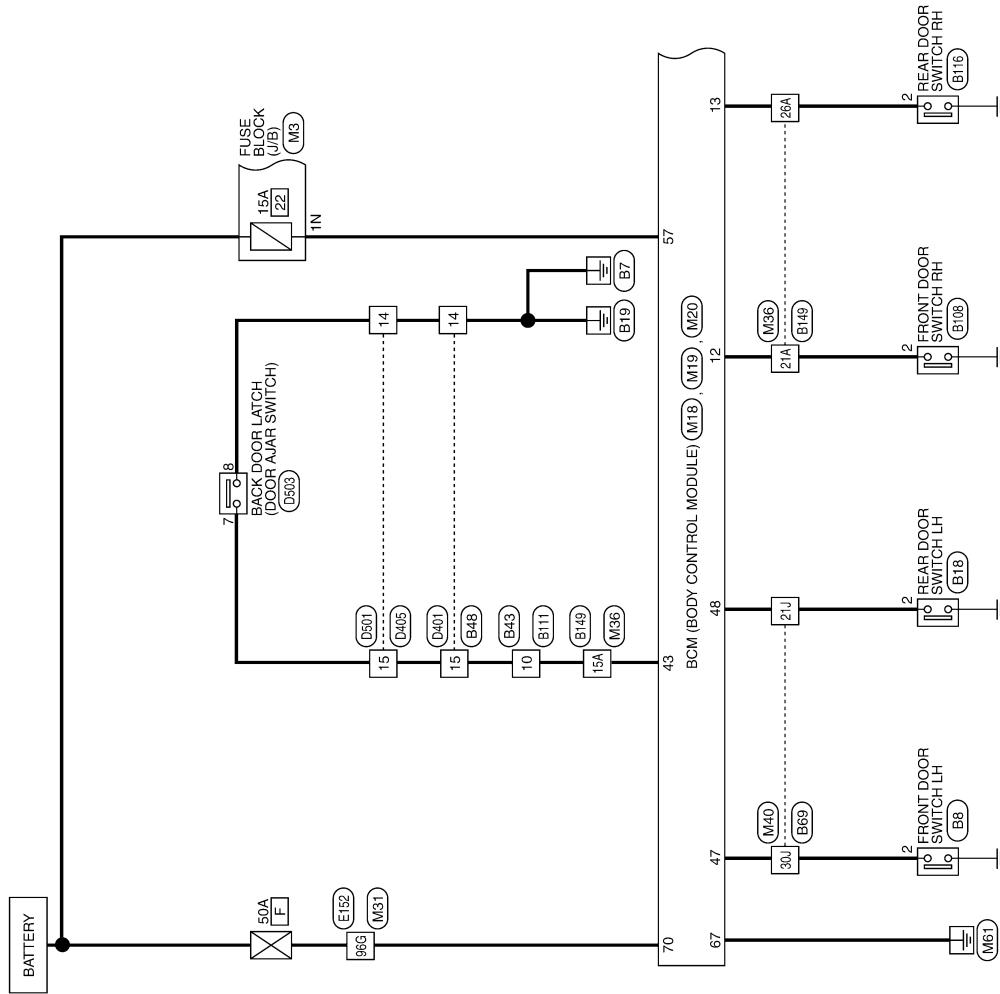
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POWER DOOR LOCK SYSTEM

Wiring Diagram - With Intelligent Key System

INFOID:00000009822896

POWER DOOR LOCK SYSTEM - WITH INTELLIGENT KEY SYSTEM

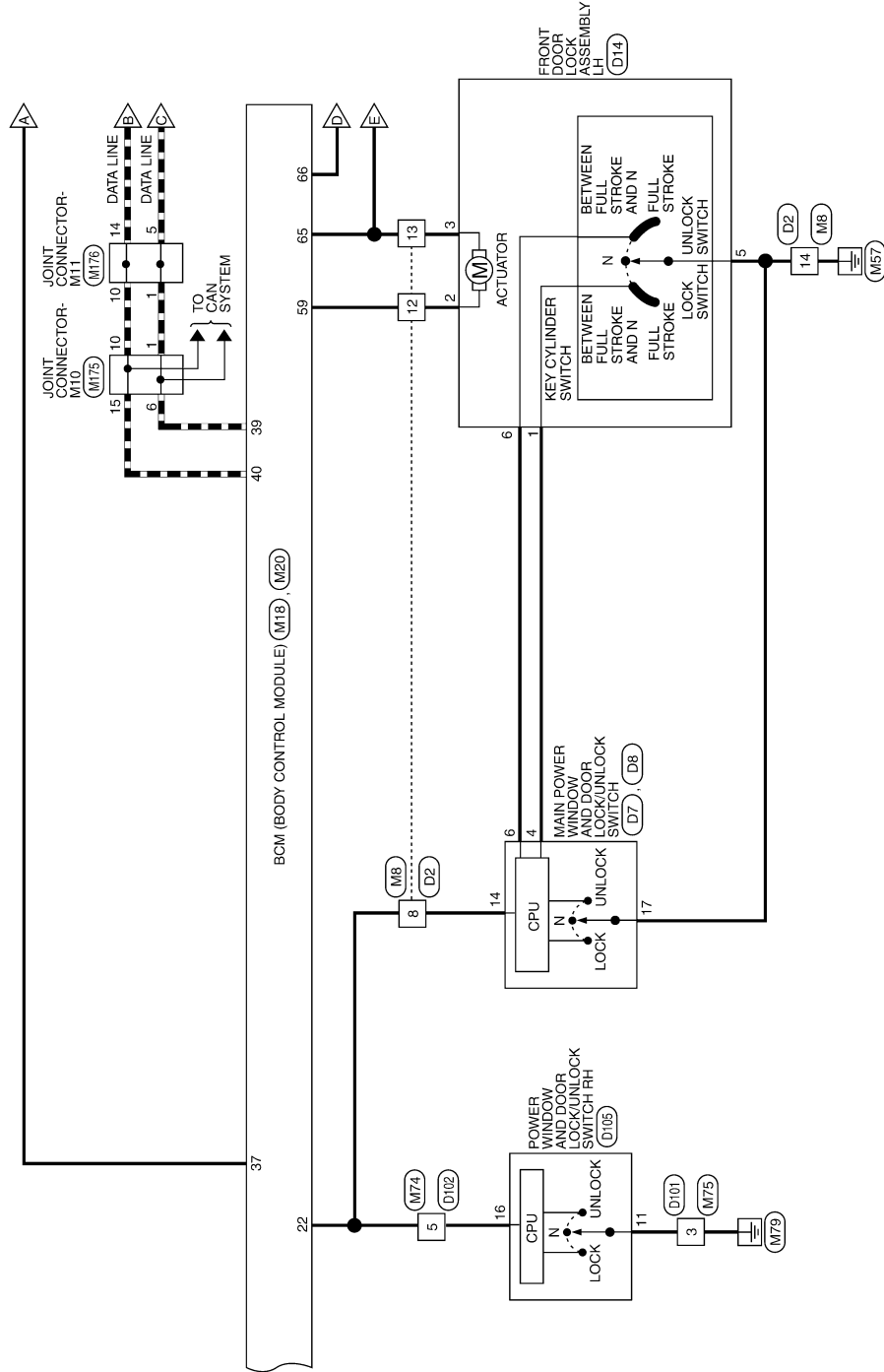


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POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

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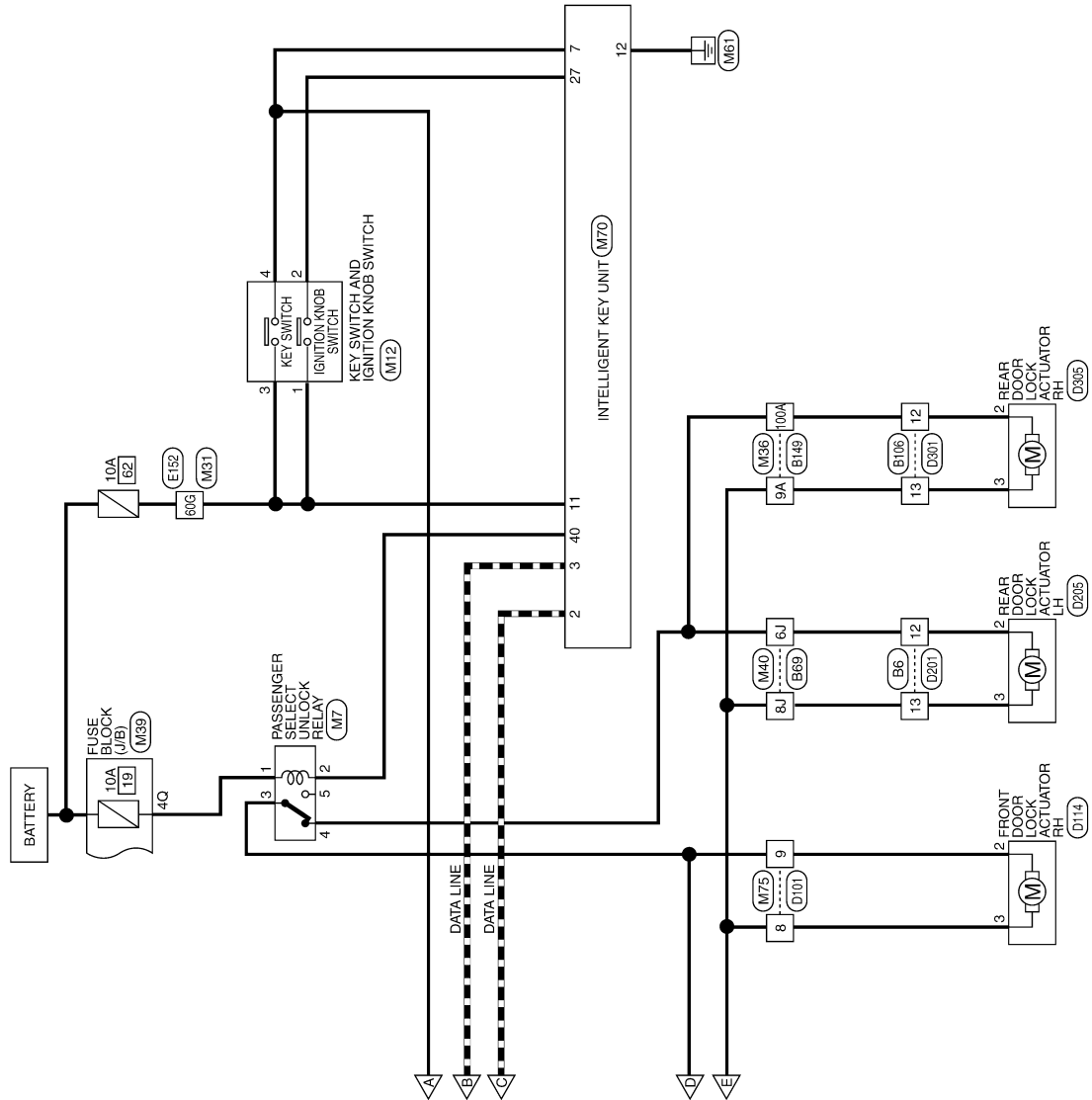
ABKWA1875GB

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POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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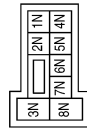
POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

POWER DOOR LOCK SYSTEM CONNECTORS - WITH INTELLIGENT KEY SYSTEM

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



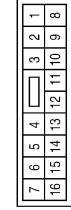
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M7
Connector Name	PASSENGER SELECT UNLOCK RELAY
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	Y/R	-
2	V	-
3	G/Y	-
4	G/Y	-

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



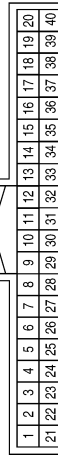
Terminal No.	Color of Wire	Signal Name
8	W/V	-
12	G	-
13	V	-
14	B	-

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

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

DLK

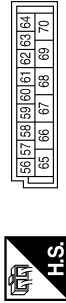
POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

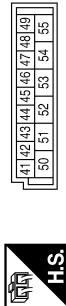
Terminal No.	Color of Wire	Signal Name
65	V	DOOR LOCK OUTPUT(ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W/B	BAT (F/L)

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



Terminal No.	Color of Wire	Signal Name
57	Y/R	BAT (FUSE)
59	G	DOOR UNLOCK OUTPUT(DR)

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



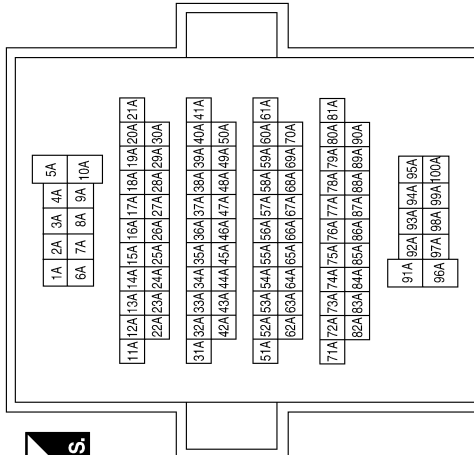
Terminal No.	Color of Wire	Signal Name
43	R/B	BACK DOOR SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



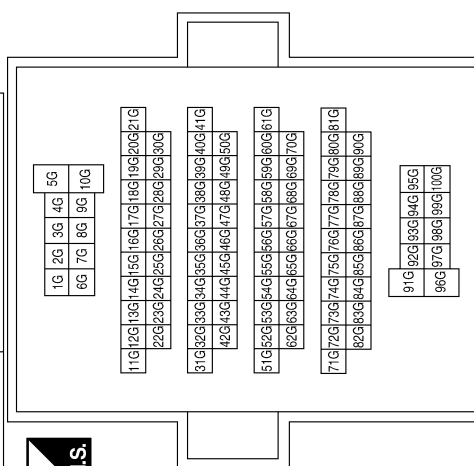
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9A	V	-
15A	R/B	-
21A	R/L	-
26A	GR	-
100A	G/Y	-

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



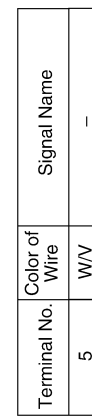
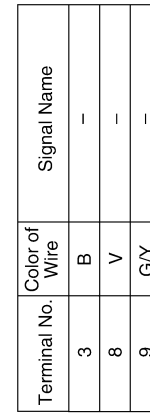
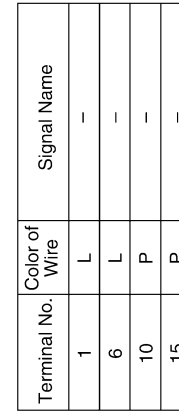
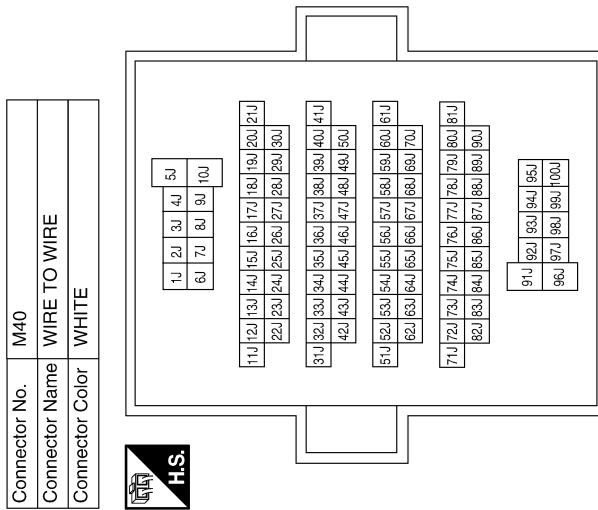
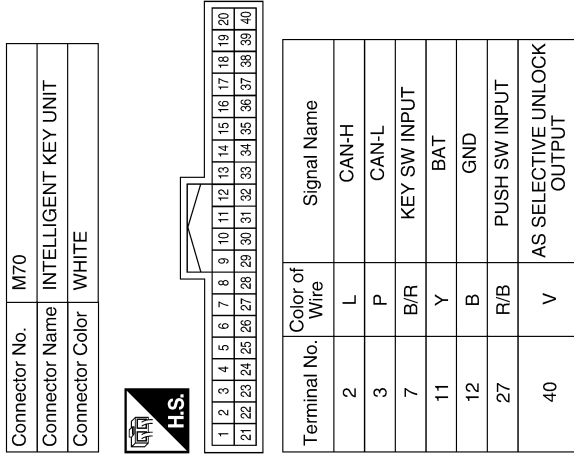
Terminal No.	Color of Wire	Signal Name
60G	Y	-
96G	W/B	-

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POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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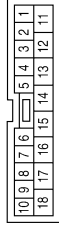
DLK

POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

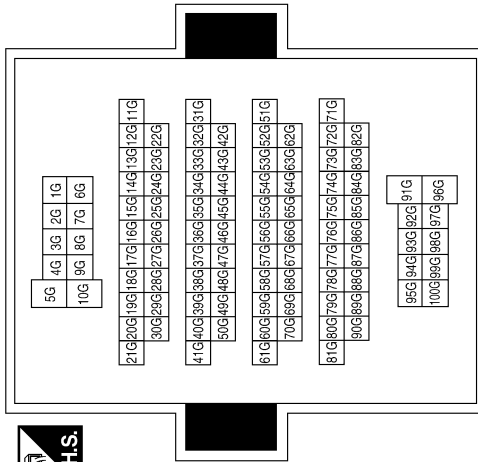
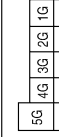
[WITH INTELLIGENT KEY SYSTEM]

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



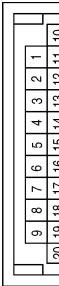
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

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



Terminal No.	Color of Wire	Signal Name
60G	Y	-
96G	W/B	-

Connector No.	M176
Connector Name	JOINT CONNECTOR-M11
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
5	L	-
10	P	-
14	P	-

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	-

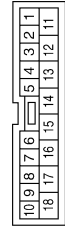
ABKIA3971GB

POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

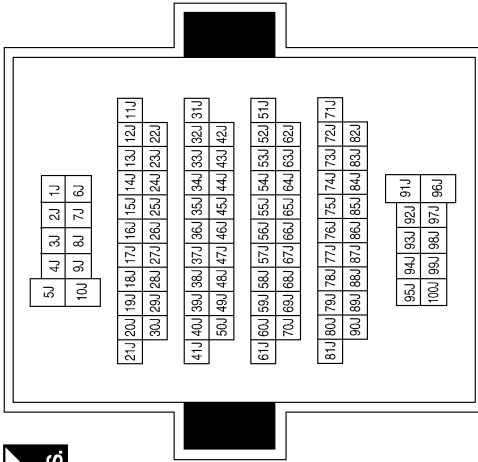
< WIRING DIAGRAM >

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



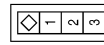
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
6J	G/Y	-
8J	V	-
21J	R/Y	-
30J	SB	-

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



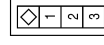
Terminal No.	Color of Wire	Signal Name
2	R/L	-

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.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	GR	-

ABKIA3972GB

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

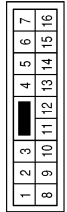
DLK

POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

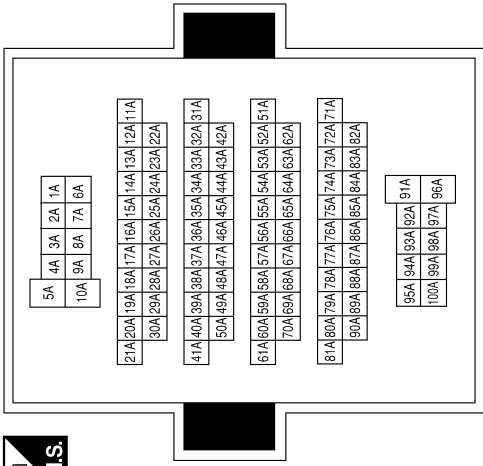
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



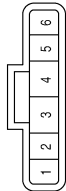
Terminal No.	Color of Wire	Signal Name
8	LG/W	-
12	G	-
13	V	-
14	B	-

Terminal No.	Color of Wire	Signal Name
9A	V	-
15A	R/W	-
21A	R/L	-
26A	GR	-
100A	G/Y	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE

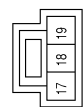


Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



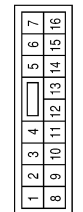
Terminal No.	Color of Wire	Signal Name
1	L	-
2	G	-
3	V	-
5	B	-
6	R	-

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	KEY CYLINDER LOCK
6	R	KEY CYLINDER UNLOCK
14	LG/W	COMMUNICATION

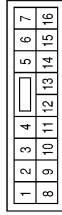
ABKIA3973GB

POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

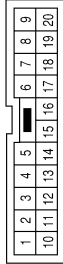
< WIRING DIAGRAM >

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



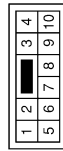
Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	COMMUNICATION

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



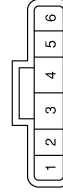
Terminal No.	Color of Wire	Signal Name
5	LG/W	-

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



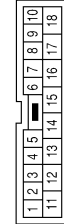
Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

Connector No.	D205
Connector Name	REAR DOOR LOCK ACTUATOR LH
Connector Color	BLACK



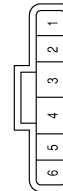
Terminal No.	Color of Wire	Signal Name
2	G/Y	-
3	V	-

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	-
3	V	-

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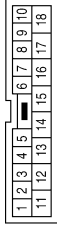
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POWER DOOR LOCK SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



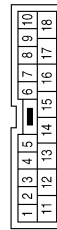
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D305
Connector Name	REAR DOOR LOCK ACTUATOR RH
Connector Color	BLACK



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

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



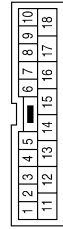
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



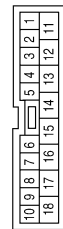
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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	-

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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

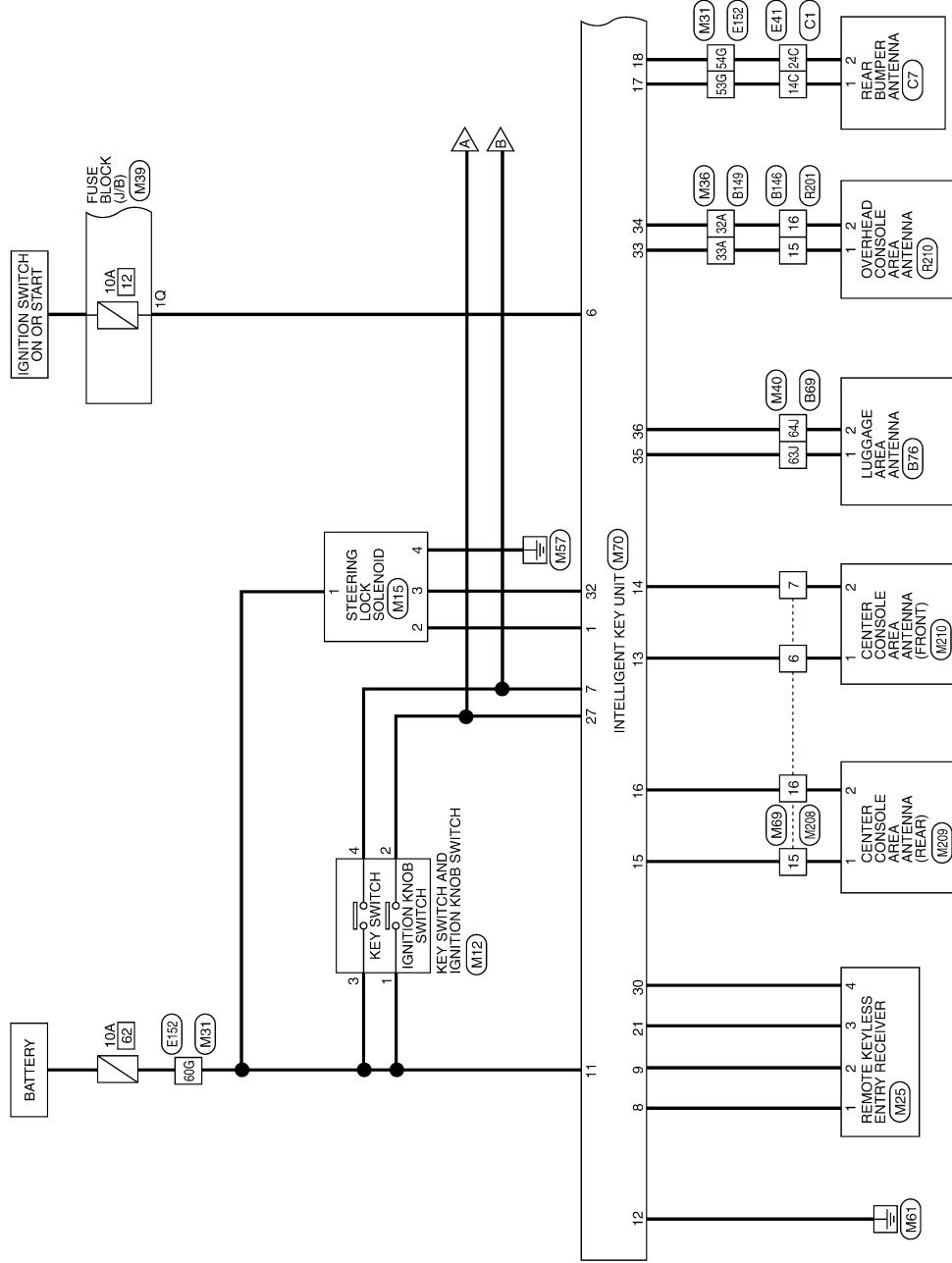
[WITH INTELLIGENT KEY SYSTEM]

INTELLIGENT KEY SYSTEM

Wiring Diagram

INFOID:000000009822897

INTELLIGENT KEY SYSTEM



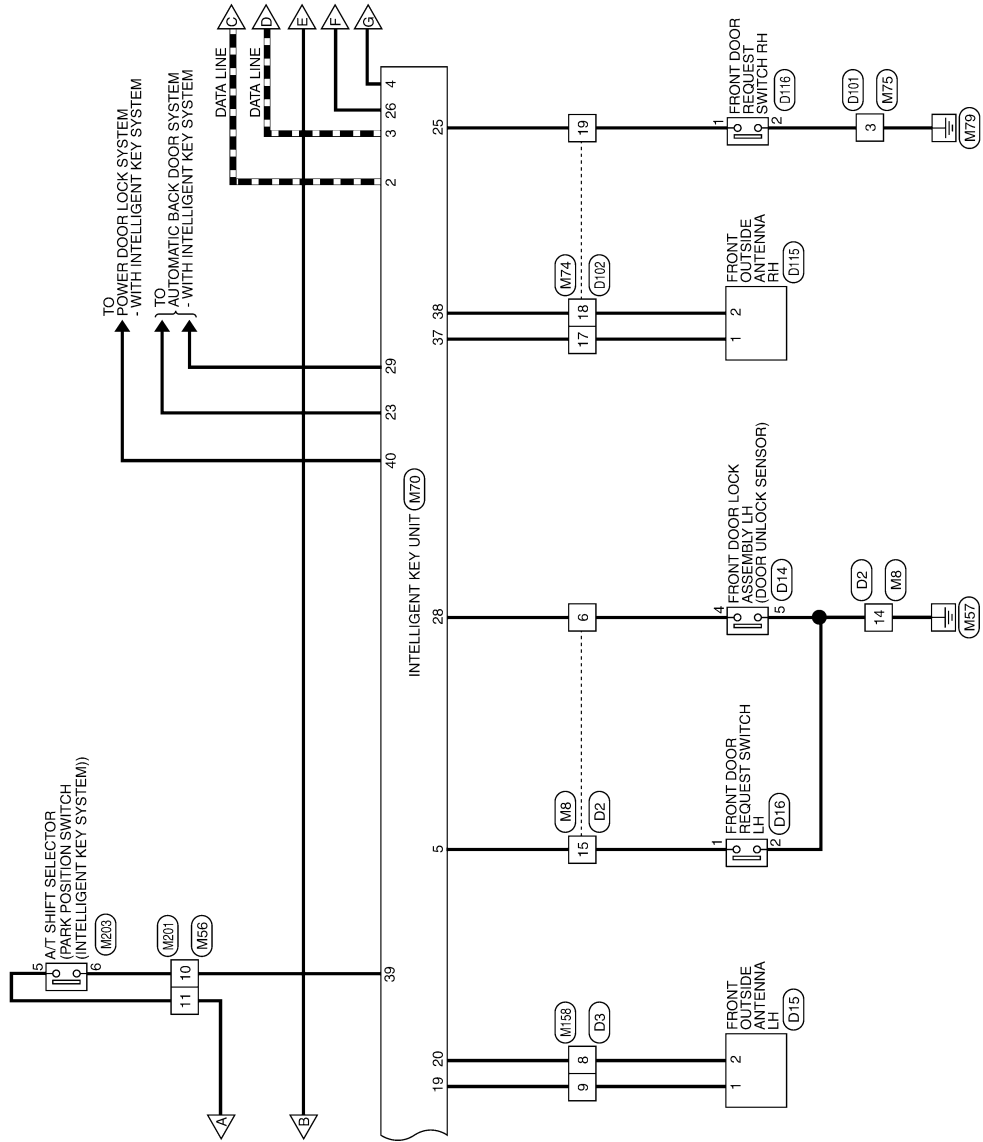
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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

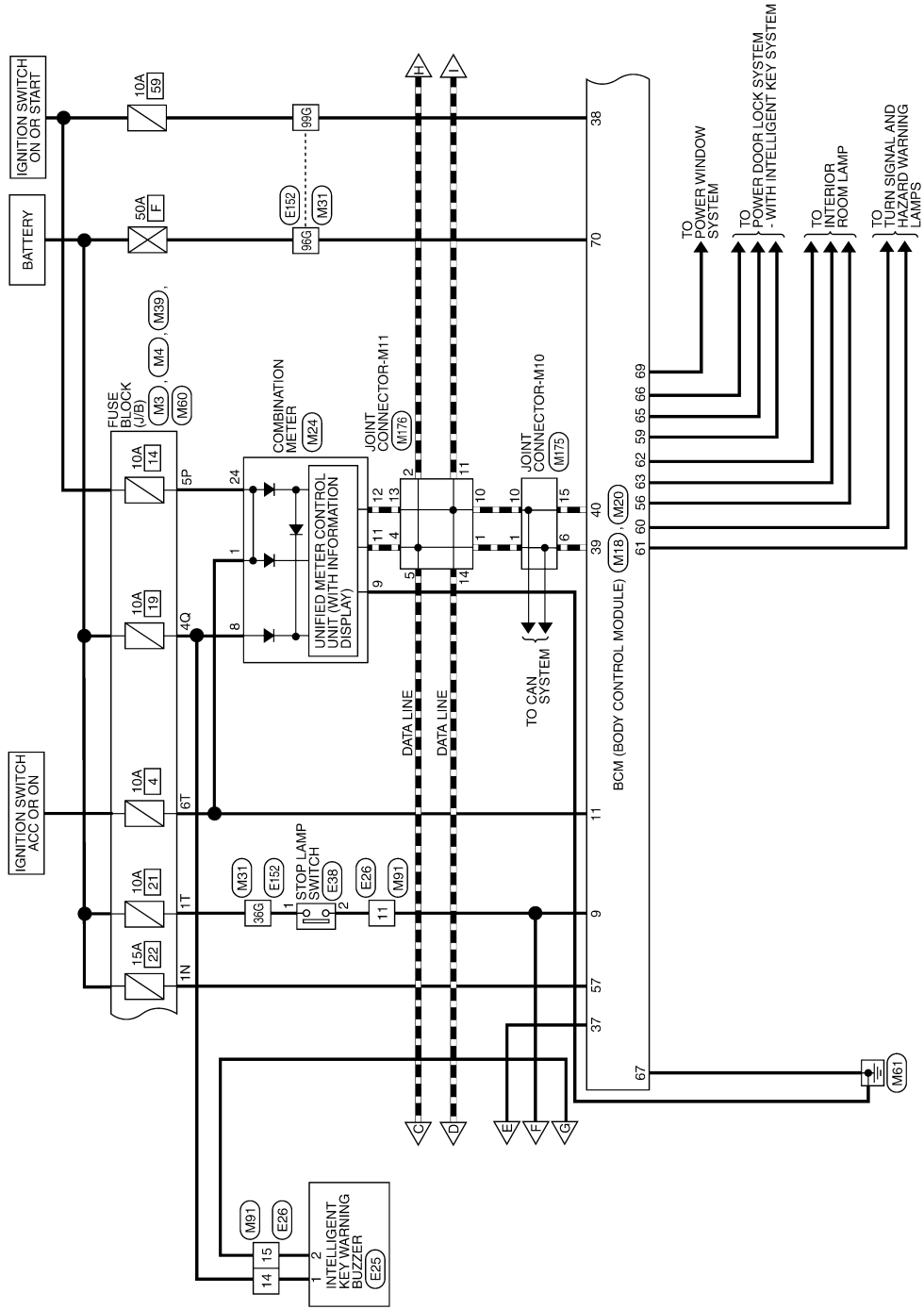


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INTELLIGENT KEY SYSTEM

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[WITH INTELLIGENT KEY SYSTEM]



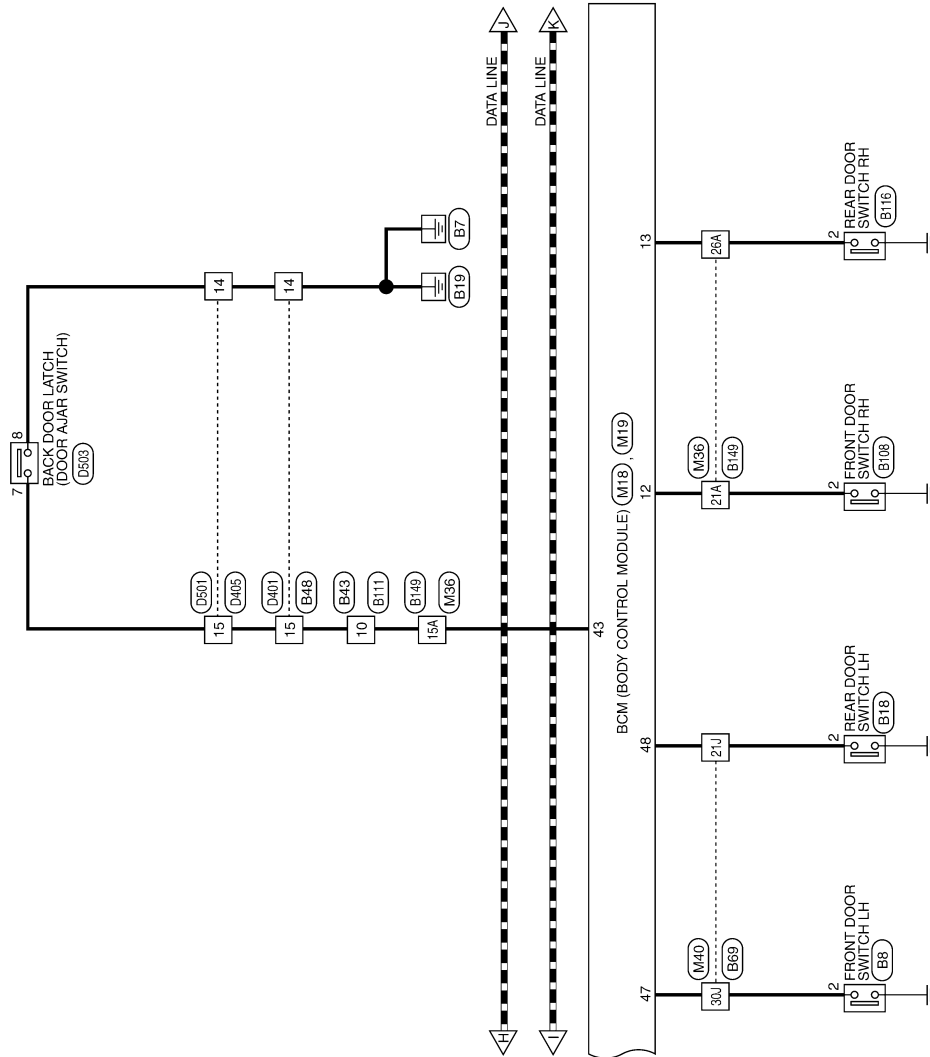
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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

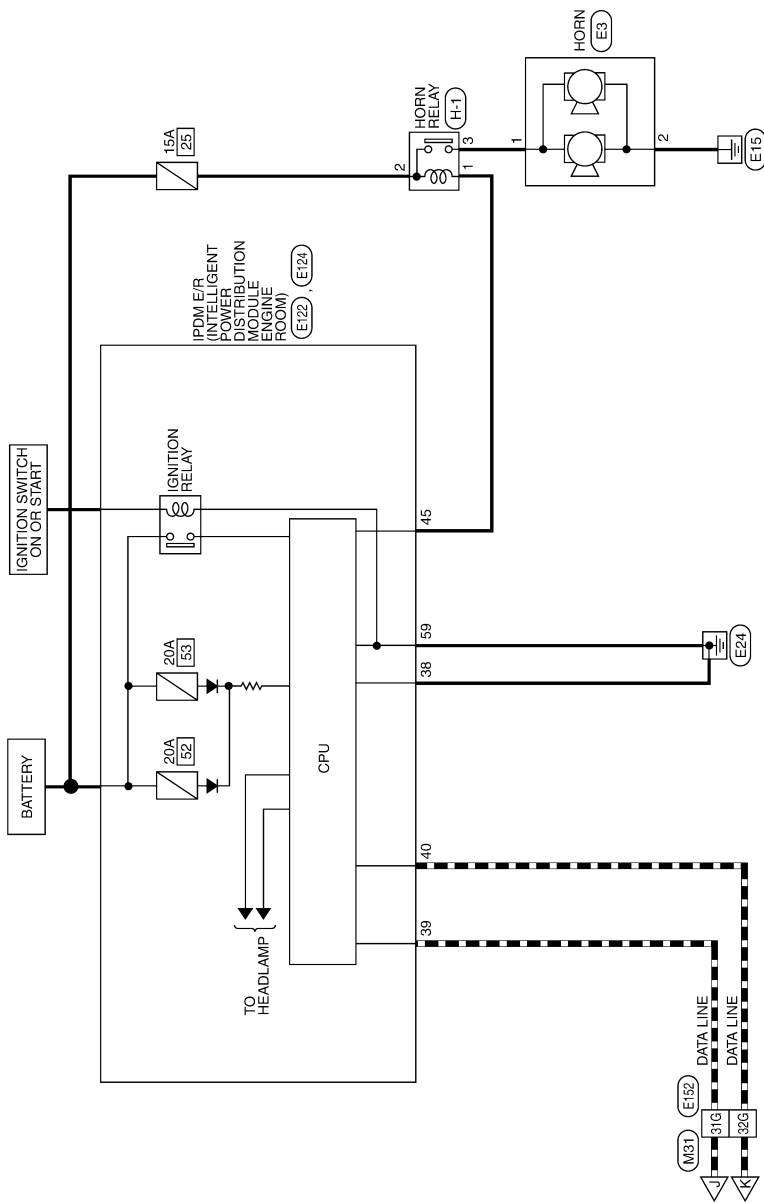


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INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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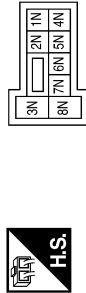
INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

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



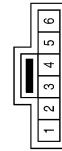
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

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	Y	-
2	L/Y	-
3	L/O	-
4	B	-

INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]

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



41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

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
9	R/G	BRAKE SW
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



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
69	W/R	POWER WINDOW POWER SUPPLY (BAT)
70	W/B	BAT (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



56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT (FUSE)

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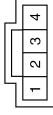
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INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

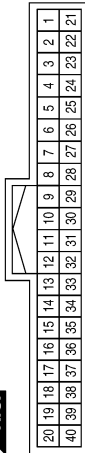
Connector No.	M25
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK



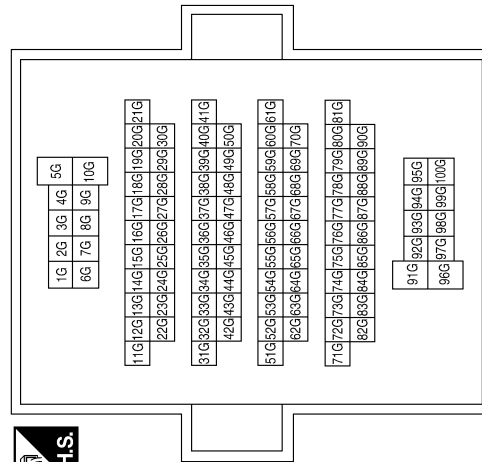
Terminal No.	Color of Wire	Signal Name
1	G	-
2	GR	-
3	B/W	-
4	G/B	-

Terminal No.	Color of Wire	Signal Name
1	O	ACCESSORY
8	Y/R	BATTERY
9	B	GND
11	L	CAN-H
12	P	CAN-L
24	O/L	RUN/START

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



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



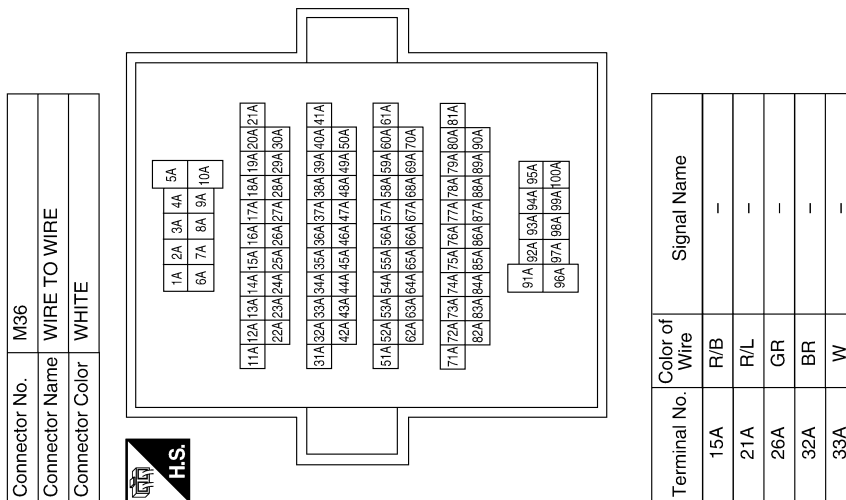
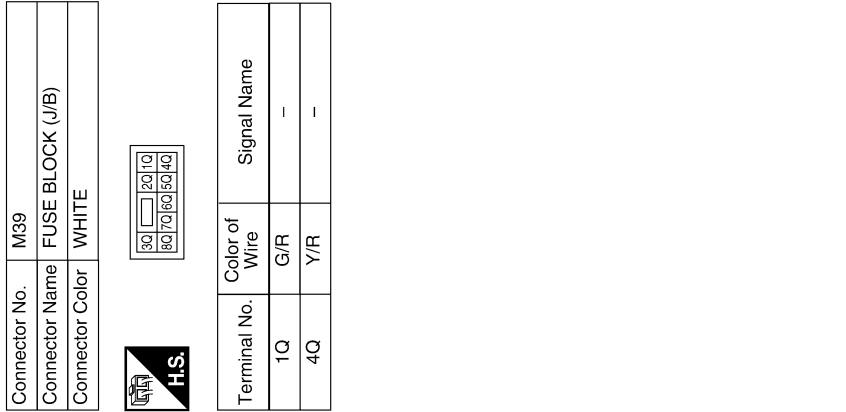
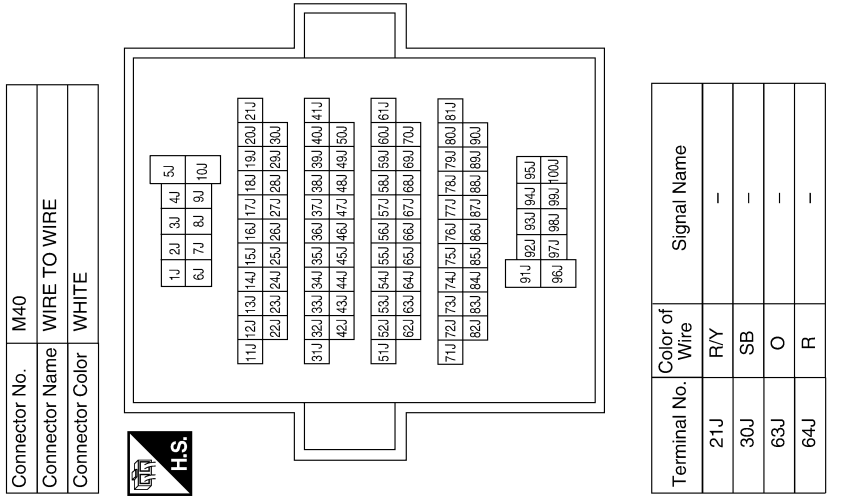
Terminal No.	Color of Wire	Signal Name
31G	L	-
32G	P	-
36G	R/Y	-
53G	W/L	-
54G	W/R	-
60G	Y	-
96G	W/B	-
99G	W/L	-

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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]



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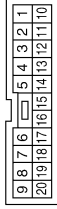
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INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

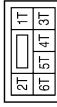
< WIRING DIAGRAM >

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
1T	R/Y	-
6T	O	-

Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE

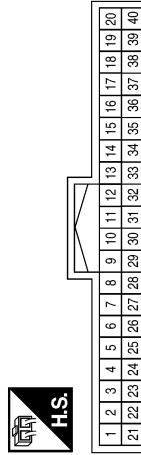


Terminal No.	Color of Wire	Signal Name
10	L/R	-
11	R/B	-

Terminal No.	Color of Wire	Signal Name
26	R/G	BRAKE SW
27	R/B	PUSH SW INPUT
28	R	DR STATUS SW INPUT
29	LG/R	BACK HANDLE SW INPUT
30	G/B	RF TUNER 5V OUTPUT
31	-	-
32	L/O	STRG C/U SIG
33	W	ROOM ANT4 (+)
34	BR	ROOM ANT4 (-)
35	O	ROOM ANT2 (+)
36	R	ROOM ANT2 (-)
37	LG	AS ANT (+)
38	B/Y	AS ANT (-)
39	L/R	P RANGE SW INPUT
40	V	AS SELECTIVE UNLOCK OUTPUT

Terminal No.	Color of Wire	Signal Name
8	G	RF TUNER GND
9	GR	RF TUNER SIG
10	-	-
11	Y	BAT
12	B	GND
13	B/W	ROOM ANT3 (+)
14	W/G	ROOM ANT3 (-)
15	G	ROOM ANT1 (+)
16	L	ROOM ANT1 (-)
17	W/L	BACK ANT (+)
18	W/R	BACK ANT (-)
19	P	DR ANT (+)
20	V	DR ANT (-)
21	B/W	RF TUNER RSSI
22	-	-
23	L/W	PBD RELAY OUTPUT
24	-	-
25	P/L	AS REQUEST SW INPUT

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/Y	STRG C/U 5V OUTPUT
2	L	CAN-H
3	P	CAN-L
4	GR	OUTSIDE BUZZER OUTPUT
5	B/W	DR REQUEST SW INPUT
6	G/R	IGN SW INPUT
7	B/R	KEY SW INPUT

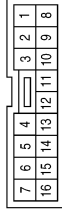
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INTELLIGENT KEY SYSTEM

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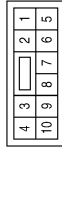
[WITH INTELLIGENT KEY SYSTEM]

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



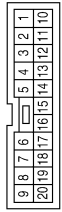
Terminal No.	Color of Wire	Signal Name
11	R/G	-
14	Y/R	-
15	GR	-

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



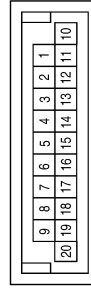
Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



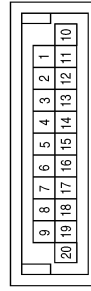
Terminal No.	Color of Wire	Signal Name
17	LG	-
18	B/Y	-
19	P/L	-

Connector No.	M176
Connector Name	JOINT CONNECTOR-M11
Connector Color	BLUE



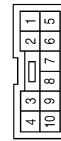
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
4	L	-
5	L	-
10	P	-
11	P	-
13	P	-
14	P	-

Connector No.	M175
Connector Name	JOINT CONNECTOR-M10
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
6	L	-
10	P	-
15	P	-

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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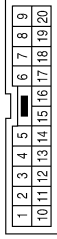
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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

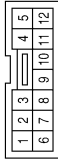
[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	BROWN



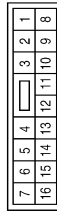
Terminal No.	Color of Wire	Signal Name
6	B/W	-
7	W/G	-
15	G	-
16	L	-

Connector No.	M203
Connector Name	A/T SHIFT SELECTOR (WITH INTELLIGENT KEY SYSTEM)
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.	E3
Connector Name	HORN
Connector Color	BLACK



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

Connector No.	M210
Connector Name	CENTER CONSOLE AREA ANTENNA (FRONT)
Connector Color	GRAY



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

Connector No.	M209
Connector Name	CENTER CONSOLE AREA ANTENNA (REAR)
Connector Color	WHITE



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

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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

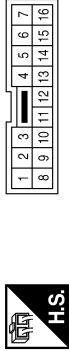
[WITH INTELLIGENT KEY SYSTEM]

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	BLACK



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

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



Terminal No.	Color of Wire	Signal Name
11	R/G	-
14	Y/R	-
15	GR	-

Connector No.	E25
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN



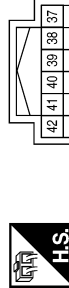
Terminal No.	Color of Wire	Signal Name
1	Y/R	-
2	-	-
3	GR	-

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



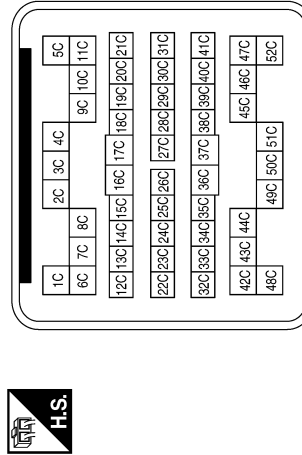
Terminal No.	Color of Wire	Signal Name
59	B	GND (POWER)

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



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
45	G/W	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	-

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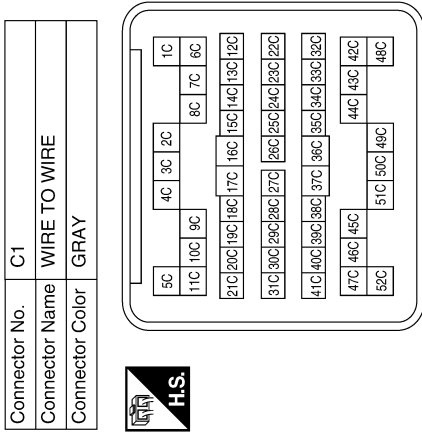
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INTELLIGENT KEY SYSTEM

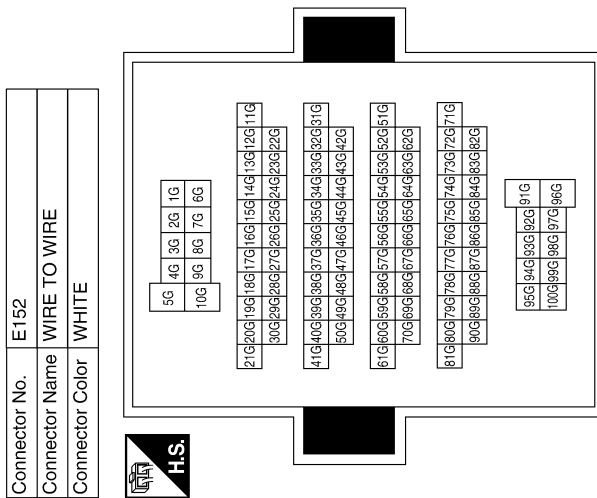
< WIRING DIAGRAM >

[WITH INTELLIGENT KEY SYSTEM]



Terminal No.	Color of Wire	Signal Name
14C	P	-
24C	W/R	-

Terminal No.	Color of Wire	Signal Name
31G	L	-
32G	P	-
36G	R/Y	-
53G	P	-
54G	W/R	-
60G	Y	-
96G	W/B	-
99G	L/W	-



Terminal No.	Color of Wire	Signal Name
2	R/Y	-



Terminal No.	Color of Wire	Signal Name
2	SB	-



Terminal No.	Color of Wire	Signal Name
1	P	-
2	W/R	-

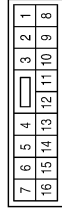
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INTELLIGENT KEY SYSTEM

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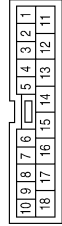
[WITH INTELLIGENT KEY SYSTEM]

Connector No.	B43
Connector Name	WIRE TO WIRE
Connector Color	WHITE



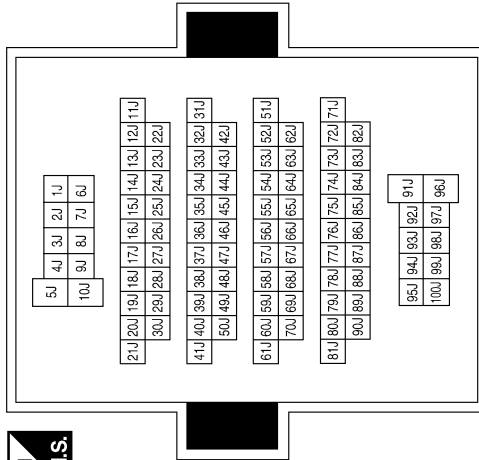
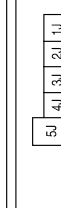
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
21J	R/Y	-
30J	SB	-
63J	O	-
64J	R	-

Connector No.	B76
Connector Name	LUGGAGE AREA ANTENNA
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	O	-
2	R	-

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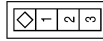
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INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

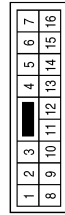
< WIRING DIAGRAM >

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



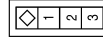
Terminal No.	2	Color of Wire	R/L	Signal Name	-
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Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



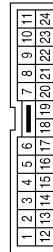
Terminal No.	10	Color of Wire	R/W	Signal Name	-
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Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



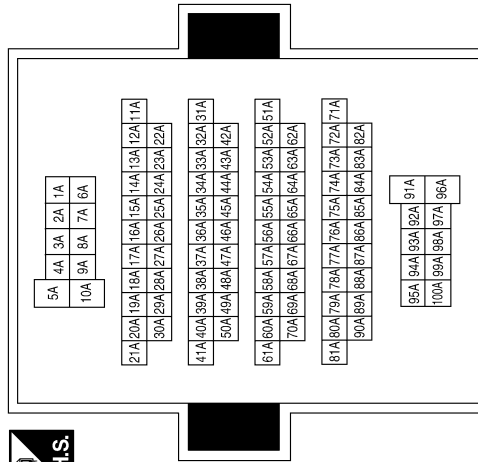
Terminal No.	2	Color of Wire	GR	Signal Name	-
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Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	15	Color of Wire	W	Signal Name	-
Terminal No.	16	Color of Wire	BR	Signal Name	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	15A	Color of Wire	R/W	Signal Name	-
Terminal No.	21A	Color of Wire	R/L	Signal Name	-
Terminal No.	26A	Color of Wire	GR	Signal Name	-
Terminal No.	32A	Color of Wire	BR	Signal Name	-
Terminal No.	33A	Color of Wire	W	Signal Name	-

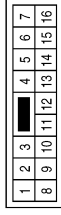
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< WIRING DIAGRAM >

[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	OVERHEAD CONSOLE AREA ANTENNA
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



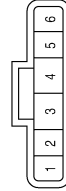
Terminal No.	Color of Wire	Signal Name
15	W	-
16	BR	-

Connector No.	D15
Connector Name	FRONT OUTSIDE ANTENNA LH
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	-
5	B	-

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	V	-
9	P	-

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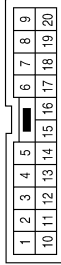
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INTELLIGENT KEY SYSTEM

< WIRING DIAGRAM >

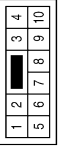
[WITH INTELLIGENT KEY SYSTEM]

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



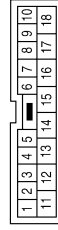
Terminal No.	Color of Wire	Signal Name
3	B	-

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	-

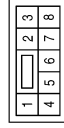
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INTELLIGENT KEY SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

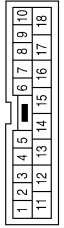
< WIRING DIAGRAM >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



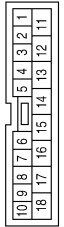
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



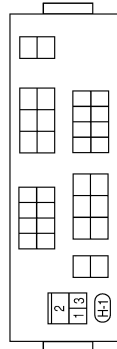
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX (HORN RELAY)
Connector Color	-



Terminal No.	Color of Wire	Signal Name
1	R/W	-
2	G/B	-
3	G	-

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AUTOMATIC BACK DOOR SYSTEM

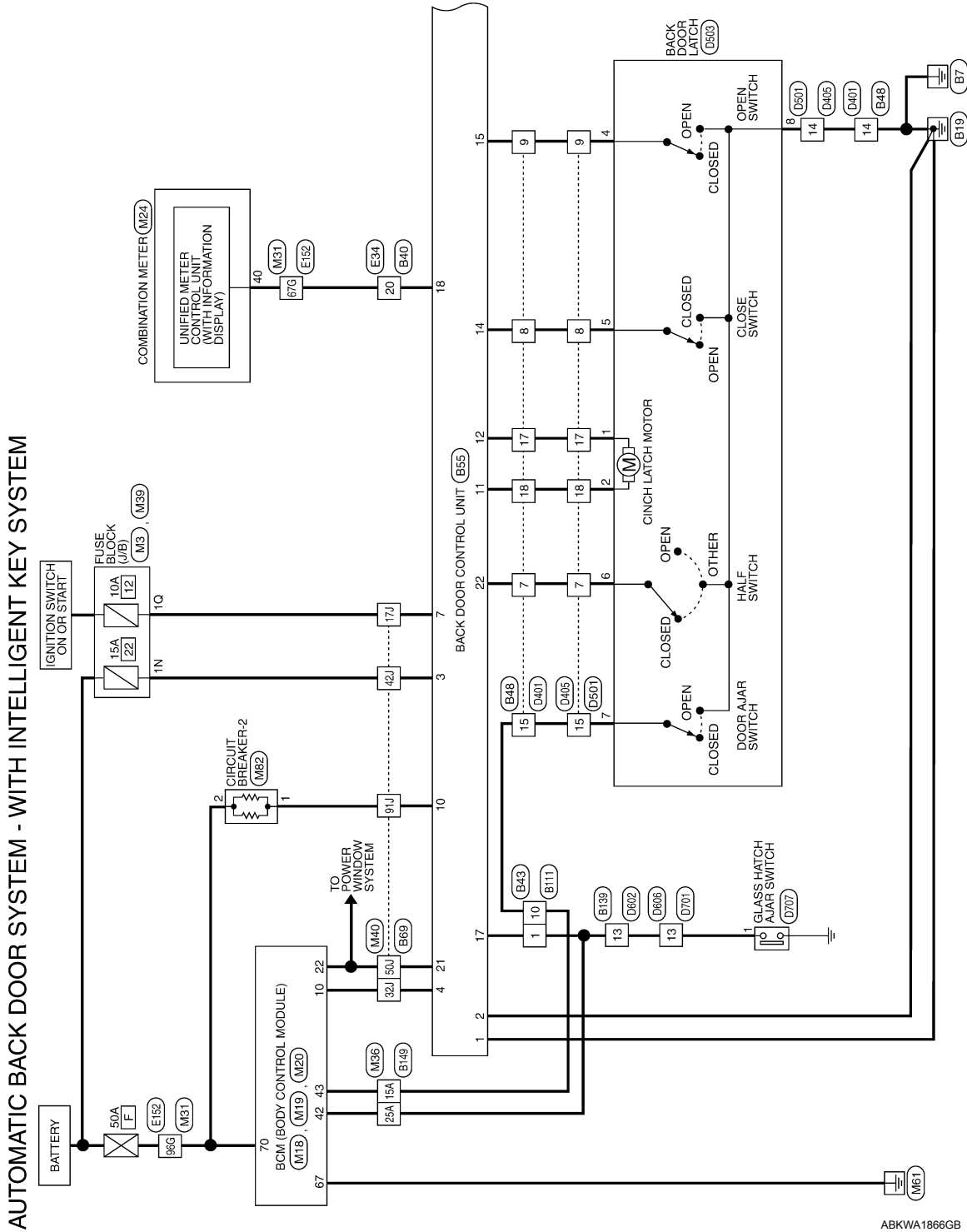
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

AUTOMATIC BACK DOOR SYSTEM

Wiring Diagram - With Intelligent Key System

INFOID:00000009822898

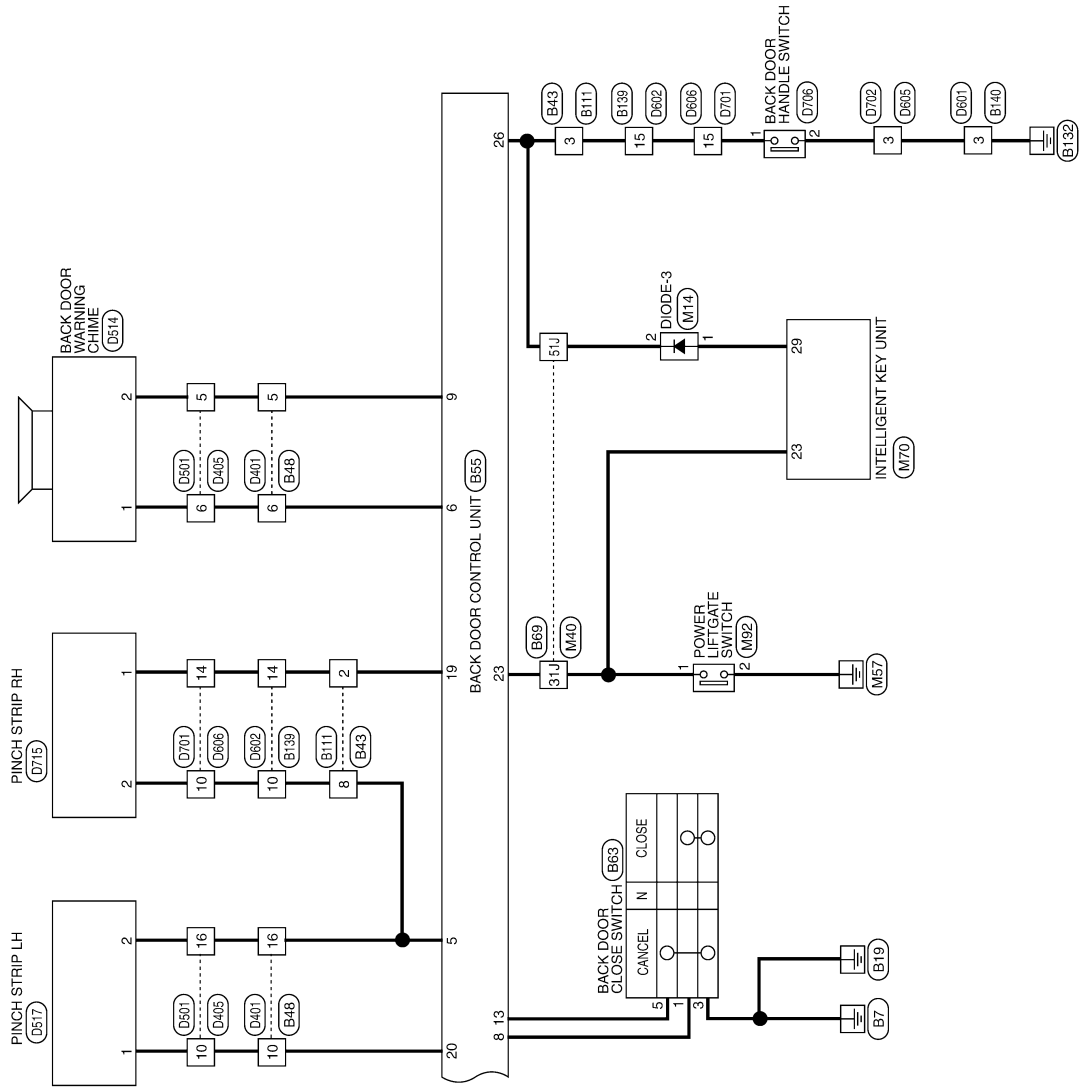


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AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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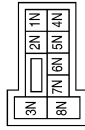
AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

AUTOMATIC BACK DOOR SYSTEM CONNECTORS - WITH INTELLIGENT KEY SYSTEM

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



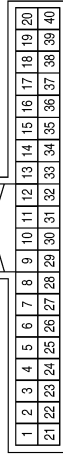
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M14
Connector Name	DIODE-3
Connector Color	BLACK



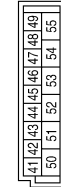
Terminal No.	Color of Wire	Signal Name
1	LG/R	-
2	W	-

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



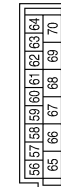
Terminal No.	Color of Wire	Signal Name
10	G	IVCS INPUT
22	W/W	ANTI-PINCH SERIAL LINK (RX, TX)

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



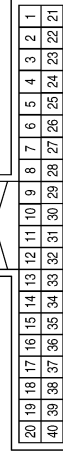
Terminal No.	Color of Wire	Signal Name
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW

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	BAT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



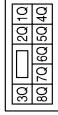
Terminal No.	Color of Wire	Signal Name
40	GR/R	PN REVERSE

AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

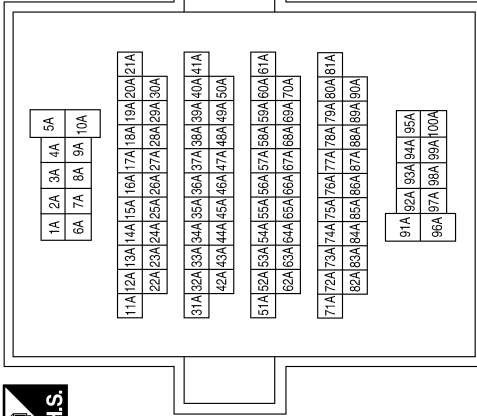
< WIRING DIAGRAM >

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



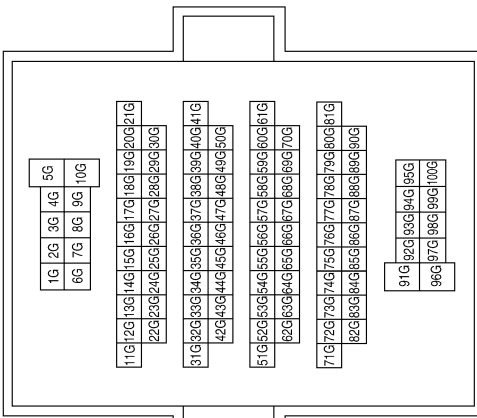
Terminal No.	1Q	Color of Wire	G/R	Signal Name	-
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Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	15A	Color of Wire	R/B	Signal Name	-
	25A		GR		-

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



Terminal No.	67G	Color of Wire	GR/R	Signal Name	-
	96G		W/B		-

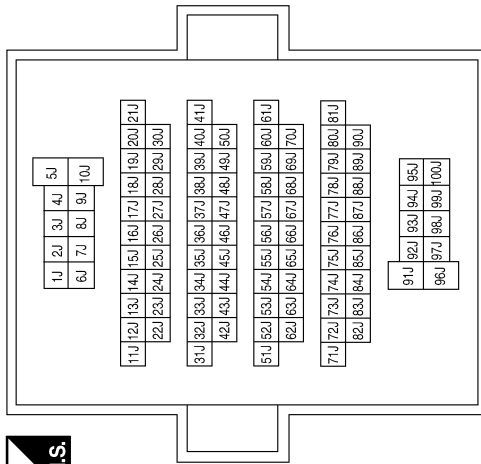
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AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

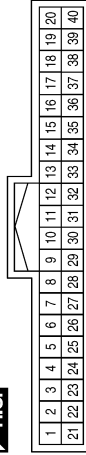
< WIRING DIAGRAM >

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



Terminal No.	Color of Wire	Signal Name
17J	G/R	-
31J	L/W	-
32J	G	-
42J	Y/R	-
50J	W/W	-
51J	W	-
91J	L/B	-

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



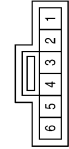
Terminal No.	Color of Wire	Signal Name
23	L/W	PBD RELAY OUTPUT
29	LG/R	BACK HANDLE SW INPUT

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	WHITE



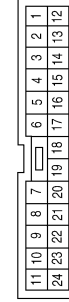
Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

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.	E94
Connector Name	WIRE TO WIRE
Connector Color	WHITE



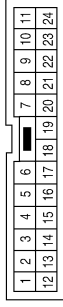
Terminal No.	Color of Wire	Signal Name
20	GR/R	-

AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

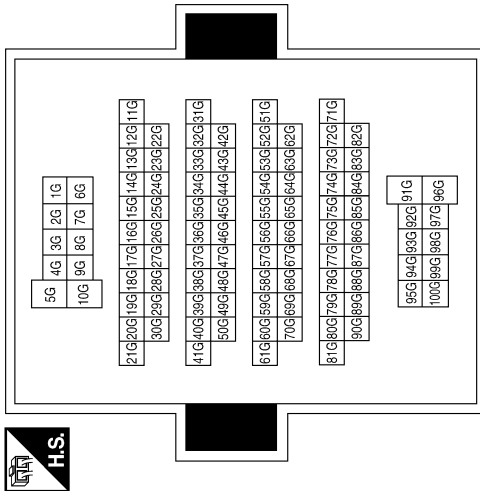
Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

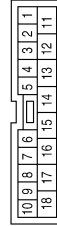
Terminal No.	Color of Wire	Signal Name
67G	GR/R	-
96G	W/B	-

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



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	-

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AUTOMATIC BACK DOOR SYSTEM

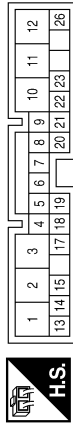
[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
19	BR/B	PINCH STRIP RH
20	V/G	PINCH STRIP LH
21	W/V	P/WINDOW SERIAL LINK
22	BR	HALF SW INPUT
23	L/W	OVERHEAD SW INPUT
26	V	OUTSIDE HANDLE SW INPUT

Terminal No.	Color of Wire	Signal Name
6	R	SPEAKER OUTPUT (+)
7	G/R	IGN SW INPUT
8	GR/B	D-PILLAR SW INPUT
9	L	SPEAKER OUTPUT (-)
10	L/B	POWER SUPPLY (POWER SYSTEM)
11	Y	CINCH LATCH MOTOR (+)
12	L	CINCH LATCH MOTOR (-)
13	P/L	MAIN SW INPUT
14	P	CLOSE SW INPUT
15	O/L	OPEN SW INPUT
17	GR	GLASS SW INPUT
18	GR/R	P RANGE SW INPUT

Connector No.	B55
Connector Name	BACK DOOR CONTROL UNIT
Connector Color	WHITE



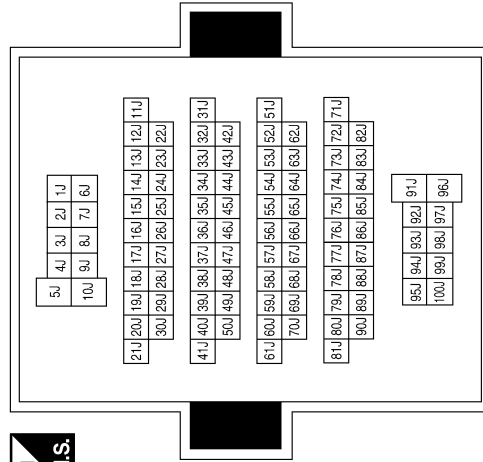
Terminal No.	Color of Wire	Signal Name
1	B	GND
2	B	GND
3	Y/R	POWER SUPPLY (CONTROL SYSTEM)
4	G	FLASH SIGNAL OUTPUT
5	B/P	PINCH STRIP GND

Connector No.	B63
Connector Name	BACK DOOR CLOSE SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	GR/B	-
2	-	-
3	B	-
4	-	-
5	P/L	-
6	-	-

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



Terminal No.	Color of Wire	Signal Name
17J	G/R	-
31J	L/W	-
32J	G	-
42J	Y/R	-
50J	W/V	-
51J	W	-
91J	L/B	-

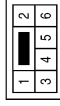
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AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

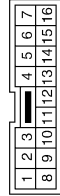
< WIRING DIAGRAM >

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



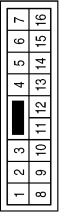
Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



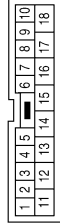
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

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	-

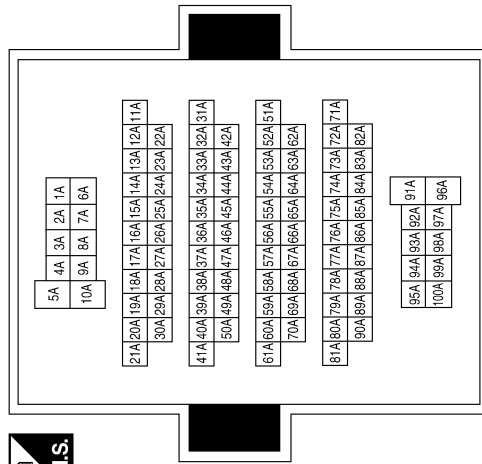
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

Terminal No.	Color of Wire	Signal Name
15A	R/W	-
25A	GR	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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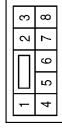
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AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

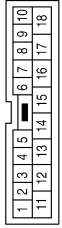
< WIRING DIAGRAM >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



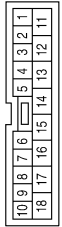
Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	-	-
4	O/L	-
5	P	-
6	BR	-
7	R/W	-
8	B	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
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	-
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



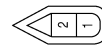
Terminal No.	Color of Wire	Signal Name
3	B	-

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	-

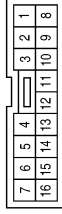
ABKIA3942GB

AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



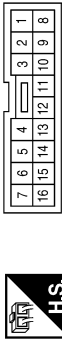
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

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



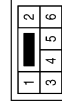
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D706
Connector Name	BACK DOOR HANDLE SWITCH
Connector Color	GRAY



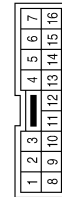
Terminal No.	Color of Wire	Signal Name
1	V	-
2	B	-

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	-

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AUTOMATIC BACK DOOR SYSTEM

[WITH INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

Connector No.	D715
Connector Name	PINCH STRIP RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	BR/B	-
2	B/P	-

Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	GR	-

ABKIA3944GB

INTELLIGENT KEY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000009822899

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.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All doors and ignition switch do not respond to Intelligent Key command.	1. Check Intelligent Key function and battery inspection.	DLK-108
	2. Check Intelligent Key unit power supply and ground circuit.	DLK-71
	3. Check remote keyless entry receiver.	DLK-105
	4. Check BCM power supply and ground circuit.	BCS-30
	5. Replace Intelligent Key unit.	SEC-122

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DLK

DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

DOOR LOCK FUNCTION SYMPTOMS

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : Symptom Table

INFOID:000000009822900

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.
- 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.	BCS-30
	2. Check door lock and unlock switch.	DLK-77
	3. Check door lock actuator (driver side)	DLK-89
	4. Check Intermittent Incident.	GI-42
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.	DLK-82
	2. Replace power window main switch.	PWC-94
Specific door lock actuator does not operate.	1a. Check driver side door lock actuator.	DLK-89
	1b. Check passenger side door lock actuator.	DLK-90
	1c. Check rear LH side door lock actuator.	DLK-91
	1d. Check rear RH side door lock actuator.	DLK-93
	1e. Check back door lock actuator.	DLK-94
	2. Check Intermittent Incident.	GI-42
Door lock/unlock do not operate by request switch.	1. Door switch check.	DLK-74
	2. Ignition knob switch check.	DLK-118
	3. Replace Intelligent Key unit.	SEC-122
Door lock/unlock does not operate by request switch (LH side).	1. Front door request switch LH check.	DLK-86
	2. Front outside antenna LH check.	DLK-99
	3. Replace Intelligent Key unit.	SEC-122
Door lock/unlock does not operate by request switch (RH side).	1. Front door request switch RH check.	DLK-86
	2. Front outside antenna RH check.	DLK-99
	3. Replace Intelligent Key unit.	SEC-122
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”.	DLK-58
	2. Replace Intelligent Key unit.	SEC-122
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	DLK-58
	2. Key switch check (BCM).	DLK-117
	3. Ignition knob switch check.	DLK-118
	4. Door switch check.	DLK-74
	5. Replace Intelligent Key unit.	SEC-122

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".	DLK-58
	2. Door switch check.	DLK-74
	3a. Center console area antenna (rear) check.	DLK-63
	3b. Luggage area antenna check.	DLK-69
	3c. Center console area antenna (front) check.	DLK-65
	3d. Overhead console area antenna check.	DLK-67
	4. Front door lock actuator LH (door unlock sensor) check.	DLK-85
	5. Intelligent Key battery and function inspection.	DLK-108
	6. Replace Intelligent Key unit.	SEC-122
Vehicle speed sensing auto LOCK operation does not operate.	1. Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-12
	2. Check combination meter vehicle speed signal.	MWI-31
	3. Check intermittent incident.	GI-42
Ignition OFF interlock door UNLOCK function does not operate.	1. Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-12
	2. Check BCM for DTC.	BCS-44
	3. Check intermittent incident.	GI-42

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:000000009822901

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.	DLK-108
	2. Remote Keyless Entry function check.	DLK-105
	3. Replace Intelligent Key unit.	SEC-122
Selective unlock function does not operate by Intelligent Key remote control button.	1. Check "SELECT UNLOCK FUNCTION" setting in "WORK SUPPORT".	DLK-58
	2. Intelligent Key battery inspection.	DLK-108
	3. Replace Intelligent Key unit.	SEC-122
Auto lock function does not operate properly.	1. Check "AUTO RELOCK TIMER" setting in "WORK SUPPORT".	DLK-58
	2. Key switch check (BCM).	DLK-117
	3. Ignition knob switch check.	DLK-118
	4. Door switch check.	DLK-74
	5. Replace Intelligent Key unit.	SEC-122

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".	DLK-58
	2. Door switch check.	DLK-74
	3a. Center console area antenna (rear) check.	DLK-63
	3b. Luggage area antenna check.	DLK-69
	3c. Center console area antenna (front) check.	DLK-65
	3d. Overhead console area antenna check.	DLK-67
	4. Front door lock actuator LH (door unlock sensor) check.	DLK-85
	5. Intelligent Key battery inspection.	DLK-108
Panic alarm function does not operate properly.	6. Replace Intelligent Key unit.	SEC-122
	1. Check "PANIC ALARM DELAY" setting in "WORK SUPPORT".	DLK-58
	2. Theft warning operation check.	SEC-19
	3. Intelligent Key battery inspection.	DLK-108
	4. Key switch check (BCM).	DLK-117
	5. Ignition knob switch check.	DLK-118
Back door open function does not operate properly.	6. Replace Intelligent Key unit.	SEC-122
	1. Back door diagnosis.	DLK-122
	2. Intelligent Key battery inspection.	DLK-108
Power window down function does not operate.	3. Replace Intelligent Key unit.	SEC-122
	1. Check "PW DOWN SET" setting in "WORK SUPPORT".	DLK-58
	2. Intelligent Key battery inspection.	DLK-108

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:000000009822902

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)

- 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	DLK-124
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	DLK-130
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	DLK-124
	Back door close switch system inspection	DLK-134
	Auto back door power supply and ground circuit system inspection.	DLK-72
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	DLK-130
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	DLK-122
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	DLK-135
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	DLK-105
	Power window serial link	—
	Pinch strip system inspection	DLK-130
Auto closure does not operate.	Half-latch switch system	DLK-132
	Cinch latch motor system	DLK-136
	Handle switch system	DLK-135
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	DLK-133
	Handle switch system	DLK-135
Warning chime does not sound.	Back door warning chime system	DLK-131
Auto closure operation works, but the back door is not fully closed	Close switch system	DLK-134
	Handle switch system	DLK-135
	Cinch latch motor system	DLK-136
	Back door latch assembly mechanism damaged or worn.	DLK-122
Auto open operation releases lock, but does not fully open back door.	Glass hatch ajar switch check	DLK-126

BACK DOOR HANDLE

BACK DOOR HANDLE : Symptom Table

INFOID:000000009822903

BACK DOOR OPEN FUNCTION MALFUNCTION

BACK DOOR OPENER FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

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	Diagnosis/service procedure	Reference page
Back door open function does not operate by back door handle switch (doors unlocked).	1. Refer to diagnosis chart.	DLK-207
	2. Check Intermittent Incident.	GI-42
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.	DLK-137
	2. Intelligent Key unit power back door output signal.	DLK-138
	3. Intelligent Key battery and function check.	DLK-108

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:000000009822904

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.	DLK-108
	2. Intelligent Key unit power and ground check.	DLK-71
	3. Check intermittent incident.	---

WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

WARNING FUNCTION SYMPTOMS

Symptom Table

INFOID:000000009822905

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.	DLK-118
		2. Check door switch.	DLK-74
		3. Check warning chime function.	DLK-113
		4. Check Intermittent Incident.	GI-42
	For external	1. Check ignition knob switch.	DLK-118
		2. Check door switch.	DLK-74
		3. Check Intelligent Key warning buzzer.	DLK-97
		4. Check Intermittent Incident.	GI-42
P position warning does not operate.	1. Check Park position switch.	DLK-103	
	2. Check door switch.	DLK-74	
	3. Check Intelligent Key warning buzzer.	DLK-97	
	4. Check warning chime function.	DLK-113	
	5. Check combination meter display function.	DLK-112	
	6. Check Intermittent Incident.	GI-42	
ACC warning does not operate	1. Check ignition knob switch.	DLK-118	
	2. Check warning chime function.	DLK-113	
	3. Check combination meter display function.	DLK-112	
	4. Check Intermittent Incident.	GI-42	

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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.	DLK-74	
		2. Check inside key antennas	Center console area (rear)	DLK-63
			Luggage area	DLK-69
			Center console area (front)	DLK-65
			Overhead console area	DLK-67
		3. Check Intelligent Key warning buzzer.		DLK-97
		4. Check warning chime function.		DLK-113
		5. Check ignition knob switch.		DLK-118
	6. Check combination meter display function.		DLK-112	
	7. Check Intermittent Incident.		GI-42	
	Key switch and ignition knob switch operation	1. Check ignition knob switch.		DLK-118
		2. Check inside key antennas	Center console area (rear)	DLK-63
			Luggage area	DLK-69
			Center console area (front)	DLK-65
			Overhead console area	DLK-67
		3. Check warning chime function.		DLK-113
	4. Check combination meter display function.		DLK-112	
	5. Check Intermittent Incident.		GI-42	
	Door is open	1. Check ignition knob switch.		DLK-118
		2. Check inside key antennas	Center console area (rear)	DLK-63
			Luggage area	DLK-69
Center console area (front)			DLK-65	
Overhead console area			DLK-67	
3. Check combination meter display function.			DLK-112	
4. Check Intermittent Incident.		GI-42		
Take away through window	1. Check "TAKE OUT FROM WIN WARN" setting in "WORK SUPPORT".		DLK-58	
	2. Check inside key antennas	Center console area (rear)	DLK-63	
		Luggage area	DLK-69	
		Center console area (front)	DLK-65	
		Overhead console area	DLK-67	
	3. Check warning chime function.		DLK-113	
	4. Check ignition knob switch.		DLK-118	
	5. Check combination meter display function.		DLK-112	
6. Check Intermittent Incident.		GI-42		
Key warning chime does not operate.	1. Check door switch.		DLK-74	
	2. Check warning chime function.		DLK-113	
	3. Check ignition knob switch.		DLK-118	
	4. Check combination meter display function.		DLK-112	
	5. Check Intermittent Incident.		GI-42	

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.	DLK-74	
	2. Check ignition knob switch.	DLK-118	
	3. Check Intelligent Key warning buzzer.	DLK-97	
	4. Check inside key antennas	Center console area (rear)	DLK-63
		Luggage area	DLK-69
		Center console area (front)	DLK-65
		Overhead console area	DLK-67
	5. Check Intermittent Incident.	GI-42	

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KEY REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

KEY REMINDER FUNCTION SYMPTOMS

Symptom Table

INFOID:000000009822906

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.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT.
- 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 SUPPORT”.	DLK-58	
	2. Check door switch.	DLK-74	
	3. Check inside key antennas	Center console area (rear)	DLK-63
		Luggage area	DLK-69
		Center console area (front)	DLK-65
		Overhead console area	DLK-67
	4. Check unlock sensor.	DLK-85	
	5. Check Intelligent Key battery inspection.	DLK-108	
6. Check Intermittent Incident.	GI-42		

HAZARD FUNCTION

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

HAZARD FUNCTION

Symptom Table

INFOID:000000009822907

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.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT.
- 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”.	DLK-58
	2. Check hazard function.	DLK-114
	3. Check Intermittent incident.	GI-42
Hazard reminder does not operate by Intelligent Key. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-58
	2. Check hazard function.	DLK-114
	3. Check Intelligent Key battery inspection.	DLK-108
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”.	DLK-58
	2. Check Intelligent Key warning buzzer.	DLK-97
	3. Check Intermittent incident.	GI-42

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HORN FUNCTION

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HORN FUNCTION

Symptom Table

INFOID:000000009822908

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.
- 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”.	DLK-58
	2. Check hazard function.	DLK-114
	3. Check Intermittent Incident.	GI-42
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-58
	2. Check hazard function.	DLK-114
	3. Check Intelligent Key battery inspection.	DLK-108
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”.	DLK-58
	2. Check Intelligent Key warning buzzer.	DLK-97
	3. Check Intermittent Incident.	GI-42
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	DLK-58
	2. Check horn function.	DLK-110
	3. Check Intermittent Incident.	GI-42

HOMELINK UNIVERSAL TRANSCEIVER

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

INFOID:000000009822909

HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	DLK-139
	2. Check Intermittent Incident.	GI-42

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

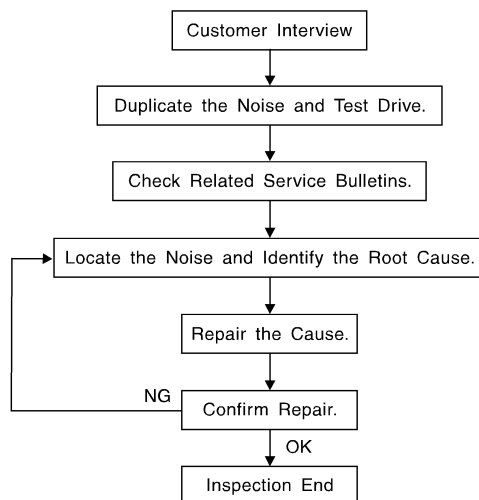
< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:00000009822910



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-220, "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 CVT and A/T models).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: 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-218. "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.

SILICONE GREASE

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

[WITH INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

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:000000009822911

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and the instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar finisher
4. Instrument panel to windshield
5. Instrument panel 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. Shift selector 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

[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. Sun visor 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.

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 lens 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 installed to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator installation 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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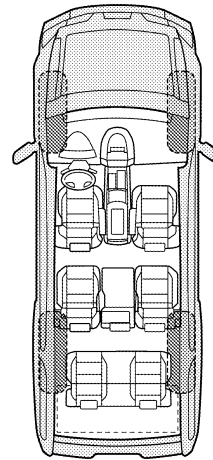
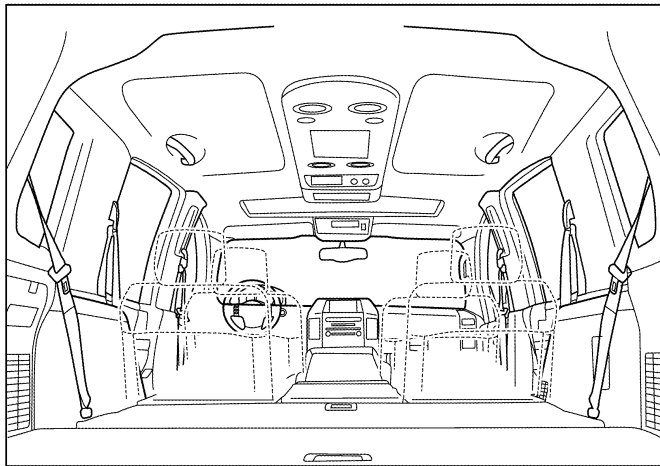
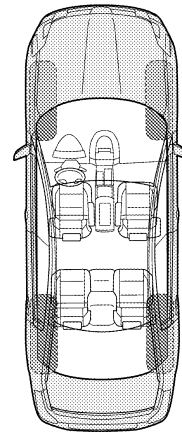
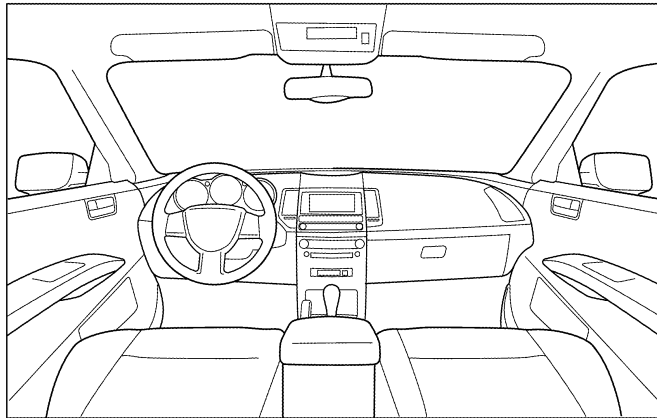
Dear Customer:

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:

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: _____ Customer Name _____
W.O.# _____ Date: _____

This form must be attached to Work Order

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PRECAUTION

PRECAUTIONS

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

INFOID:000000009822913

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

WARNING:

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

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

WARNING:

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

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000009822914

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

PRECAUTIONS

< PRECAUTION >

[WITH INTELLIGENT KEY SYSTEM]

5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Servicing Doors and Locks

INFOID:000000009822915

WARNING:

Radio waves could adversely affect electric medical equipment. Those who use a pacemaker should contact the electric medical equipment manufacturer for the possible influences before use,

- 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.
- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
 - Water soluble dirt:
 - Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
 - Then rub with a soft, dry cloth.
 - Oily dirt:
 - Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
 - Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
 - Then rub with a soft, dry cloth.
 - Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
 - For genuine leather seats, use a genuine leather seat cleaner.

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PREPARATION

< PREPARATION >

[WITH INTELLIGENT KEY SYSTEM]

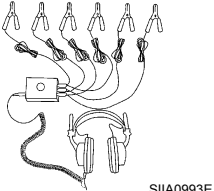
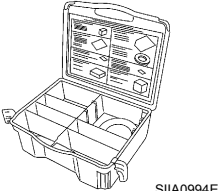
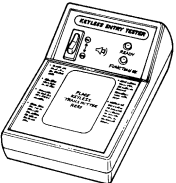

PREPARATION

PREPARATION

Special Service Tool

INFOID:000000009822916

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>SIIA0993E</p>	<p>Locating the noise</p>
<p>— (J-43980) NISSAN Squeak and Rattle Kit</p>  <p>SIIA0994E</p>	<p>Repairing the cause of noise</p>
<p>— (J-43241) Remote Keyless Entry Tester</p>  <p>LEL946A</p>	<p>Used to test key fobs</p>
<p>— (J-50190) Signal Tech II</p>  <p>ALEIA0131ZZ</p>	<ul style="list-style-type: none"> • Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Check Intelligent Key relative signal strength • Confirm vehicle Intelligent Key antenna signal strength

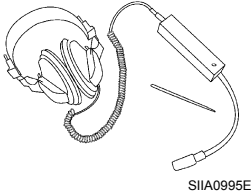
PREPARATION

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[WITH INTELLIGENT KEY SYSTEM]

Commercial Service Tool

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(Kent-Moore No.) Tool name	Description
<p data-bbox="191 317 293 373">(J-39565) Engine ear</p>  <p data-bbox="781 533 846 552">SIIA0995E</p>	Locating the noise

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HOOD

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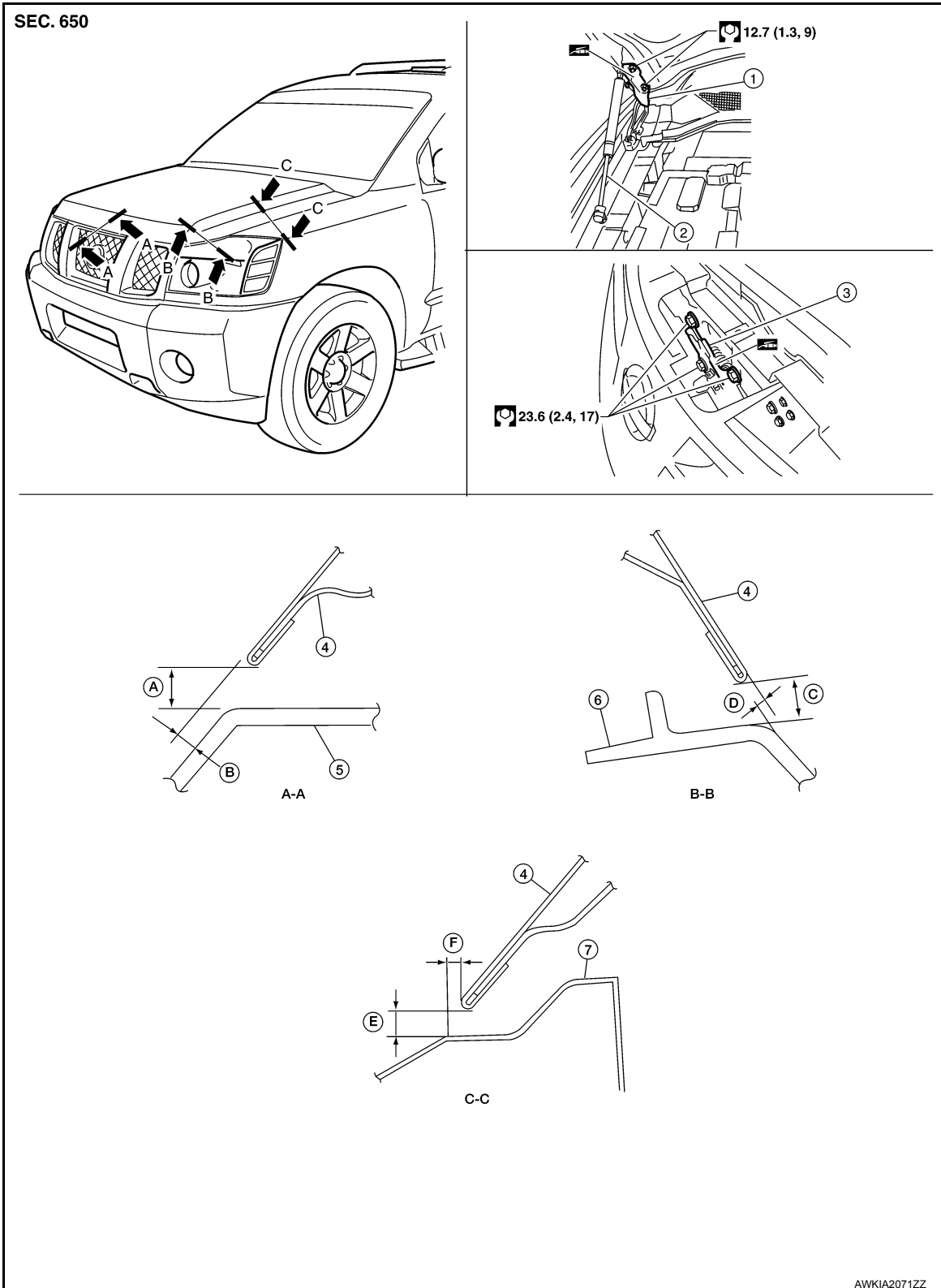
[WITH INTELLIGENT KEY SYSTEM]

REMOVAL AND INSTALLATION

HOOD

Fitting Adjustment

INFOID:000000009822918



HOOD

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

- | | | |
|---------------------|---------------------|---------------------------|
| 1. Hood hinge | 2. Hood stay | 3. Hood lock assembly |
| 4. Hood assembly | 5. Front grille | 6. Front combination lamp |
| 7. Front fender | A. 8.0 mm (0.31 in) | B. 2.0 mm (0.08 in) |
| C. 8.0 mm (0.31 in) | D. 0.8 mm (0.03 in) | E. 3.5 mm (0.14 in) |
| F. 0.0 mm (0.00 in) | | |

CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-23, "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-23, "Removal and Installation"](#).

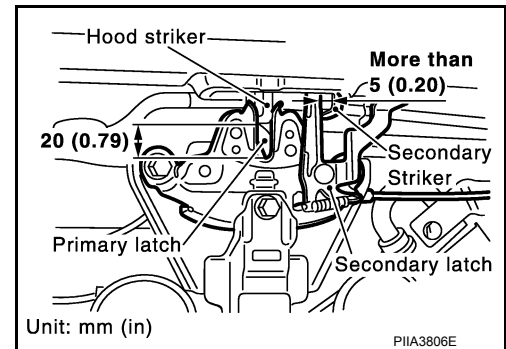
HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to [EXT-23, "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, 7 lb).

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-23, "Removal and Installation"](#).



Removal and Installation of Hood Assembly

INFOID:000000009822919

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.

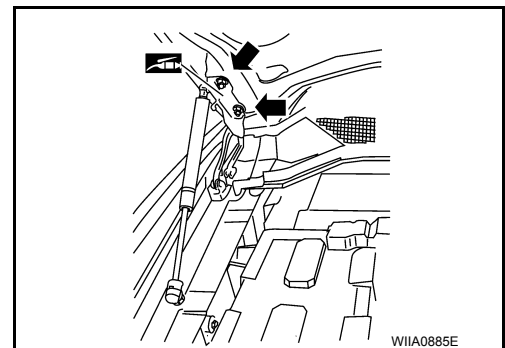
2. Remove the hinge nuts from the hood to remove the hood assembly.

CAUTION:

Operate with two workers, because of its heavy weight.

Installation is in the reverse order of removal.

- Adjust the hood. Refer to [DLK-226, "Fitting Adjustment"](#).
- Adjust the hood lock. Refer to [DLK-226, "Fitting Adjustment"](#).



HOOD

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

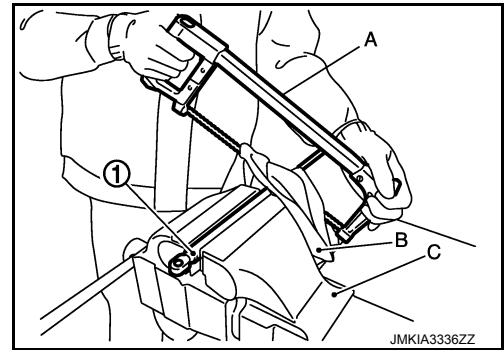
Hood Stay Disposal

INFOID:000000009822920

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

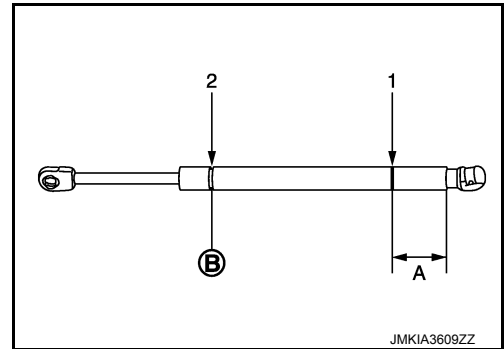
CAUTION:

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



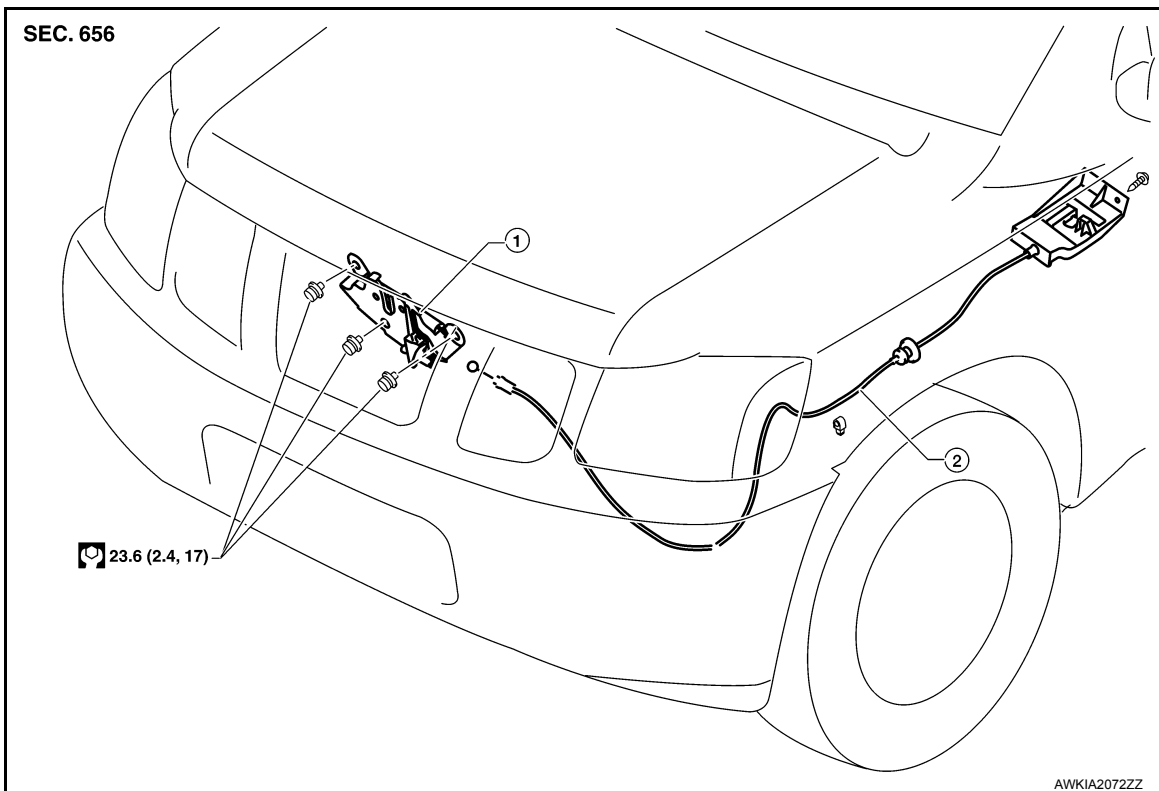
A: 20 mm (0.8 in)

B: Cut at the groove.



Removal and Installation of Hood Lock Control

INFOID:000000009822921



1. Hood lock assembly

2. Hood lock release cable

REMOVAL

1. Remove the hood lock assembly bolts.

HOOD

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

2. Disconnect the hood lock release cable from the hood lock assembly and unclip it from the radiator core support upper and hoodledge.
3. Remove the bolt and the hood opener.
4. Remove the grommet from the dash lower and pull the hood lock release cable toward the passenger compartment.

CAUTION:

While pulling, be careful not to damage the outside of the hood lock cable, keep the radius 100 mm (3.94 in) or more.

INSTALLATION

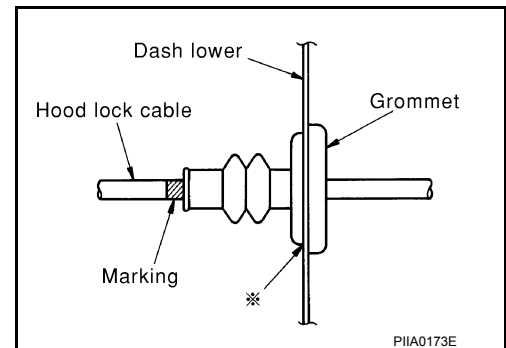
1. Pull the hood lock release cable through the hole in dash lower panel into the engine compartment.

CAUTION:

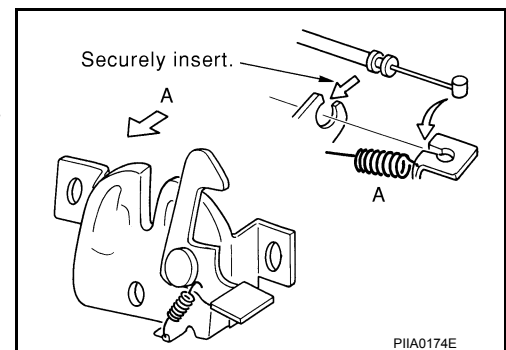
While pulling, be careful not to damage the outside of the hood lock release cable.

Be careful not to bend the cable too much, keeping the radius 100 mm (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 hood lock assembly.
5. After installing, check the hood lock adjustment and hood opener operation.
6. Install the remaining components in the reverse order of removal.



Hood Lock Control Inspection

INFOID:000000009822922

CAUTION:

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

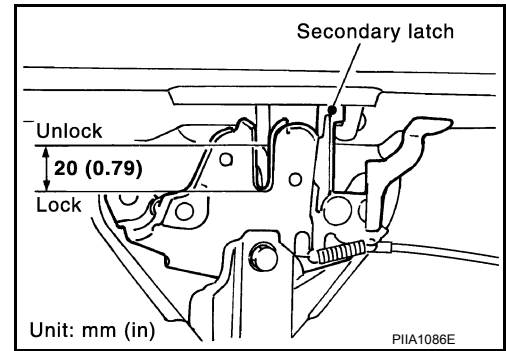
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HOOD

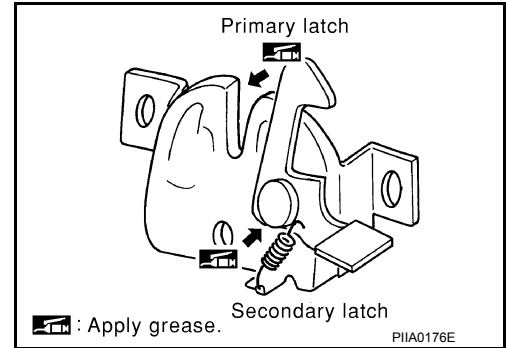
< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

1. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from Pyrex. 200 MM. (7.9 in) height.
2. While operating the hood opener, carefully make sure the front end of the hood is raised by Pyrex. 20 MM. (0.8 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 as shown.



DOOR

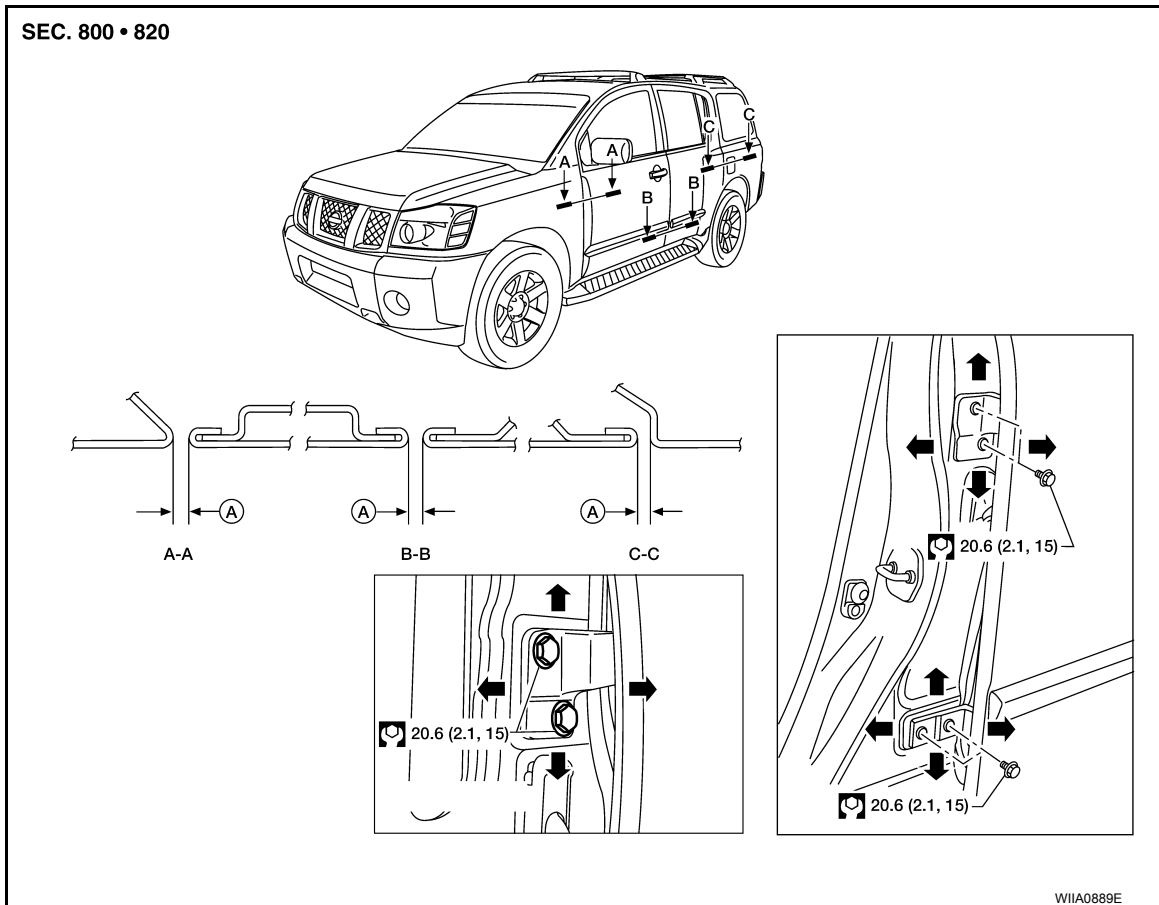
< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

DOOR

Fitting Adjustment

INFOID:00000009822923



A. 4.5 ± 1.0 mm (0.177 ± 0.039 in)

FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to [EXT-26, "Removal and Installation"](#).
2. Loosen the hinge bolts.
3. Raise the front door at rear end to adjust.
4. Tighten the hinge bolts.
5. Install the front fender. Refer to [EXT-26, "Removal and Installation"](#).

REAR DOOR

Longitudinal clearance and surface height adjustment at front end

1. Loosen the hinge bolts.
2. Open the rear door, and raise the rear door at rear end to adjust.
3. Tighten the hinge bolts.

STRIKER ADJUSTMENT

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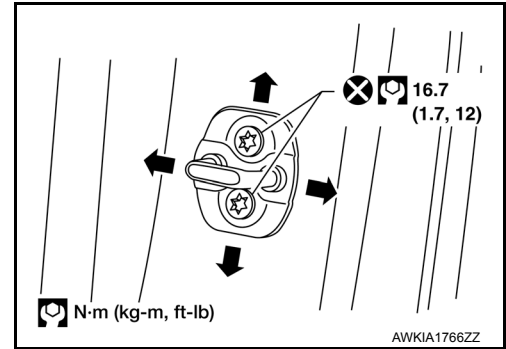
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DOOR

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

1. Loosen the striker bolts.
2. Adjust the striker so that it becomes parallel with the lock insertion direction.
3. Tighten the striker bolts.



INFOID:000000009822924

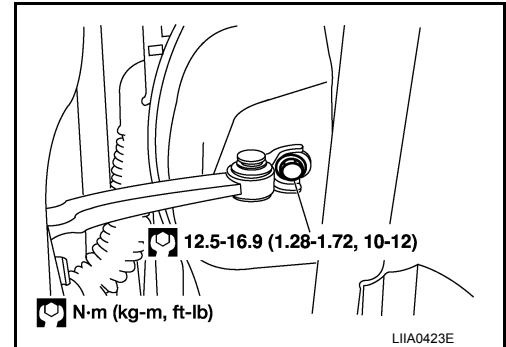
Removal and Installation

FRONT DOOR

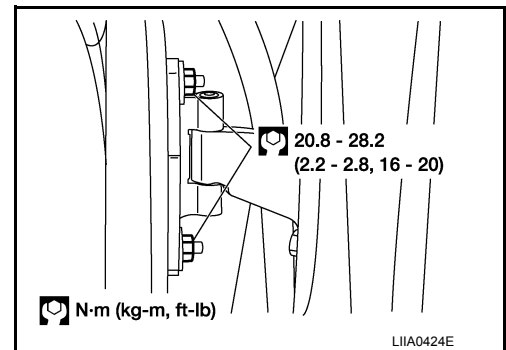
Removal

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-13, "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:

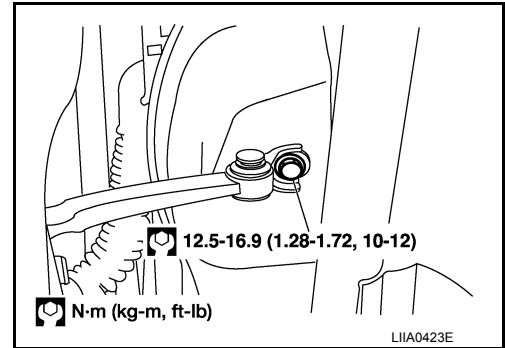
- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

DOOR

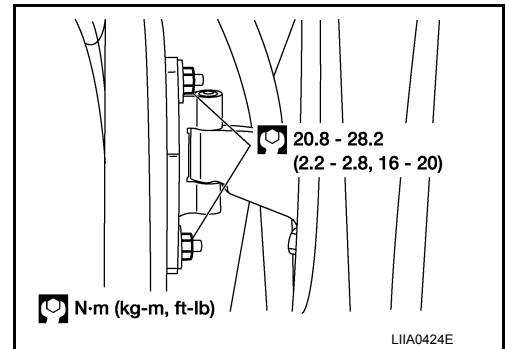
< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

1. Remove the door window and module assembly. Refer to [GW-16, "Removal and Installation"](#).
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



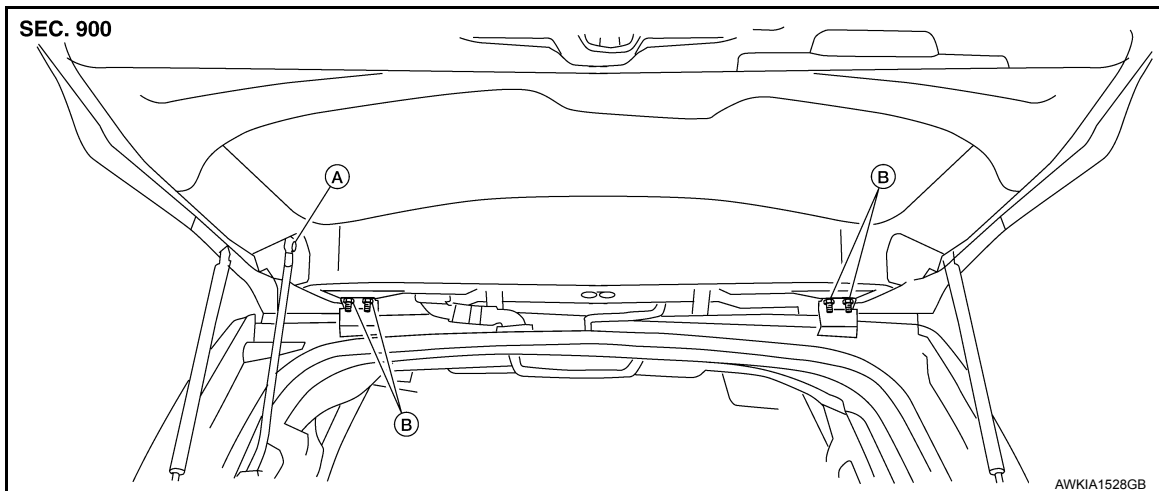
5. Remove the door-side hinge nuts and bolts, and remove the door assembly.



Installation

Installation is in the reverse order of removal.

BACK DOOR



- A. 15.2 N-m (1.6 kg-m, 11 ft-lb) B. 17.0 N-m (1.7 kg-m, 13ft-lb)

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-21, "Removal and Installation"](#).
2. Remove the back door lock assembly. Refer to [DLK-241, "Door Lock Assembly"](#).
3. Remove the rear wiper motor. Refer to [WW-76, "Rear Wiper Motor"](#).
4. Remove the back door wire harness.

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DOOR

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

5. Remove the rear washer nozzle and hose from the back door. Refer to [WW-78. "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.
9. Remove the door side nuts and the back door assembly.

Installation

Installation is in the reverse order of removal.

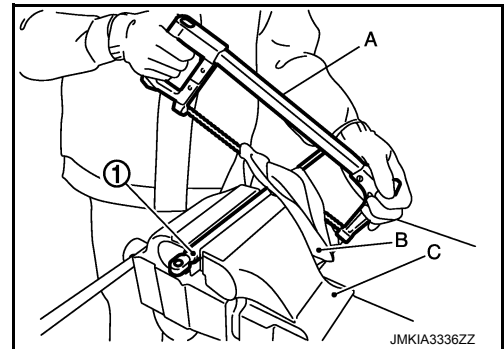
Back Door Stay Disposal

INFOID:000000009822925

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

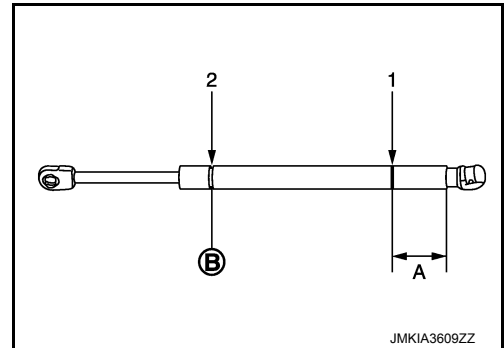
CAUTION:

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



A: 20 mm (0.8 in)

B: Cut at the groove.



JMKIA3609ZZ

FRONT DOOR LOCK

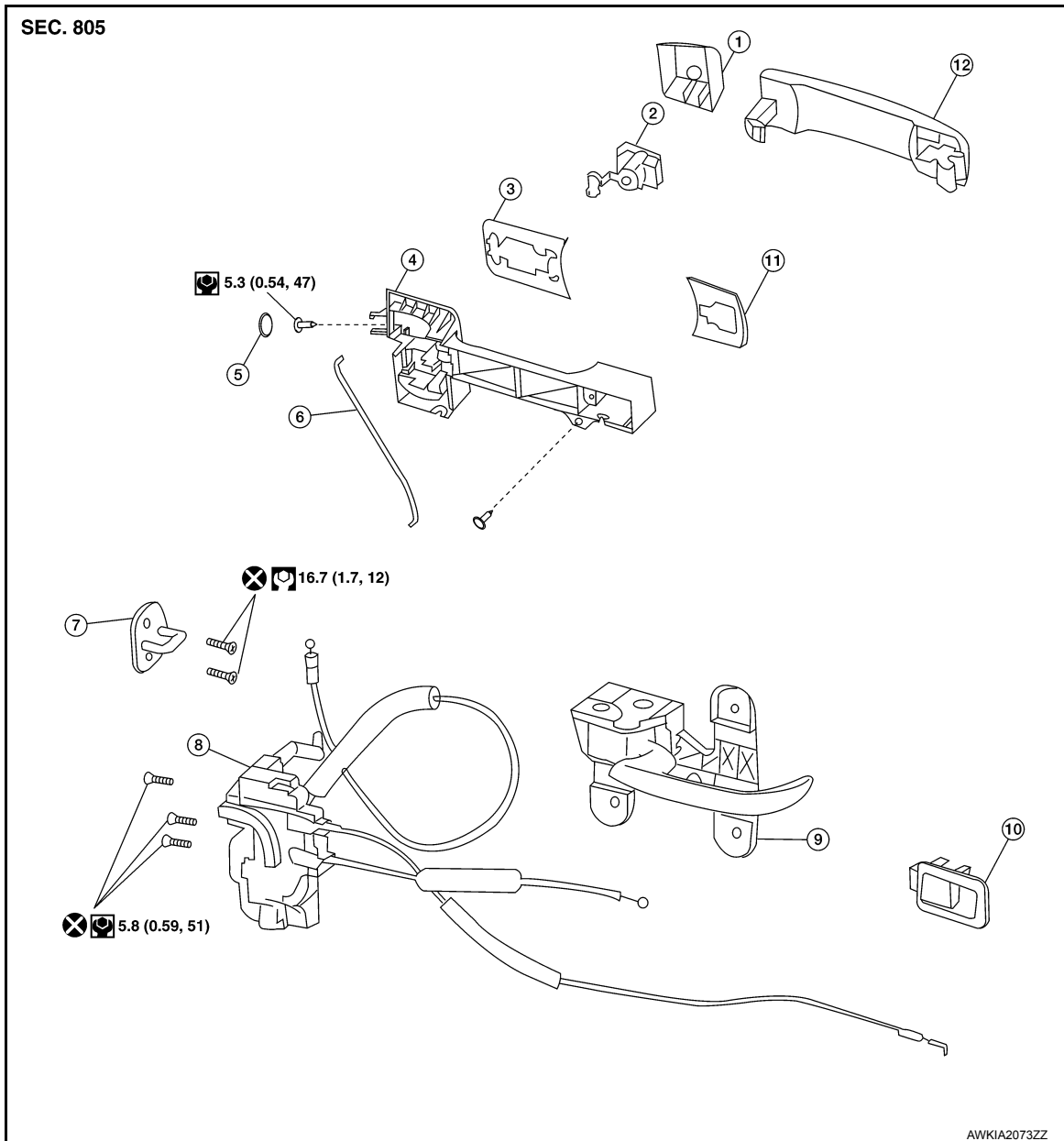
< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

FRONT DOOR LOCK

Component Structure

INFOID:000000009822926



- | | | |
|------------------------------|---|--|
| 1. Outside handle escutcheon | 2. Door key cylinder assembly (driver side) | 3. Rear gasket |
| 4. Outside handle bracket | 5. Grommet | 6. Door key cylinder rod (driver side) |
| 7. Door striker | 8. Door lock assembly | 9. Inside handle |
| 10. Inside door lock lever | 11. Front gasket | 12. Outside handle |

Removal and Installation

INFOID:000000009822927

REMOVAL

1. Remove the front door glass regulator. Refer to [GW-13, "Removal and Installation"](#).
2. Remove the front door glass rear run.

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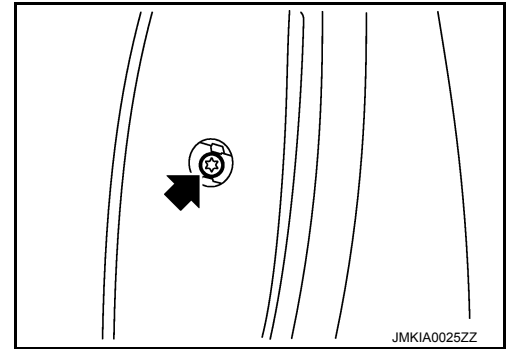
FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

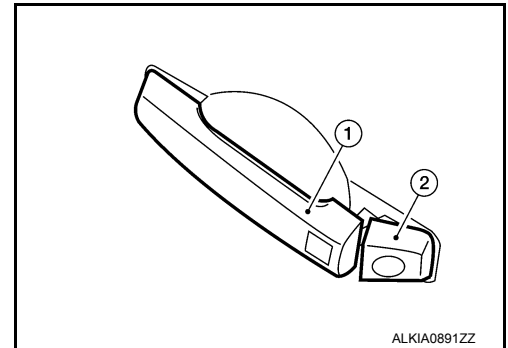
[WITH INTELLIGENT KEY SYSTEM]

3. Remove the door side grommet and the bolt from the grommet hole.

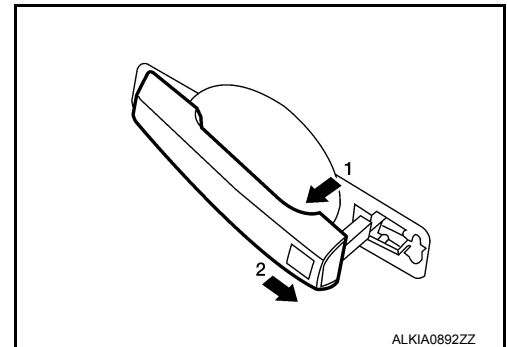
Bolt **5.3 N·m (0.54 kg-m, 47 in-lb)**



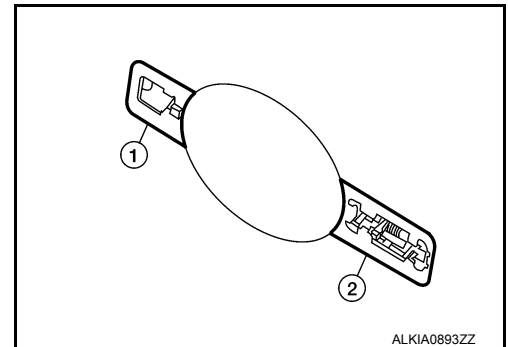
4. While pulling the outside handle (1), remove the door key cylinder assembly (LH) (2) or outside handle escutcheon (RH) (2).



5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling (1) the outside handle, slide (2) toward rear of vehicle to remove.
7. Disconnect the harness connector from the Intelligent Key request switch.



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

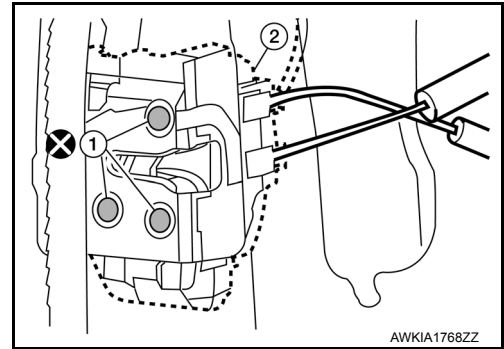


FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

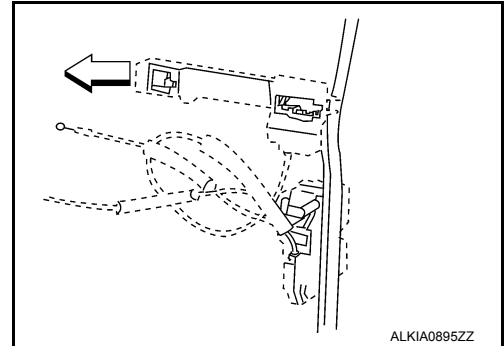
[WITH INTELLIGENT KEY SYSTEM]

- Remove the bolts (1) and separate the door lock assembly (2) from the door.

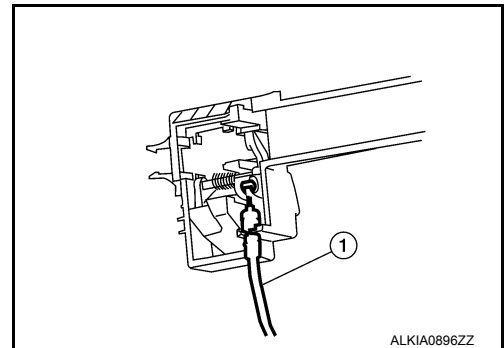


- While pulling the outside handle bracket, slide toward the front of the vehicle to remove the bracket and the door lock assembly as shown.

⇐: Front



- Disconnect the harness connector from the door lock actuator.
- Disconnect the outside handle cable (1) from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

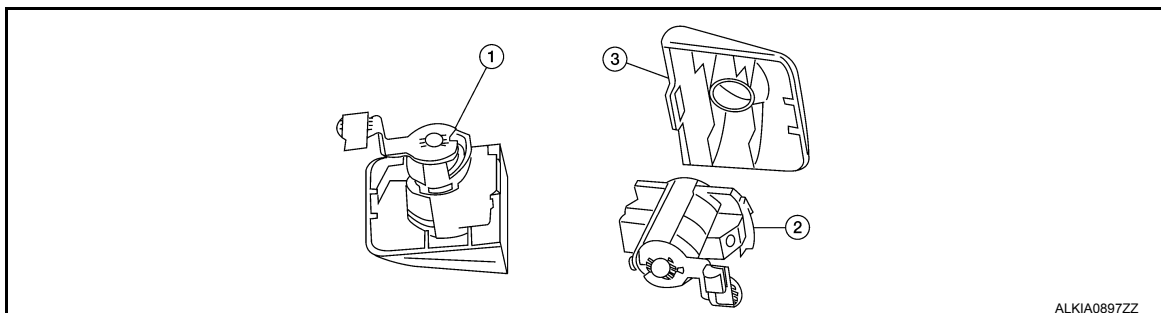
CAUTION:

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

Disassembly and Assembly

INFOID:000000009822928

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

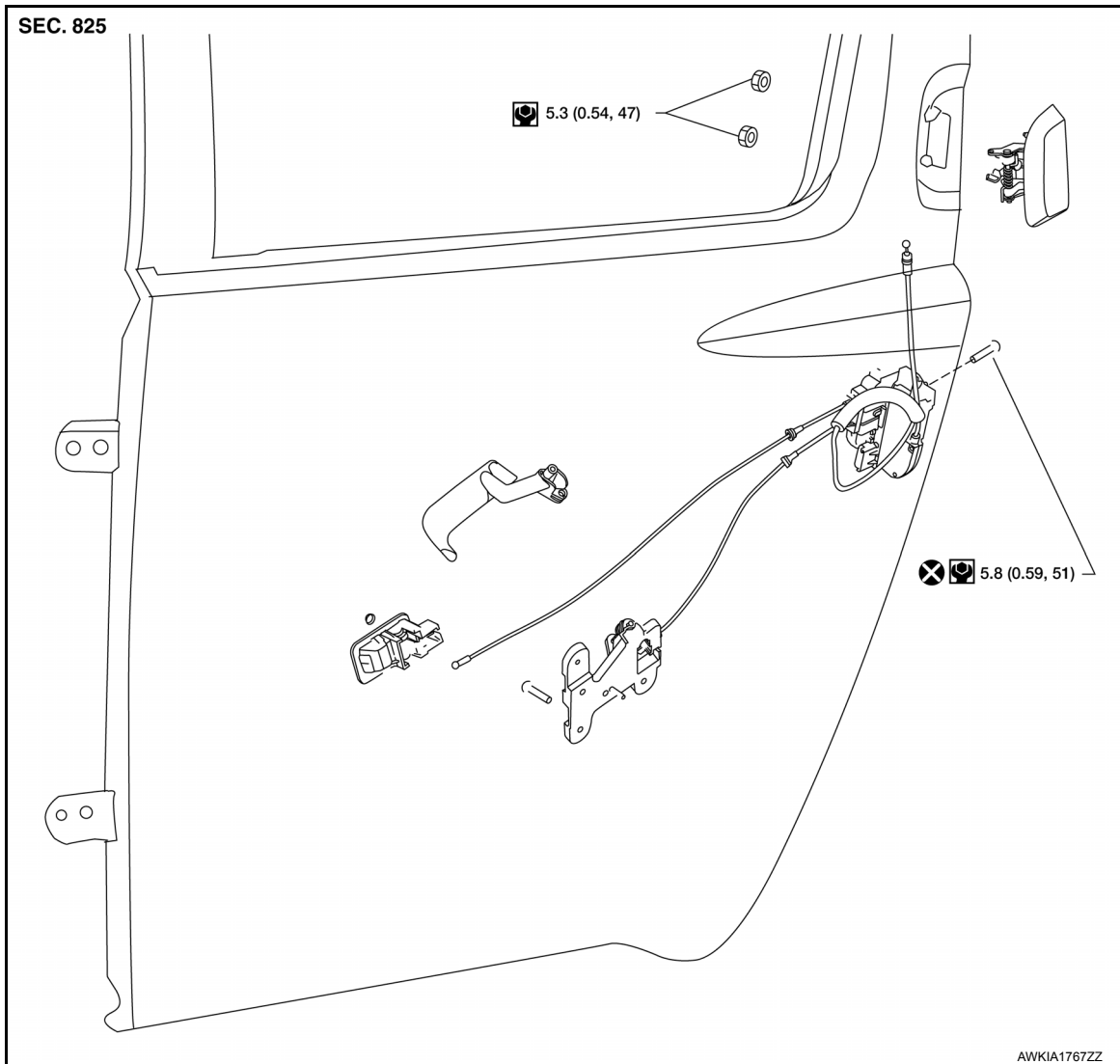
< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

REAR DOOR LOCK

Component Structure

INFOID:00000009822929

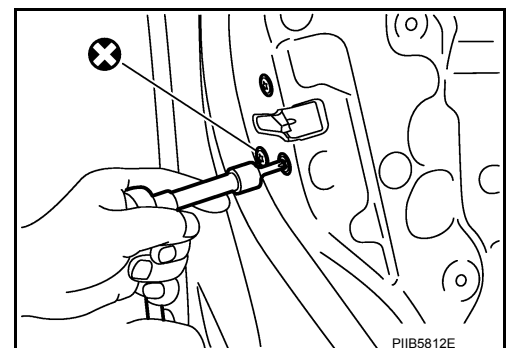


Removal and Installation

INFOID:00000009822930

REMOVAL

1. Remove the rear door finisher. Refer to [INT-15, "Removal and Installation"](#).
2. Position aside the vapor barrier.
3. Remove door grommets, and remove outside handle nuts from grommet hole.
4. Remove outside handle and disconnect the cable.
5. Remove the door lock bolts, remove the door lock and disconnect the actuator connector.
6. Reach inside the door to separate outside handle rod connection.



REAR DOOR LOCK

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

INSTALLATION

Installation is in the reverse order of removal.

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BACK DOOR LOCK

< REMOVAL AND INSTALLATION >

[WITH INTELLIGENT KEY SYSTEM]

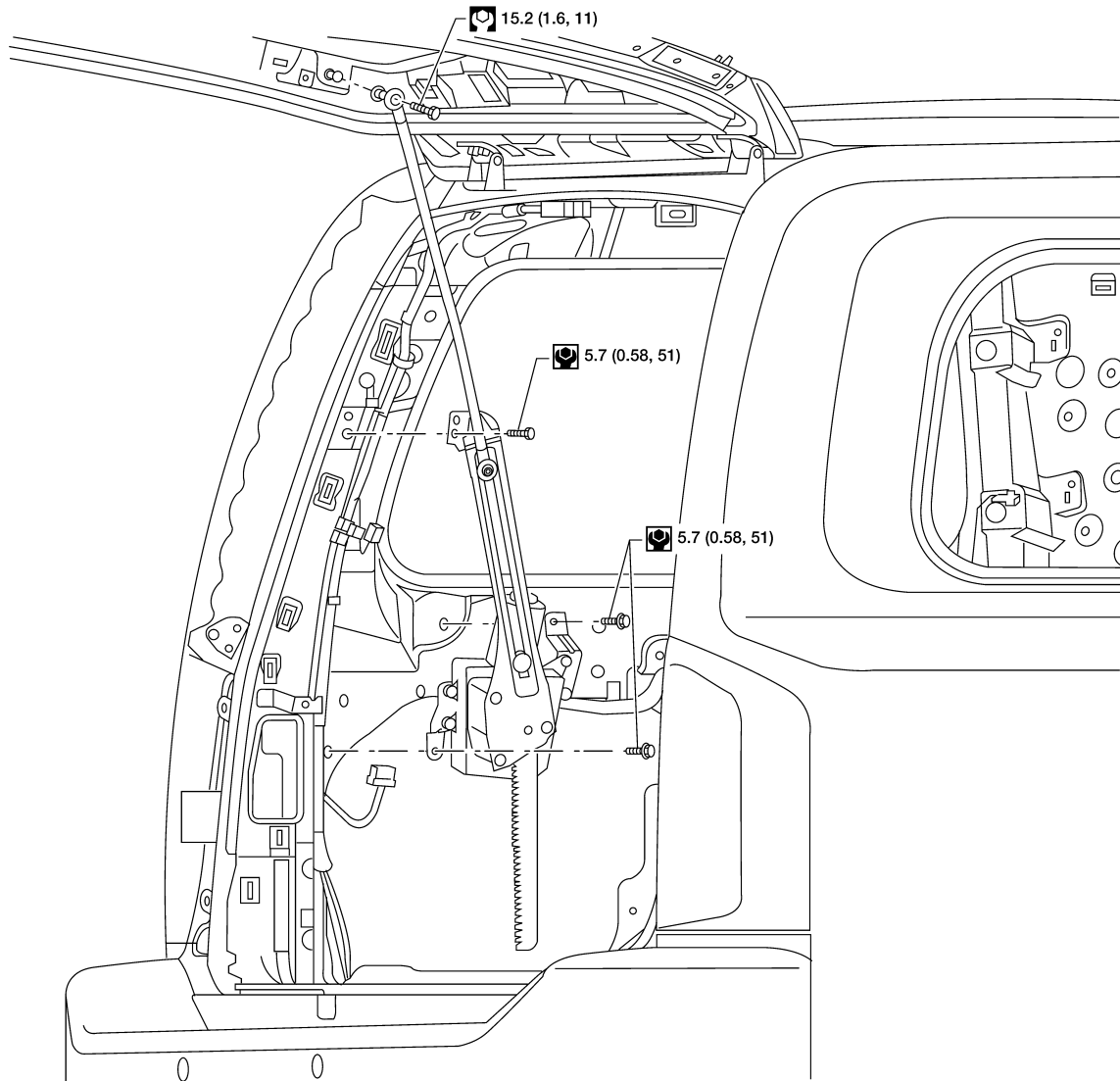
BACK DOOR LOCK

Power Back Door Opener

INFOID:00000009822931

Removal

SEC. 905



WIA0893E

1. Remove the LH luggage side upper. Refer to [INT-24, "Removal and Installation"](#).
2. Disconnect the battery negative terminal. Refer to [PG-77, "Removal and Installation"](#).
3. Disconnect the power back door motor electrical connector.
4. Disconnect the ball socket from the back door.
5. Remove the power back door motor assembly.

Installation

Installation is in the reverse order of removal.

BACK DOOR LOCK

< REMOVAL AND INSTALLATION >

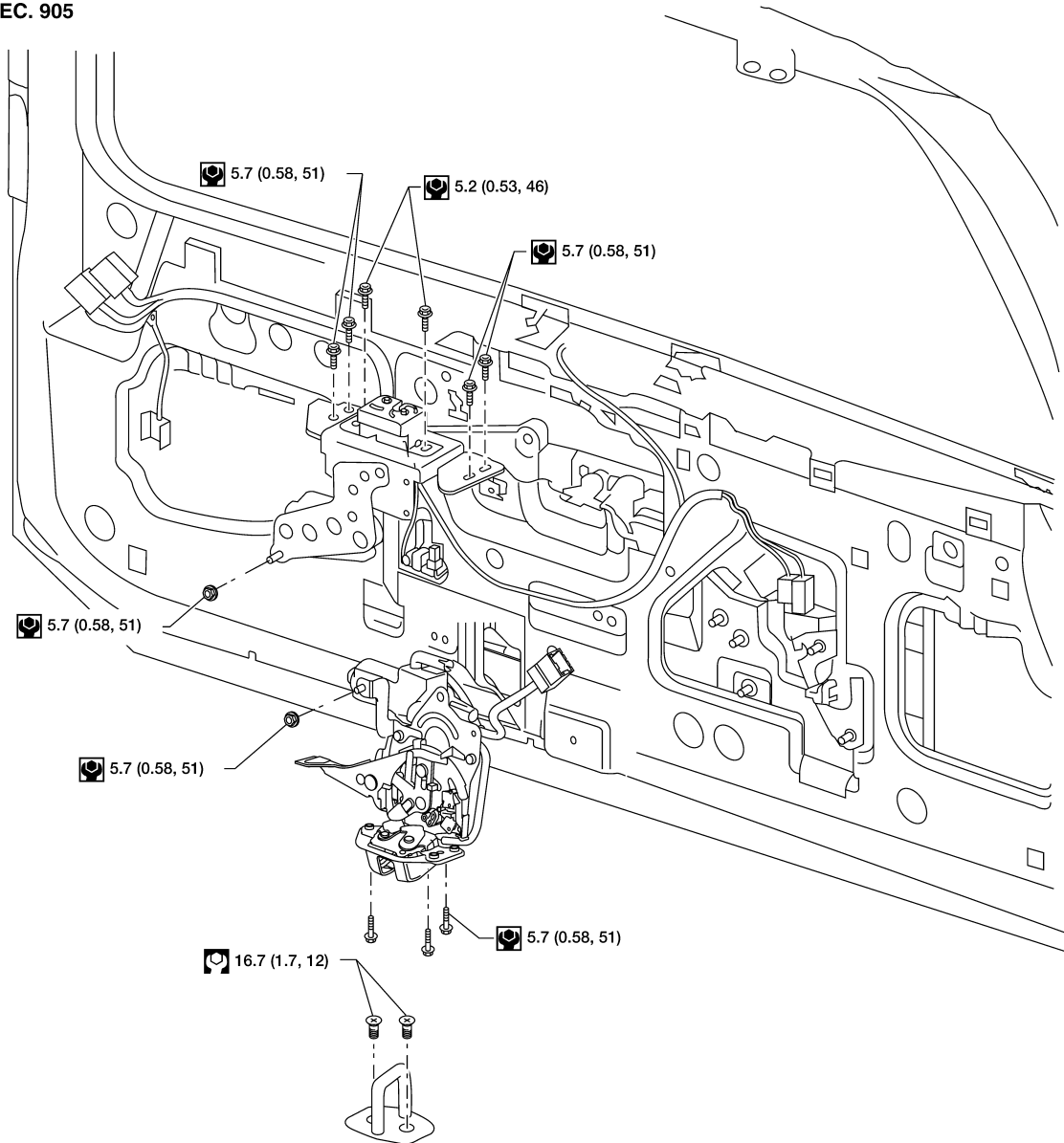
[WITH INTELLIGENT KEY SYSTEM]

Door Lock Assembly

INFOID:00000009822932

Removal

SEC. 905



WIA0894E

1. Remove the lower back door trim panel. Refer to [INT-26, "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.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

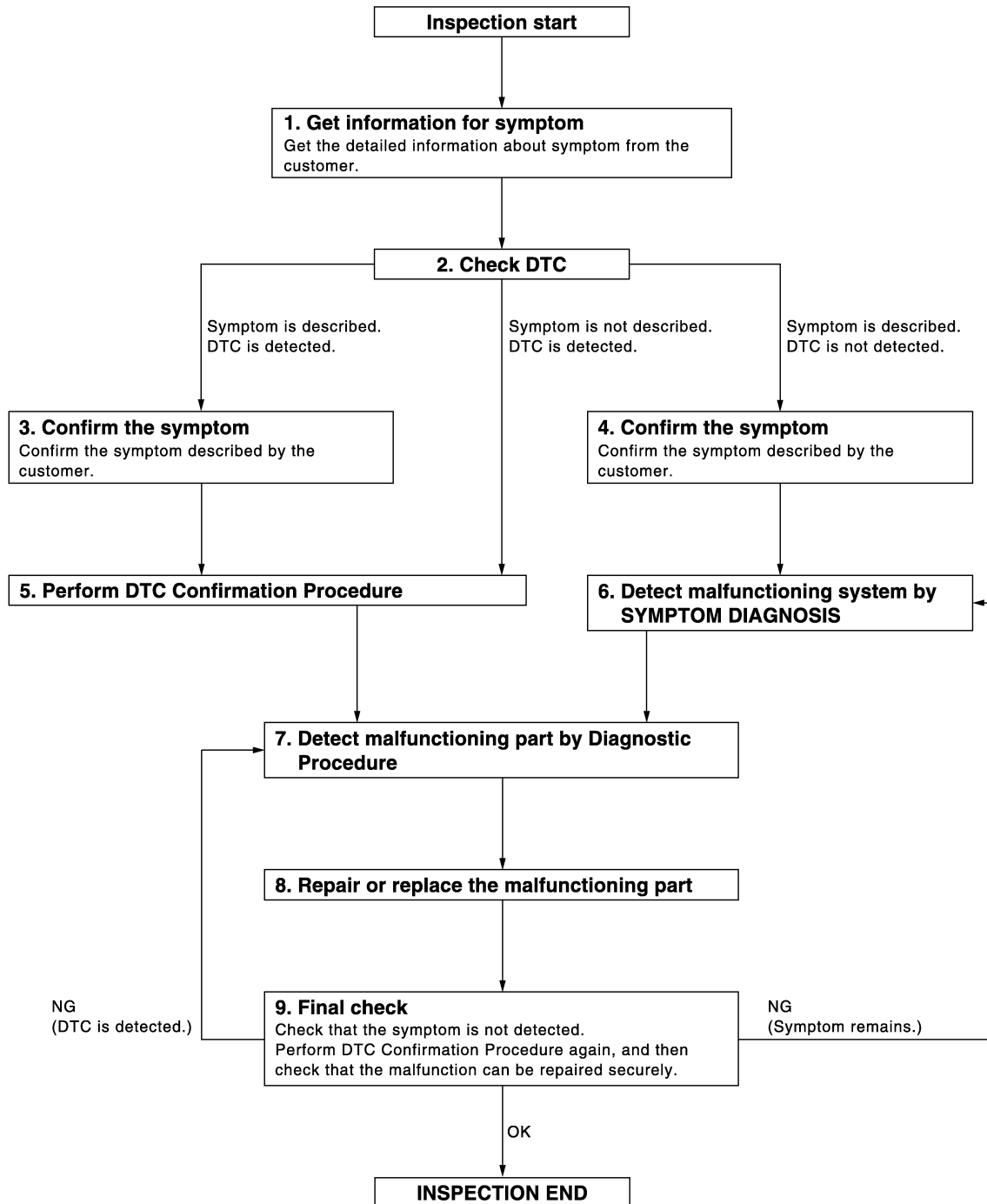
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000009822933

OVERALL SEQUENCE



DETAILED FLOW

Revision: August 2013

DLK-242

JMKIA2270GB

2014 Armada NAM

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).
 - 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 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 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 to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [BCS-44. "DTC Inspection Priority Chart"](#) and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 7.

NO >> Refer to [GI-42. "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> GO TO 7.

7.DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

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

Is malfunctioning part detected?

YES >> GO TO 8.

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

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

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

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

Does the symptom reappear?

YES (DTC is detected) >> GO TO 7.

YES (Symptom remains) >> GO TO 6.

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:000000009822934

The automatic back door system must be initialized anytime the battery or the automatic back door control unit has been disconnected.

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:000000009822935

1. INITIALIZATION

1. Close back door.
2. Open the back door with automatic open operation.

NOTE:

Do not stop the automatic operation until back door is fully open.

>> Work end.

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AUTOMATIC DOOR LOCKS

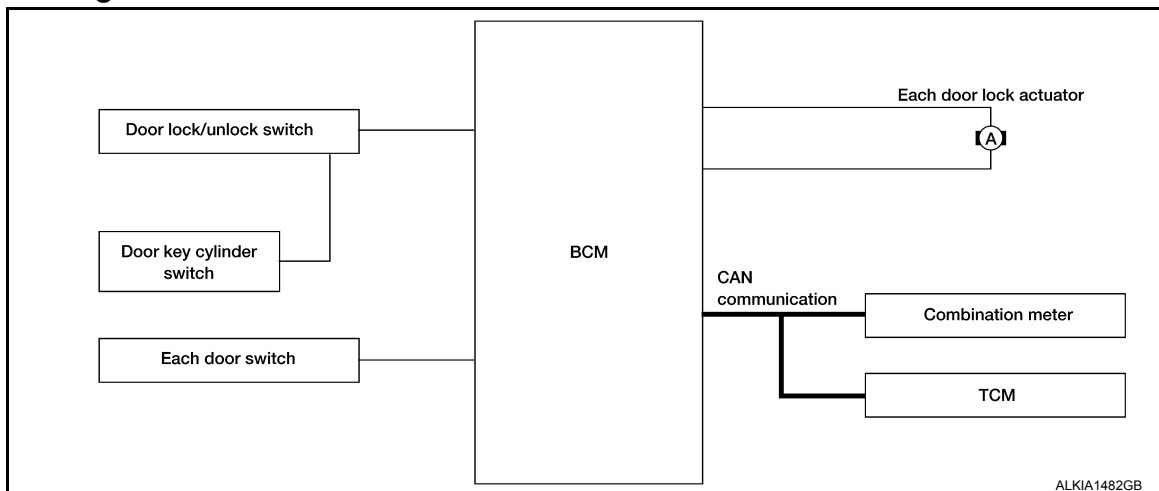
[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

AUTOMATIC DOOR LOCKS

System Diagram



System Description

INFOID:000000009822937

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

DOOR LOCK FUNCTION

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

Door Key Cylinder

- With the door key inserted in the door key cylinder on driver side, turning it to “LOCK”, will lock door lock actuator of all doors.
- With the door key inserted in the door key cylinder on driver side, turning it to “UNLOCK” once unlocks the driver side door lock actuator; turning it to “UNLOCK” again within 5 seconds after the first unlock operation unlocks all of the other doors. - (SELECTIVE UNLOCK OPERATION)

Selective unlock operation mode can be changed using “DOOR LOCK-UNLOCK SET” mode in “WORK SUPPORT”. Refer to [DLK-264. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)".](#)

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

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

AUTOMATIC DOOR LOCKS

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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

Setting change of Automatic Door Locks (LOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-264, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

IGN OFF Interlock Door Unlock*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-264, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

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

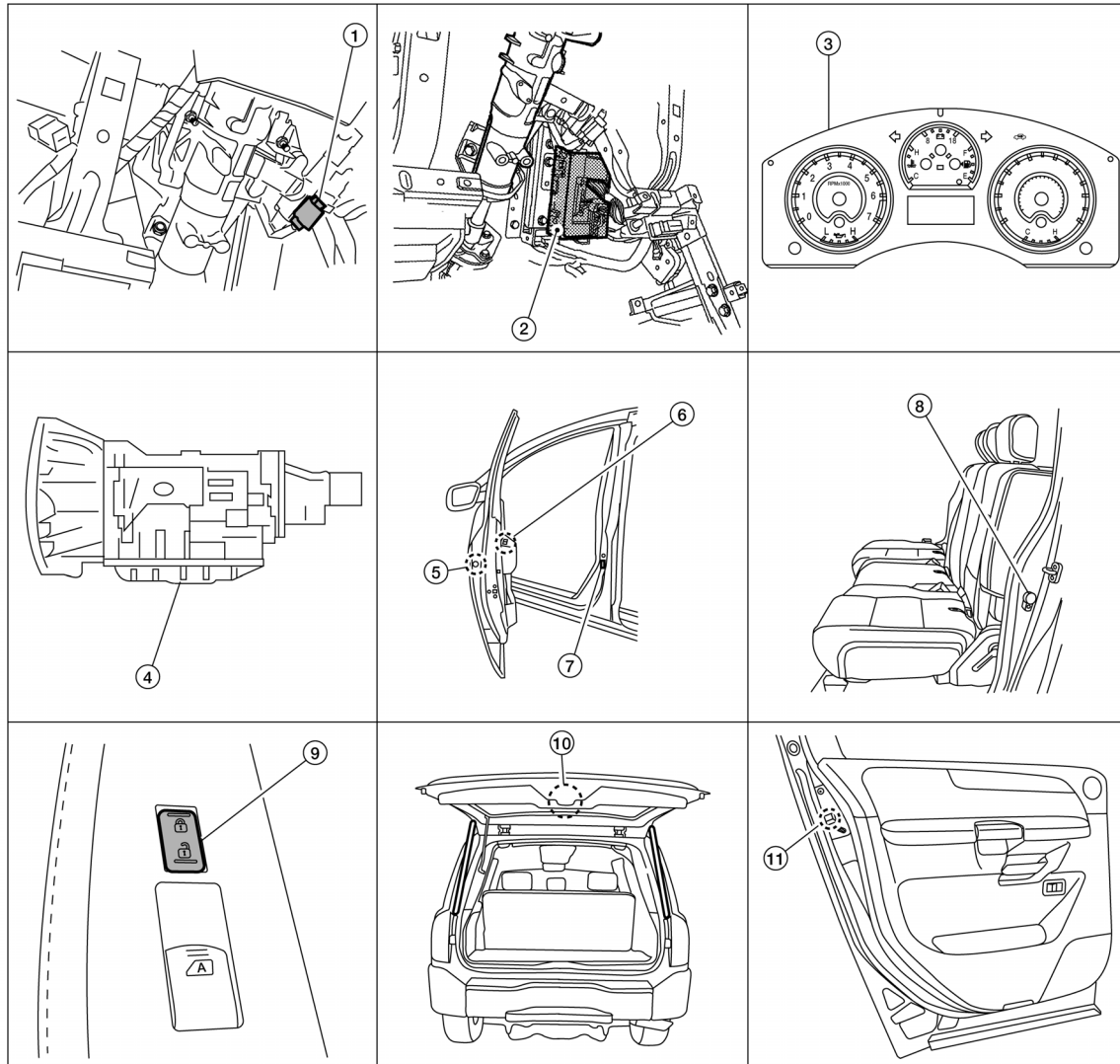
AUTOMATIC DOOR LOCKS

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:00000009822938



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- | | | |
|--|--|---|
| 1. Key switch and key lock solenoid M27 | 2. BCM M18, M19, M20 | 3. Combination meter M24 |
| 4. A/T assembly F9 | 5. Front door lock assembly LH (key cylinder switch) D14 | 6. Main power window and door lock/unlock switch D7, D8 |
| 7. Front door switch LH B8 | 8. Rear door switch LH B18 | 9. Power window and door lock/unlock switch RH D105 |
| 10. Back door switch (without power back door) D502 | 11. Rear door lock actuator LH D205 | |
| Back door latch (door ajar switch) (with power back door) D503 | RH D305 | |
| Back door lock actuator D703 | | |

AUTOMATIC DOOR LOCKS

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Description

INFOID:000000009822939

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Input lock or unlock signal to BCM.
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Input door open/close condition to BCM.
Door key cylinder switch	<ul style="list-style-type: none">• Input lock or unlock signal to main power window and door lock/unlock switch.• Main power window and door lock/unlock switch transmits door lock/unlock signal to BCM.
Combination meter	<ul style="list-style-type: none">• Receive buzzer signal from BCM via CAN communication line, and sounds the buzzer.• Transmits vehicle speed signal to CAN communication line.
TCM	Transmit shift position signal to BCM via CAN communication line.

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DOOR LOCK FUNCTION

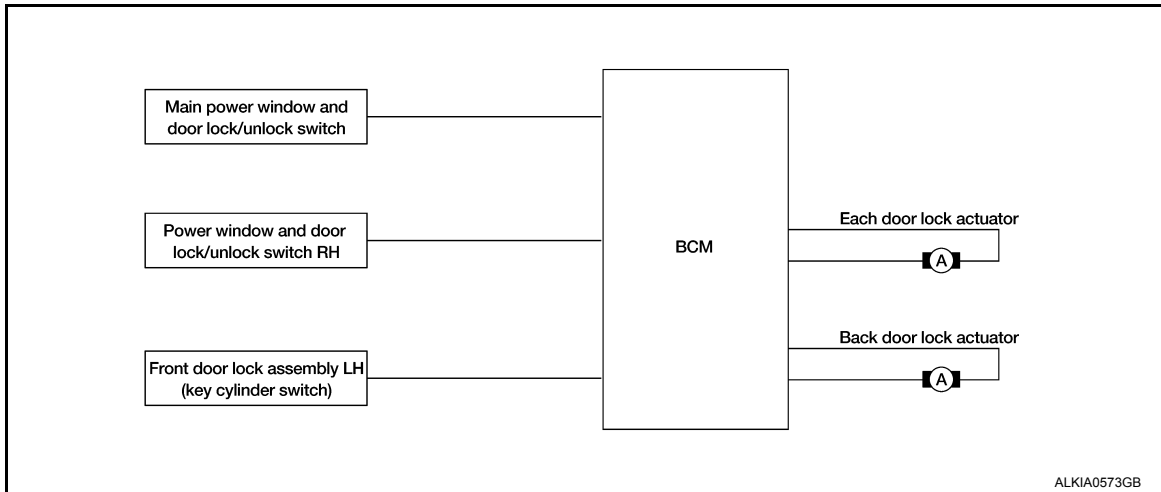
[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:000000009822940



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000009822941

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-264, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

Refer to [DLK-297, "Diagnosis Procedure"](#).

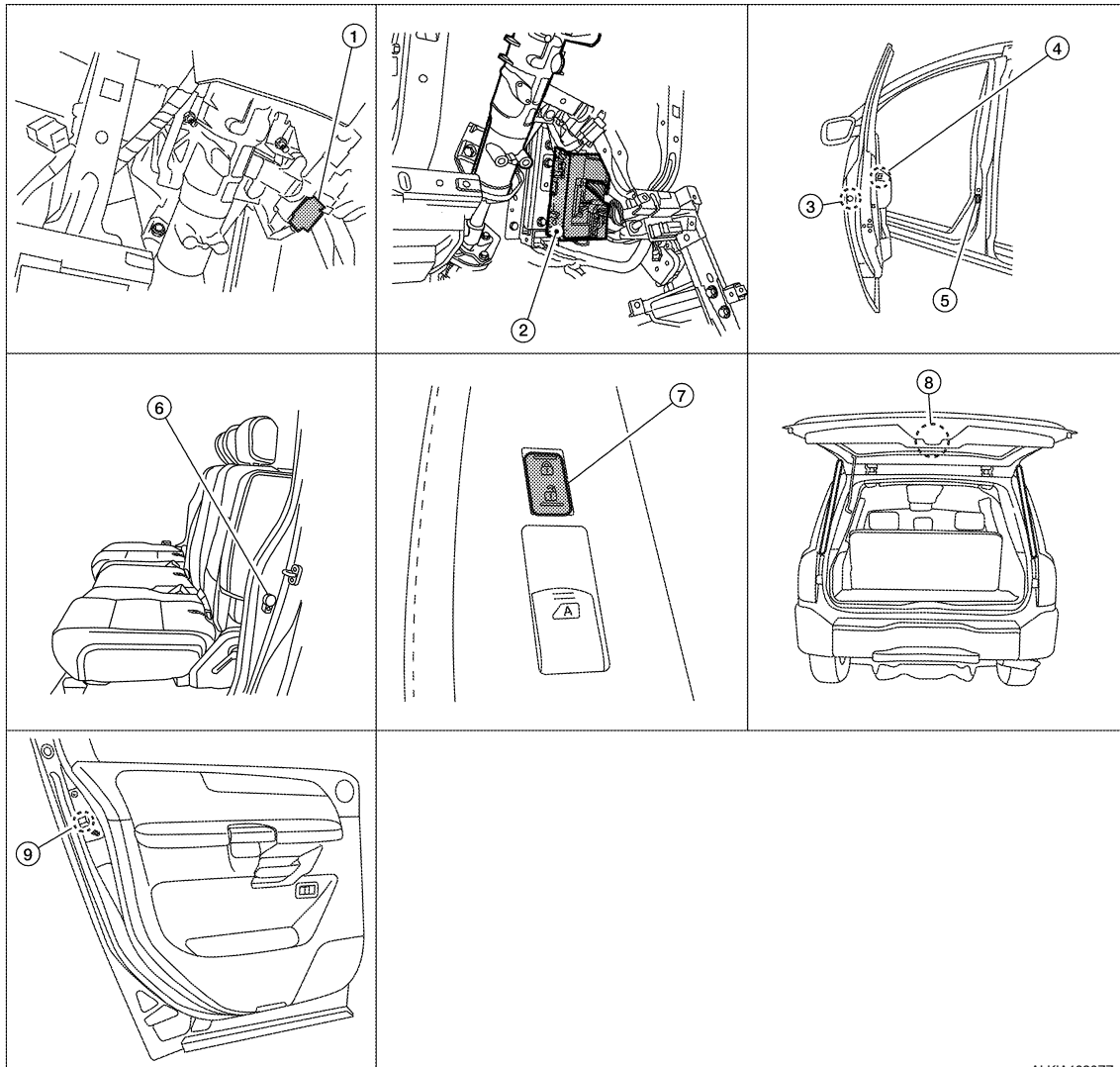
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000009822942



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| 1. Key switch and key lock solenoid M27 | 2. BCM M18, M19, M20
(view with instrument panel LH removed) | 3. Front door lock assembly LH (key cylinder switch) D14
Front door lock actuator RH D114 |
| 4. Main power window and door lock/unlock switch D7, D8 | 5. Front door switch
LH B8
RH B108 | 6. Rear door switch
LH B18
RH B116 |
| 7. Power window and door lock/unlock switch RH D105 | 8. Back door switch (without power back door) D502
Back door latch (door ajar switch) (with power back door) D503
Back door lock actuator D703 | 9. Rear door lock actuator
LH D205
RH D305 |

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DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000009822943

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

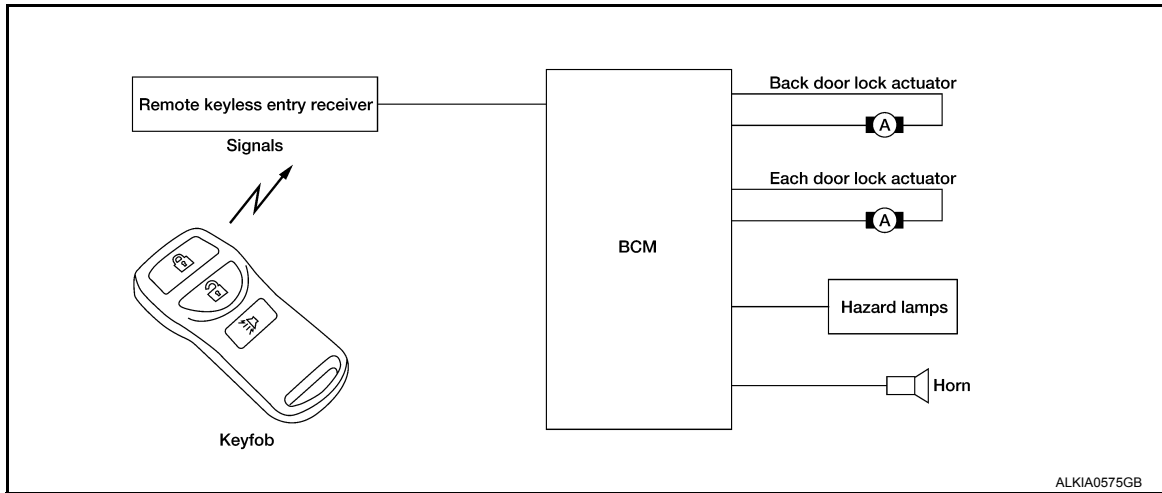
[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

REMOTE KEYLESS ENTRY

REMOTE KEYLESS ENTRY : System Diagram

INFOID:000000009822944



REMOTE KEYLESS ENTRY : System Description

INFOID:000000009822945

OPERATED PROCEDURE

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

REMOTE CONTROL ENTRY FUNCTIONS

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

REMOTE CONTROL ENTRY OPERATION CONDITIONS

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

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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-304. "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

	C mode		S mode	
	Lock	Unlock	Lock	Unlock
Keyfob operation	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

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DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Ⓟ With CONSULT

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

ⓧ Without CONSULT

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.

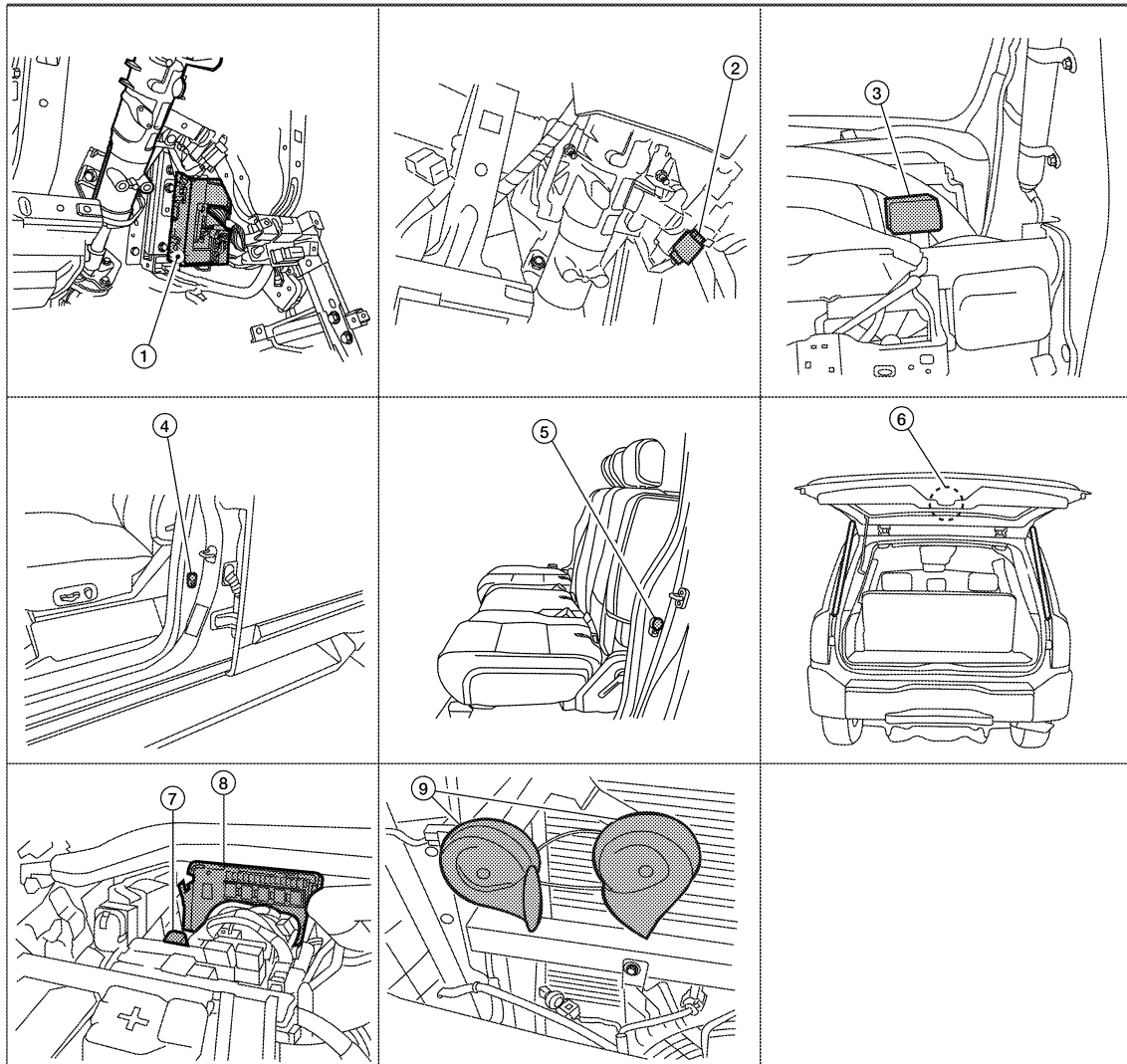
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

REMOTE KEYLESS ENTRY : Component Parts Location

INFOID:000000009822946



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|---|--|--|
| 1. BCM M18, M19, M20
(view with instrument panel LH removed) | 2. Key switch and key lock solenoid M27
(view with instrument panel LH removed) | 3. Remote keyless entry receiver M120
(view with instrument panel RH removed) |
| 4. Front door switch LH B8
RH B108 | 5. Rear door switch LH B18
RH B116 | 6. Back door switch (without power back door) D502
Back door latch (door ajar switch) (with power back door) D503 |
| 7. Horn relay H-1
(view with cover removed) | 8. IPDM E/R E122, E124 | 9. Horn E3
(view with grille removed) |

REMOTE KEYLESS ENTRY : Component Description

INFOID:000000009822947

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.

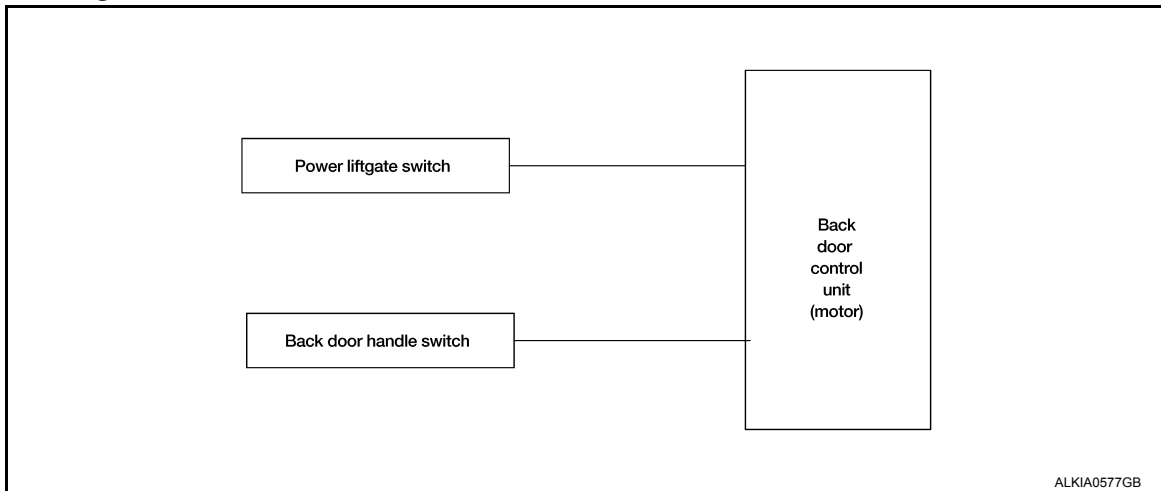
BACK DOOR OPENER FUNCTION

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR OPENER FUNCTION

System Diagram



System Description

INFOID:000000009822949

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. Refer to [DLK-245, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

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.

BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

- 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.
- 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.

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BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

- 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 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

BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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		No power function available
		9 > V > reset voltage		
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"> • Motor stopped • Clutch may slip • Control not possible because microcomputer being reset 	Control not possible because microcomputer being reset

Warning Chime Active Conditions

BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

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"> • For about 0.5 seconds immediately after drive motor operation starts • Between full open and approx. 7° from full open • Closure operation area (half switch - close switch)
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).

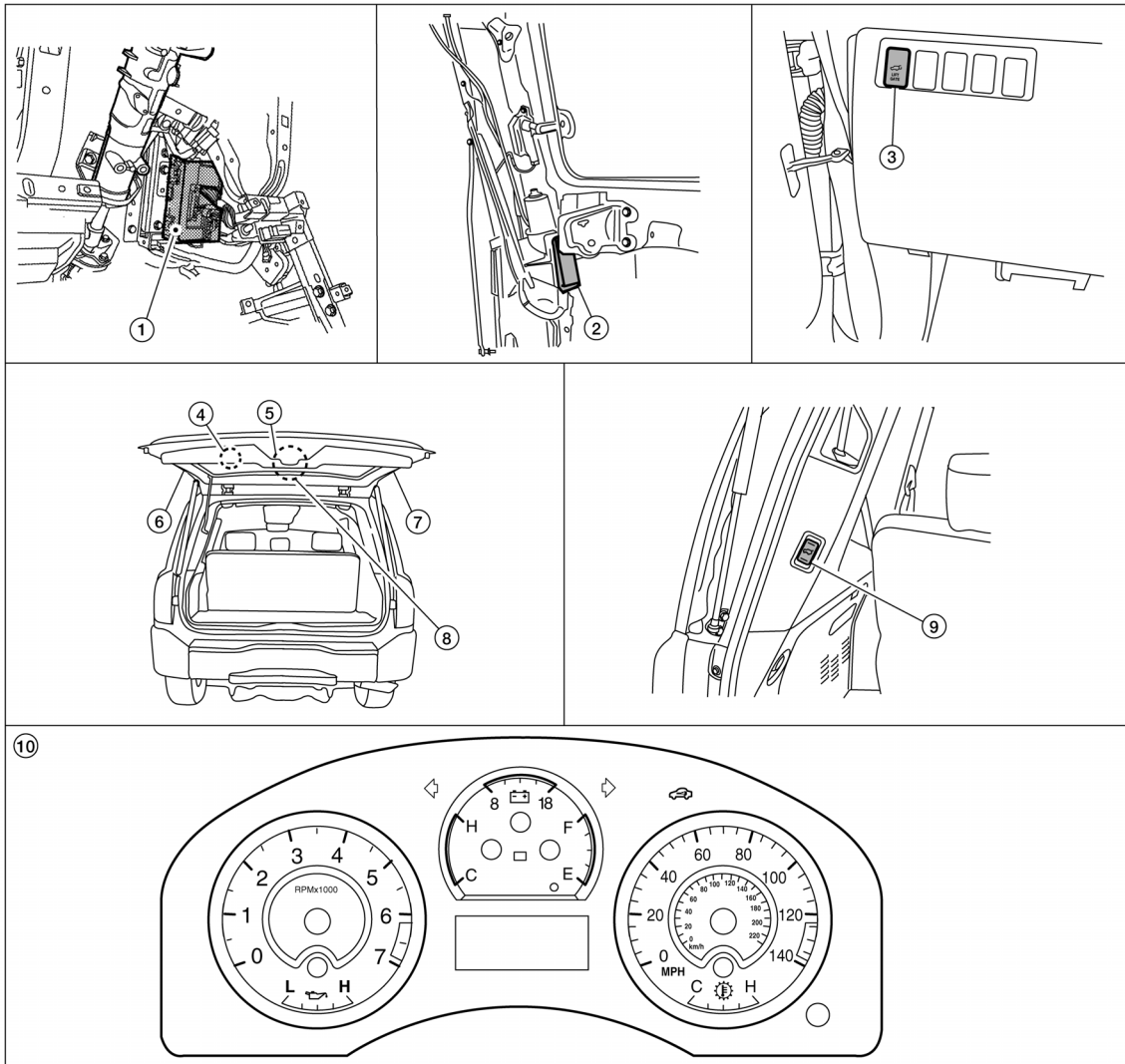
BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:000000009822950



ALKIA2324ZZ

- | | | |
|---|---|-------------------------------|
| 1. BCM M18, M19, M20
(view with instrument panel LH removed) | 2. Back door control unit B55
(view with right rear panel removed) | 3. Power liftgate switch M92 |
| 4. Back door warning chime D514 | 5. Back door latch D503
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:000000009822951

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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HOMELINK UNIVERSAL TRANSCEIVER

< SYSTEM DESCRIPTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Component Description

INFOID:000000009822952

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)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000009822953

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	<ul style="list-style-type: none"> The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		x	x	x	x		
Rear window defogger	REAR DEFOGGER			x	x			
Warning chime	BUZZER			x	x			
Interior room lamp timer	INT LAMP			x	x	x		
Remote keyless entry system	MULTI REMOTE ENT			x	x	x		
Exterior lamp	HEADLAMP			x	x	x		
Wiper and washer	WIPER			x	x	x		
Turn signal and hazard warning lamps	FLASHER			x	x			
Air conditioner	AIR CONDITIONER			x				
Intelligent Key system	INTELLIGENT KEY			x				
Combination switch	COMB SW			x				
BCM	BCM	x	x			x	x	x
Immobilizer	IMMU		x	x	x			
Interior room lamp battery saver	BATTERY SAVER			x	x	x		
Back door open	TRUNK			x	x			
Vehicle security system	THEFT ALM			x	x	x		
RAP system	RETAINED PWR			x	x	x		
Signal buffer system	SIGNAL BUFFER			x	x			
TPMS	AIR PRESSURE MONITOR		x	x	x	x		
Panic alarm system	PANIC ALARM				x			

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DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:000000009822954

SELF DIAGNOSTIC RESULT

Refer to [BCS-44, "DTC Index"](#).

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
BACK DOOR SW [On/Off]	Indicates condition of back door switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
I-KEY LOCK* [On/Off]	Indicates condition of lock signal from Intelligent Key.
I-KEY UNLOCK* [On/Off]	Indicates condition of unlock signal from Intelligent Key.
KEYLESS LOCK** [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK** [On/Off]	Indicates condition of unlock signal from keyfob.

* : with Intelligent Key

** : without Intelligent Key

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
DOOR LOCK-UNLOCK SET	On*	Automatic door locks function ON.
	Off	Automatic door locks function OFF.
ANTI-LOCK OUT SET	Off	Anti lock out function OFF.
	On*	Anti lock out function ON.
AUTOMATIC DOOR LOCK SELECT	SHIFT OUT OF PARK	Doors lock automatically when shifted out of park (P).
	VH SPD*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).
AUTOMATIC DOOR UNLOCK SELECT	MODE6	Drivers door unlocks automatically when key is removed.
	MODE5	Drivers door unlocks automatically when shifted into park (P).
	MODE4	Drivers door unlocks automatically when ignition is switched from ON to OFF.
	MODE3	Doors unlock automatically when key is removed.
	MODE2***	Doors unlock automatically when shifted into park (P).
	MODE1**	Doors unlock automatically when ignition is switched from ON to OFF.

DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Support Item	Setting	Description
AUTOMATIC LOCK/UNLOCK SELECT	On*	Automatic lock/unlock function ON.
	Off	Automatic lock/unlock function OFF.

* : Initial setting all vehicles

** : Initial setting vehicles with Intelligent Key

*** : Initial setting vehicles without Intelligent Key

MULTI REMOTE ENT

MULTI REMOTE ENT : CONSULT Function (BCM - MULTI REMOTE ENT)

INFOID:000000009822955

DATA MONITOR

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

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [OTR ULK/DR UNLK/ALL UNLK/ALL LCK].
PW REMOTO DOWN SET	This test is able to check keyfob power window down operation [Off/On].
FLASHER	This test is able to check hazard reminder operation [Off/LH/RH].
HORN	This test is able to check horn operation [On].

WORK SUPPORT

Support Item	Setting	Description
HORN CHIRP SET	Off	Horn chirp function can be changed in this mode.
	On*	
HAZARD LAMP SET	MODE4*	Lock and Unlock
	MODE3	Lock Only
	MODE2	Unlock Only
	MODE1	OFF

DIAGNOSIS SYSTEM (BCM)

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYSTEM DESCRIPTION >

Support Item	Setting		Description
MULTI ANSWER BACK SET	MODE2	Lock	Hazard warning lamps flash twice and horn does not sound.
		Unlock	Hazard warning lamps do not flash and horn does not sound.
	MODE1*	Lock	Hazard warning lamps flash twice and horn sounds once.
		Unlock	Hazard warning lamps flash once and horn does not sound.
AUTO LOCK SET	MODE3	1 min	Auto locking function can be changed in this mode.
	MODE2	OFF	
	MODE1*	5 min	
PANIC ALRM SET	MODE3	1.5 sec	Panic alarm operation can be changed in this mode.
	MODE2	OFF	
	MODE1*	0.5 sec	
PW DOWN SET	MODE3	5 sec	Keyfob power window down can be changed in this mode.
	MODE2	OFF	
	MODE1*	3 sec	
REMO CONT ID REGIST	—		Keyfob ID code can be registered.
REMO CONT ID ERASUR	—		Keyfob ID code can be erased.
REMO CONT ID CONFIR	—		Keyfob ID code is registration is displayed.

*: Initial setting

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000009822956

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:000000009822957

DTC DETECTION LOGIC

DTC	CONSULT 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">• Transmission• Receiving (ECM)• Receiving (VDC/TCS/ABS)• Receiving (METER/M&A)• Receiving (TCM)• Receiving (MULTI AV)• Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:000000009822958

1.PERFORM SELF DIAGNOSTIC

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

Is CAN COMM CIRCUIT"" displayed?

- YES >> Refer to [LAN-87, "Diagnosis Procedure"](#).
NO >> Refer to [GI-42, "Intermittent Incident"](#).

DLK

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:000000009822959

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000009822960

1. REPLACE BCM

When DTC [U1010] is detected, replace BCM.

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

Special Repair Requirement

INFOID:000000009822961

1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to [BCS-4. "CONFIGURATION \(BCM\) : Description"](#) for BCM configuration.

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

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000009822962

Regarding Wiring Diagram information, refer to [BCS-46. "Wiring Diagram"](#).

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

Is the fuse blown?

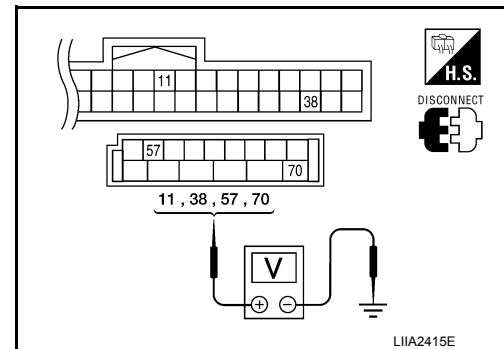
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

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



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

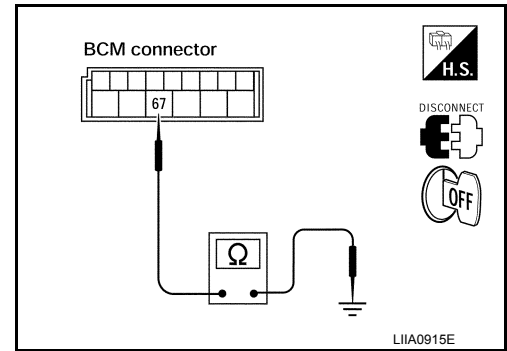
[WITHOUT INTELLIGENT KEY SYSTEM]

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

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



BACK DOOR

BACK DOOR : Diagnosis Procedure

INFOID:000000009822963

Regarding Wiring Diagram information, refer to [DLK-358, "Wiring Diagram - Without Intelligent Key System"](#).

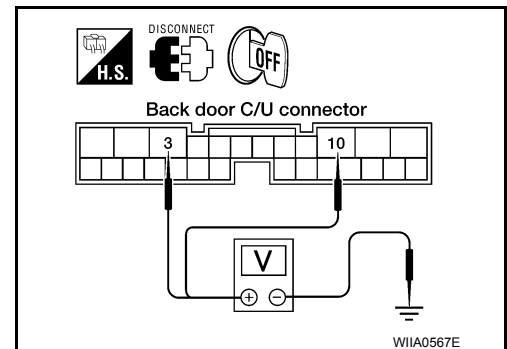
1. BACK DOOR POWER SUPPLY CIRCUIT INSPECTION

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.



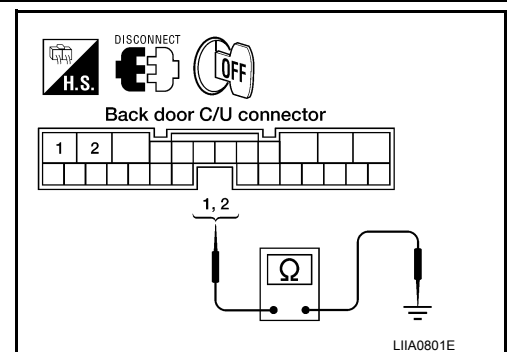
2. BACK DOOR GROUND CIRCUIT INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

DOOR SWITCH

Description

INFOID:000000009822964

Detects door open/close condition.

Component Function Check

INFOID:000000009822965

1. CHECK FUNCTION

With CONSULT

Check door switches in data monitor mode with CONSULT.

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-271, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822966

Regarding Wiring Diagram information, refer to [DLK-336, "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT

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

• 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

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

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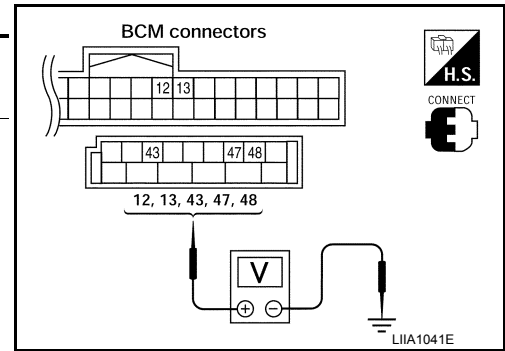
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DOOR SWITCH

< DTC/CIRCUIT 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	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 (D) D502 (Without power back door) terminal 3 or (C) D503 (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 (Without power back door) terminal 3 or (C) D503 (With power back door) terminal 7 and ground.

2 - Ground :Continuity should not exist

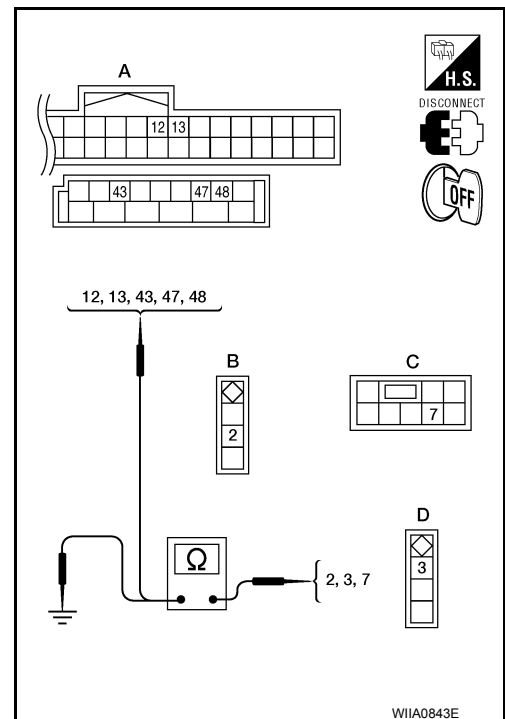
3 - Ground :Continuity should not exist

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

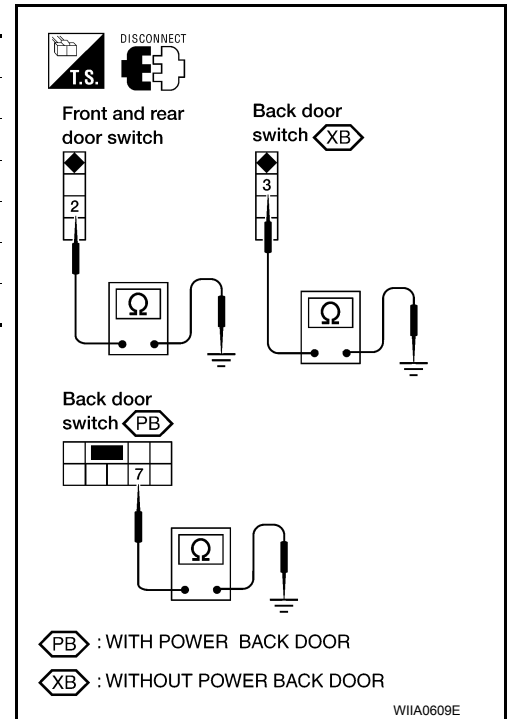
< DTC/CIRCUIT DIAGNOSIS >

[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



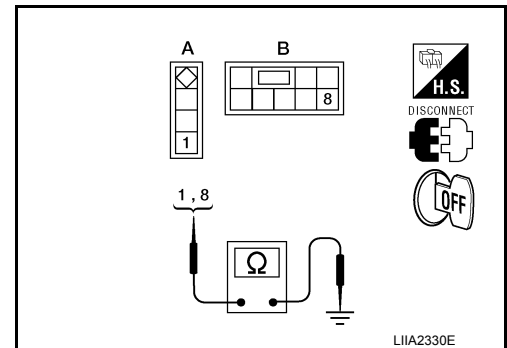
4. CHECK BACK DOOR SWITCH CIRCUIT

- 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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

DOOR LOCK AND UNLOCK SWITCH

DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000009822967

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

INFOID:000000009822968

1. CHECK FUNCTION

With CONSULT

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

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-274, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:000000009822969

Regarding Wiring Diagram information, refer to [DLK-336, "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT

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

- 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

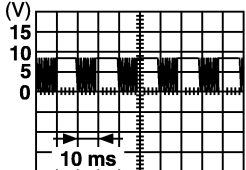
Without CONSULT

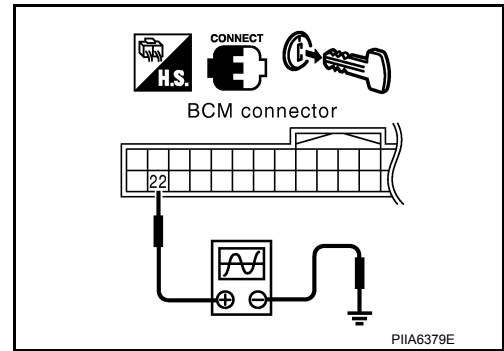
1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during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

DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 PIIA1297E



Is the inspection result normal?

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

2. CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.
2. Using the vehicle operational keyfob, press and hold the UNLOCK button for more than 3 seconds.

The front windows should be lowered.

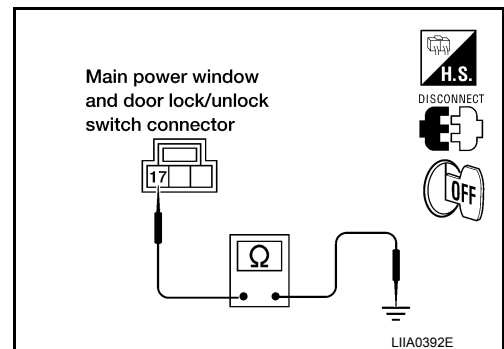
Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace BCM. Refer to [BCS-54. "Removal and Installation"](#).

3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

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

17 - Ground : Continuity should exist.



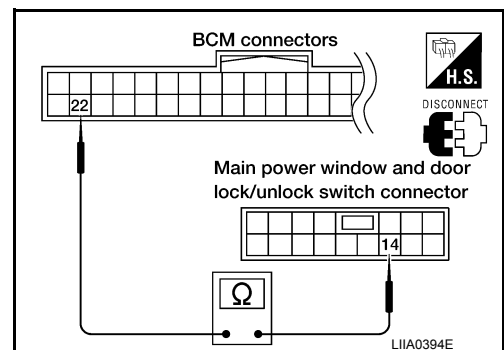
Is the inspection result normal?

- 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.



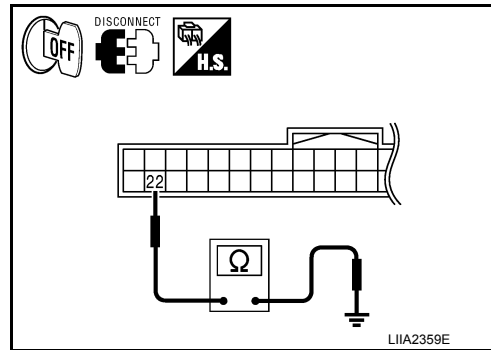
DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

3. Check continuity between BCM connector M18 terminal 22 and ground.

22 - Ground : Continuity should not 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:000000009822970

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000009822971

1.CHECK FUNCTION

With CONSULT

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

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-276. "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000009822972

Regarding Wiring Diagram information, refer to [DLK-336. "Wiring Diagram - Without Intelligent Key System"](#).

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT

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

- 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

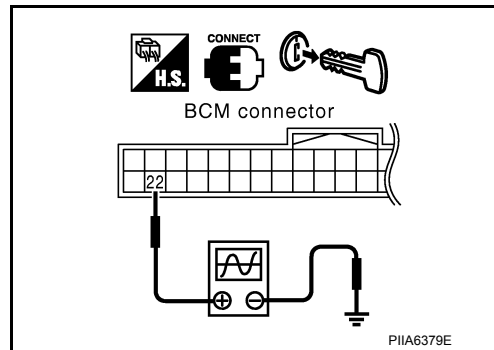
DOOR LOCK AND UNLOCK SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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

1. Turn ignition switch OFF.
2. Using the vehicle operational keyfob, press and hold the UNLOCK button for more than 3 seconds.

The front windows should be lowered.

Is the inspection normal?

- YES >> GO TO 3
 NO >> Replace BCM. Refer to [BCS-54, "Removal and Installation"](#).

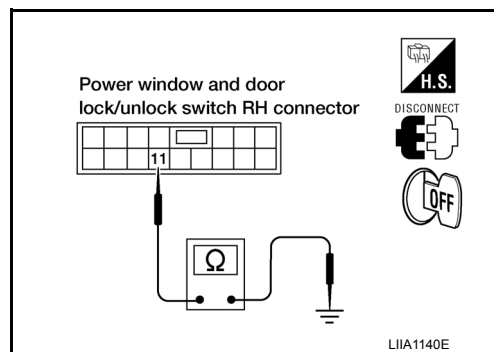
3.CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Disconnect power window and door lock/unlock switch RH.
2. 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.

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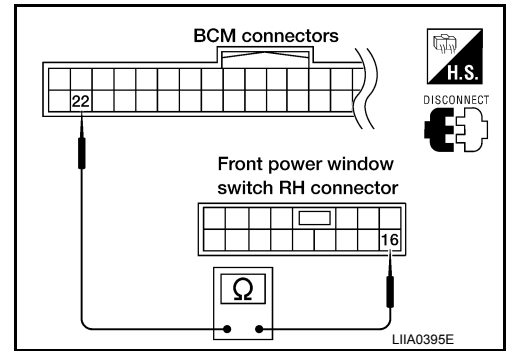
DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

22 - 16

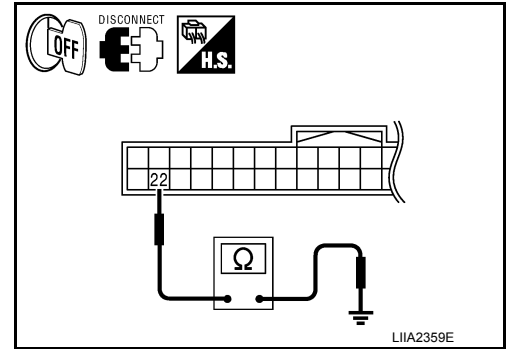
: Continuity should exist.



3. Check continuity between BCM connector M18 terminal 22 and ground.

22 - ground

: Continuity should not exist.



Is the inspection normal?

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

NO >> Repair or replace harness.

KEY CYLINDER SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

INFOID:000000009822973

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:000000009822974

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.

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-279. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822975

Regarding Wiring Diagram information, refer to [DLK-336. "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT

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

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

KEY CYL LK-SW : ON

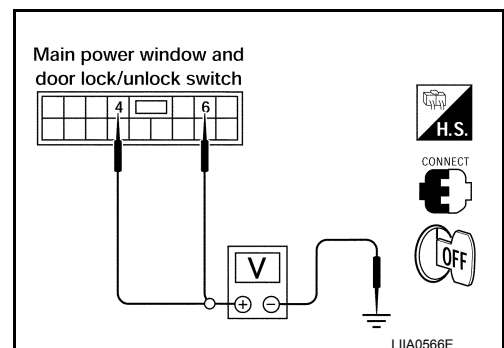
- When key inserted in left front key cylinder is turned to UNLOCK:

KEY CYL UN-SW : ON

Without CONSULT

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.

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KEY CYLINDER SWITCH

[WITHOUT INTELLIGENT KEY SYSTEM]

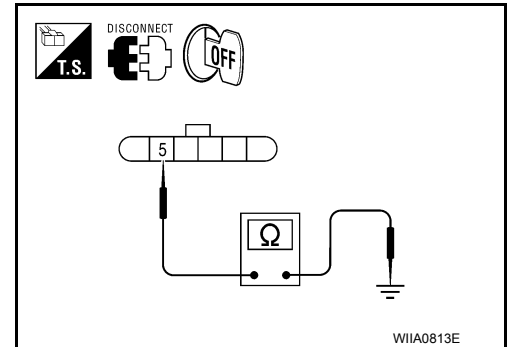
< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly LH (key cylinder switch).
3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



Is the inspection result normal?

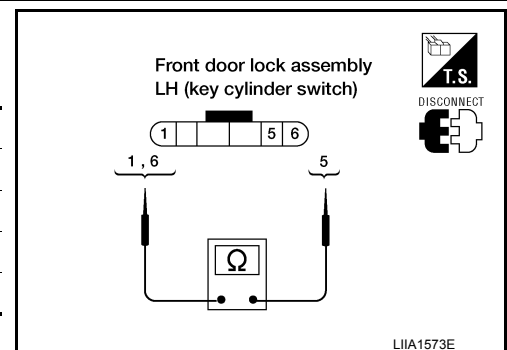
YES >> GO TO 3

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?

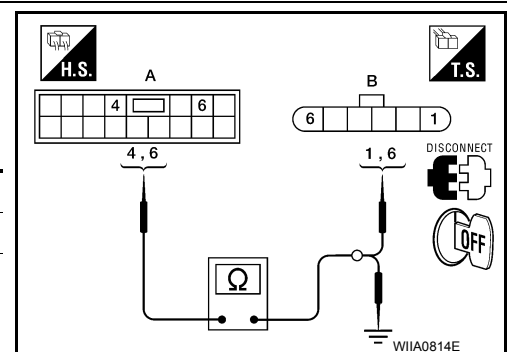
YES >> GO TO 4

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-393, "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.

DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

DOOR LOCK ACTUATOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000009822976

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:000000009822977

1. CHECK FUNCTION

1. Use CONSULT 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-281, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

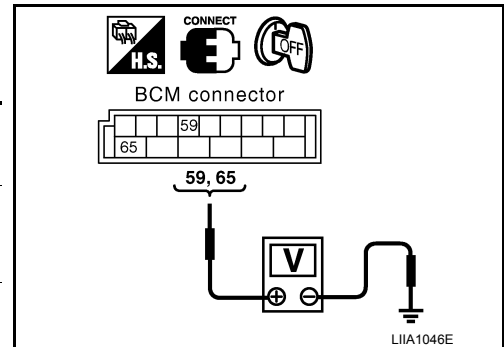
INFOID:000000009822978

Regarding Wiring Diagram information, refer to [DLK-336, "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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



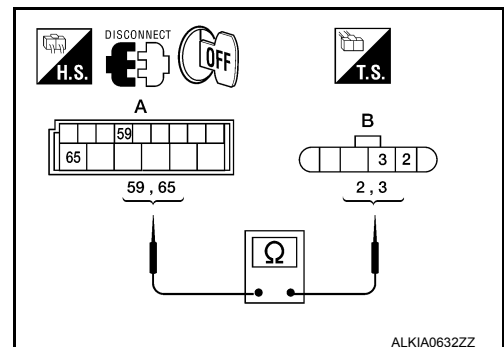
Is the inspection result normal?

- 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.

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DOOR LOCK ACTUATOR

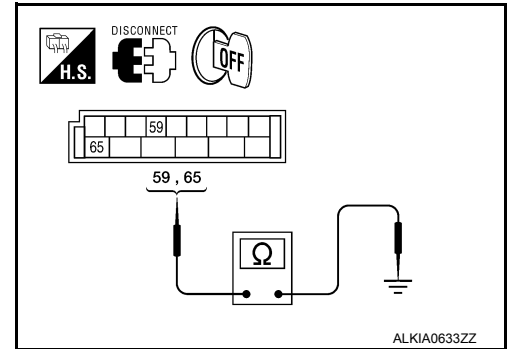
< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Terminals		Continuity
	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:000000009822979

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000009822980

1. CHECK FUNCTION

1. Use CONSULT 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-282, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

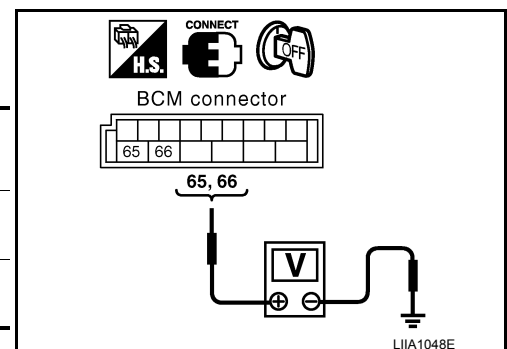
INFOID:000000009822981

Regarding Wiring Diagram information, refer to [DLK-336, "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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

DOOR LOCK ACTUATOR

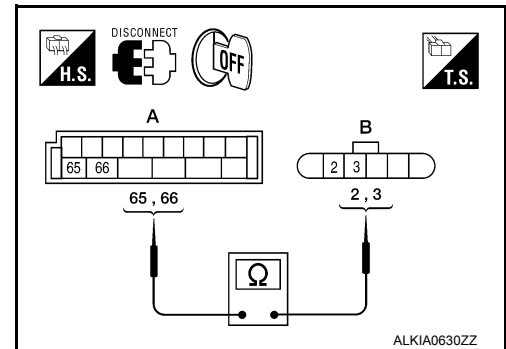
[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

2. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminal		Continuity
65	3	Yes
66	2	Yes



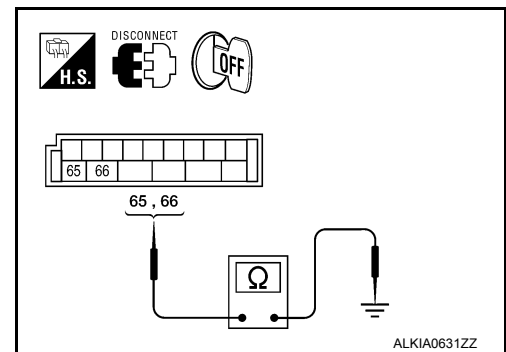
Is the inspection result normal?

- YES >> Replace front door lock actuator RH. Refer to [DLK-235. "Removal and Installation"](#).
 NO >> Repair or replace harness.

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		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.

INFOID:000000009822982

REAR LH : Component Function Check

INFOID:000000009822983

1. CHECK FUNCTION

1. Use CONSULT 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-283. "REAR LH : Diagnosis Procedure"](#).

REAR LH : Diagnosis Procedure

INFOID:000000009822984

Regarding Wiring Diagram information, refer to [DLK-336. "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK DOOR LOCK ACTUATOR SIGNAL

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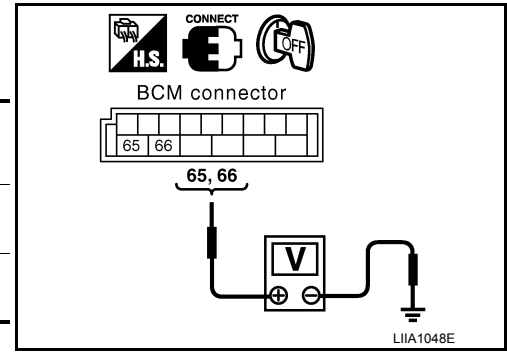
DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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?

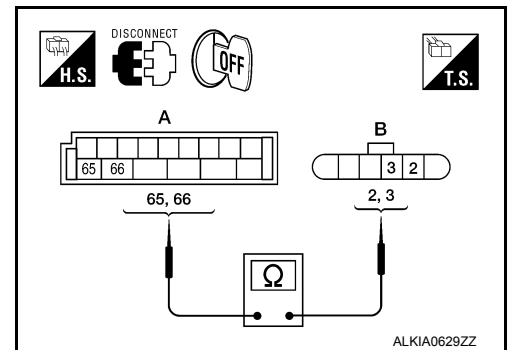
YES >> GO TO 2

NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator LH.
2. 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?

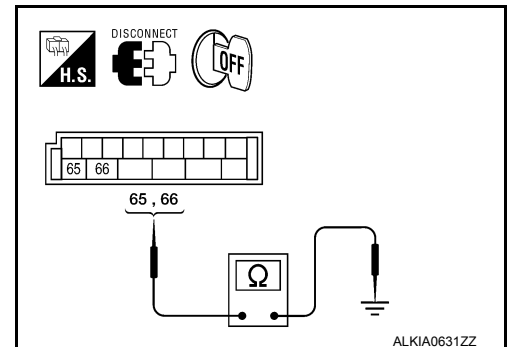
YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness.

3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

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

NO >> Repair or replace harness.

REAR RH

REAR RH : Description

Locks/unlocks the door with the signal from BCM.

INFOID:000000009822985

DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

REAR RH : Component Function Check

INFOID:000000009822986

1.CHECK FUNCTION

1. Use CONSULT 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-285. "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

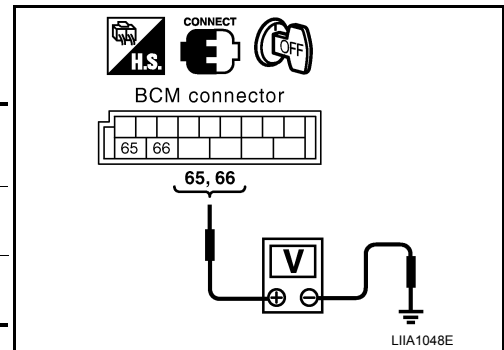
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Regarding Wiring Diagram information, refer to [DLK-336. "Wiring Diagram - Without Intelligent Key System"](#).

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals		Condition	Voltage (V) (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



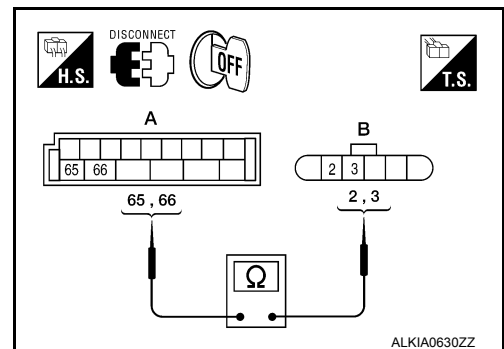
Is the inspection result normal?

- 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.

3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

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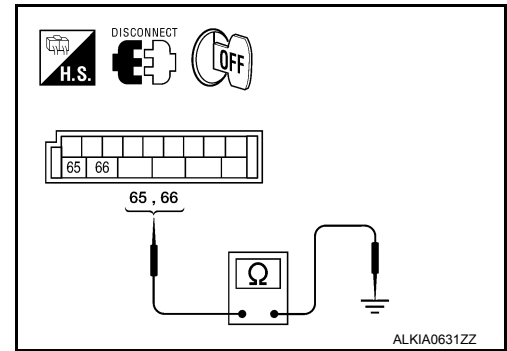
DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT 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 [BCS-54, "Removal and Installation"](#).

NO >> Repair or replace harness.

BACK DOOR (WITHOUT POWER BACK DOOR)

BACK DOOR (WITHOUT POWER BACK DOOR) : Description

INFOID:000000009822988

Locks/unlocks the door with the signal from BCM.

BACK DOOR (WITHOUT POWER BACK DOOR) : Component Function Check

INFOID:000000009822989

1.CHECK FUNCTION

- Use CONSULT 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-286, "BACK DOOR \(WITHOUT POWER BACK DOOR\) : Diagnosis Procedure"](#).

BACK DOOR (WITHOUT POWER BACK DOOR) : Diagnosis Procedure

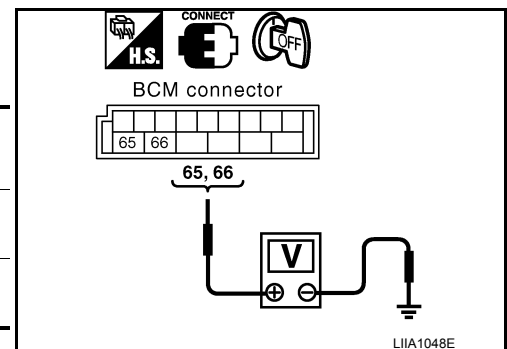
INFOID:000000009822990

Regarding Wiring Diagram information, refer to [DLK-358, "Wiring Diagram - Without Intelligent Key System"](#).

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.

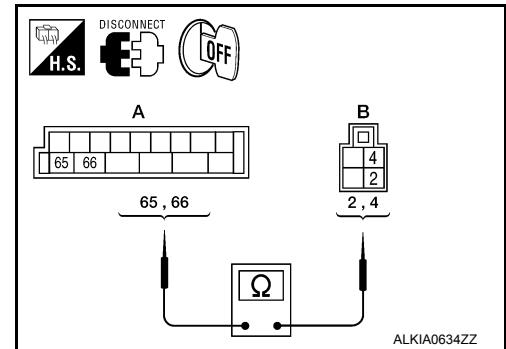
DOOR LOCK ACTUATOR

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT 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?

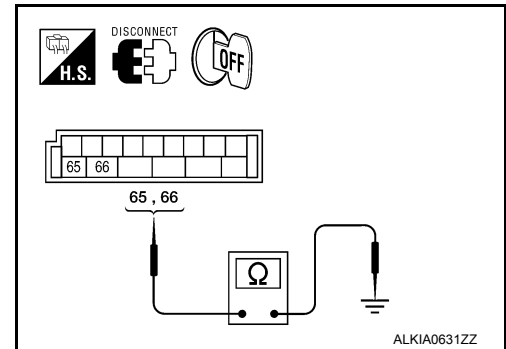
YES >> Replace door lock actuator.

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:000000009822991

All vehicles equipped with an automatic back door system are not equipped with a back door lock actuator. Opening and closing the back door is accomplished through the back door control unit assembly. Refer to [DLK-122, "Self-Diagnosis Procedure"](#).

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REMOTE KEYLESS ENTRY RECEIVER

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

REMOTE KEYLESS ENTRY RECEIVER

Description

INFOID:000000009822992

Receives keyfob operation and transmits to BCM.

Component Function Check

INFOID:000000009822993

NOTE:

The Signal Tech II (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

1. CHECK FUNCTION

With CONSULT

Check remote keyless entry receiver by pressing the keyfob lock and unlock buttons then monitoring KEYLESS LOCK, KEYLESS UNLOCK in Data Monitor mode with CONSULT.

Monitor item	Condition
KEYLESS LOCK	LOCK : ON
	UNLOCK : OFF
KEYLESS UNLOCK	LOCK : OFF
	UNLOCK : ON

Is the inspection result normal?

- YES >> Remote keyless entry receiver is OK.
- NO >> Refer to [DLK-288, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822994

Regarding Wiring Diagram information, refer to [DLK-348, "Wiring Diagram"](#).

1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

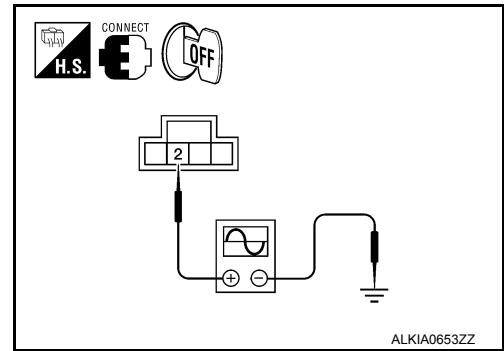
1. Turn ignition switch OFF.
2. Check remote keyless entry receiver signal with an oscilloscope.

REMOTE KEYLESS ENTRY RECEIVER

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminals		(-)	Keyfob condition	Signal (Reference value)
(+)	Terminal			
Remote keyless entry receiver connector				
M120	2	Ground	No function	<p>LIA1894E</p>
			Any button is pressed	<p>LIA1895E</p>



Is the inspection result normal?

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

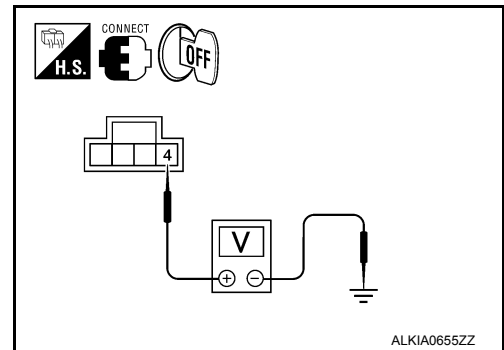
2. REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

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



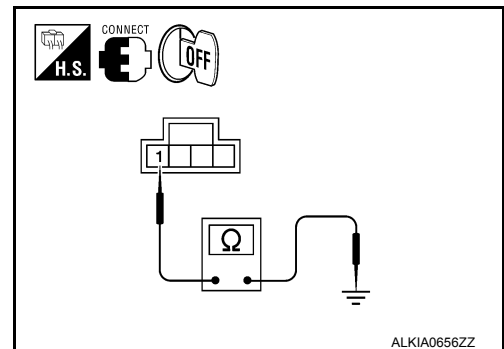
3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

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. Refer to [SEC-201, "Removal and Installation"](#).
- NO >> GO TO 4



4. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

1. Disconnect remote keyless entry receiver and BCM connectors.

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REMOTE KEYLESS ENTRY RECEIVER

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

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.

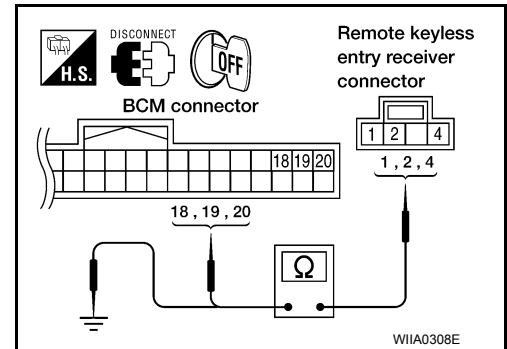
4 - 19 : Continuity should exist.

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. Refer to [SEC-201, "Removal and Installation"](#).
NO >> Repair or replace the harness between the remote keyless entry receiver and BCM.

KEYFOB BATTERY AND FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

KEYFOB BATTERY AND FUNCTION

Description

INFOID:000000009822995

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:000000009822996

NOTE:

The Signal Tech II (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

1.CHECK FUNCTION

With CONSULT

Check remote keyless entry receiver by pressing the keyfob lock and unlock buttons then monitoring KEYLESS LOCK, KEYLESS UNLOCK in Data Monitor mode with CONSULT.

Monitor item	Condition
KEYLESS LOCK	LOCK : ON
	UNLOCK : OFF
KEYLESS UNLOCK	LOCK : OFF
	UNLOCK : ON

Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Refer to [DLK-291, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009822997

NOTE:

The Signal Tech II (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

1.CHECK KEYFOB BATTERY

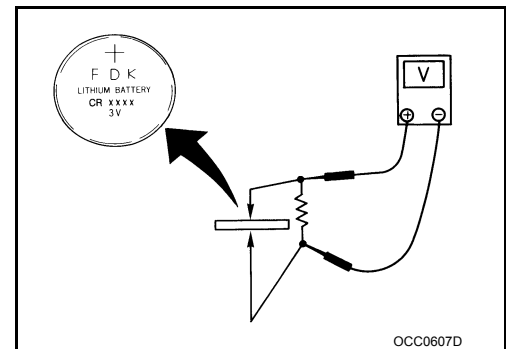
Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

Standard : Approx. 2.5 - 3.0V

Is the measurement value within specification?

YES >> GO TO 2

NO >> Replace Keyfob battery.



2.CHECK KEYFOB FUNCTION

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KEYFOB BATTERY AND FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

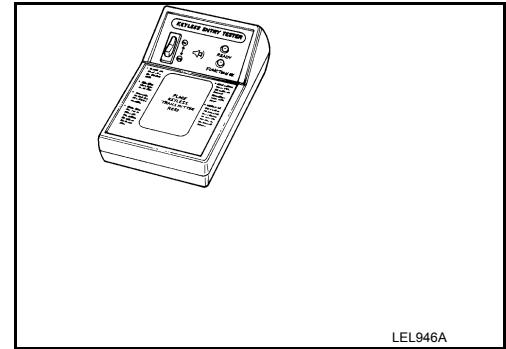
[WITHOUT INTELLIGENT KEY SYSTEM]

Check keyfob function using Signal Tech II Tool J50190 or Remote Keyless Entry Tester J-43241 (shown).

Does the test pass?

YES >> Keyfob is OK.

NO >> Replace keyfob. Refer to CONSULT Operation Manual.



Component Inspection

INFOID:000000009822998

NOTE:

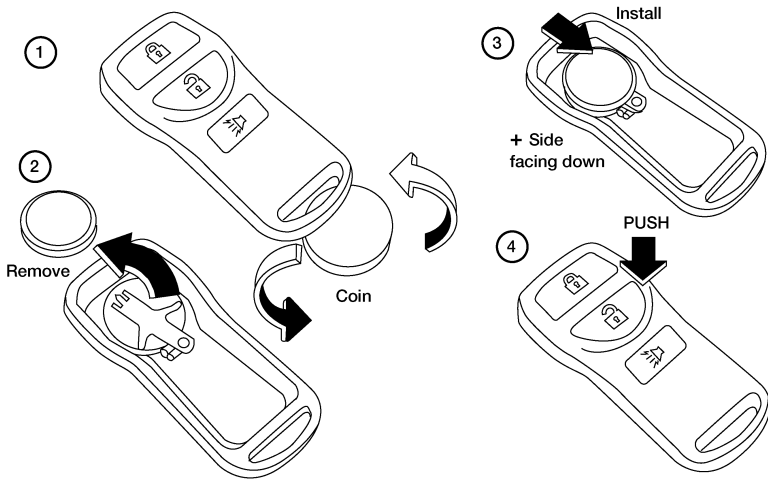
The Signal Tech II (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

1. REPLACE KEYFOB BATTERY

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.

A four-step diagram showing how to replace the battery in a keyfob. Step 1: A coin is used to pry open the lid. Step 2: The old battery is removed from the compartment. Step 3: A new battery is inserted into the compartment with the positive (+) side facing down. Step 4: The lid is pushed closed, and the keyfob buttons are pushed to test the device.

LI1A1514E

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-288, "Component Function Check"](#).

Special Repair Requirement

INFOID:000000009822998

Refer to CONSULT Operation Manual.

HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HORN FUNCTION

Description

INFOID:000000009823000

Perform answer-back for each operation with horn.

Component Function Check

INFOID:000000009823001

1.CHECK FUNCTION

1. Select "HORN" in "ACTIVE TEST" mode with CONSULT.
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-293. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009823002

Regarding Wiring Diagram information, refer to [DLK-348. "Wiring Diagram"](#).

1.CHECK HORN FUNCTION

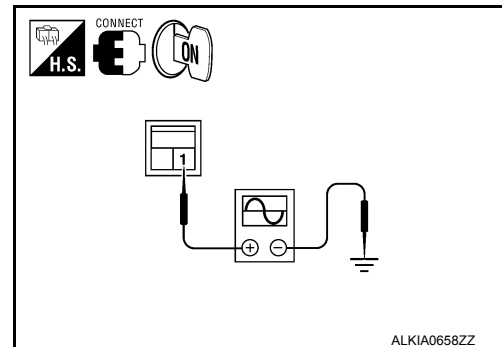
Check horn function with horn switch

Do the horns sound?

- YES >> GO TO 2
 NO >> Go to [HRN-4. "Wiring Diagram"](#).

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT.
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 3
 NO >> Replace IPDM E/R. Refer to [PCS-31. "Removal and Installation of IPDM E/R"](#).

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

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HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to [PCS-31, "Removal and Installation of IPDM E/R"](#).

NO >> Repair or replace the malfunctioning part.

WARNING CHIME FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

WARNING CHIME FUNCTION

Description

INFOID:000000009823003

Performs operation method guide and warning with buzzer.

Component Function Check

INFOID:000000009823004

1.CHECK FUNCTION

With CONSULT

1. Turn ignition switch ON.
2. Using Consult, 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-295. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009823005

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HAZARD FUNCTION

Description

INFOID:000000009823006

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

Component Function Check

INFOID:000000009823007

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-114, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000009823008

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-54, "Removal and Installation"](#).
- NO >> Repair or replace hazard warning switch circuit. Refer to [EXL-139, "Removal and Installation"](#).

KEY SWITCH (BCM INPUT)

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

KEY SWITCH (BCM INPUT)

Diagnosis Procedure

INFOID:00000009823009

Regarding Wiring Diagram information, refer to [DLK-336. "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK KEY SWITCH AND KEY LOCK SOLENOID INPUT SIGNAL

With CONSULT

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT. Refer to [DLK-264. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

- When key is inserted to ignition key cylinder:

KEY ON SW :ON

- When key is removed from ignition key cylinder:

KEY ON SW :OFF

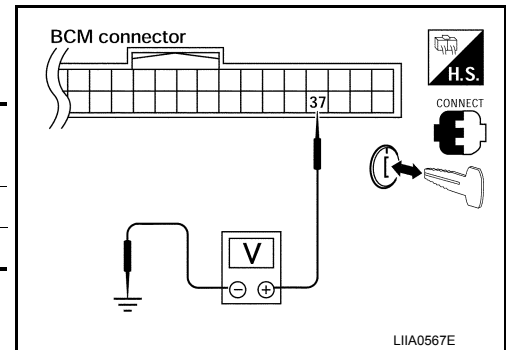
Without CONSULT

Check voltage between BCM connector M18 terminal 37 and ground.

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

Is the inspection result normal?

- YES >> Key switch (insert) circuit is OK.
- NO >> GO TO 2



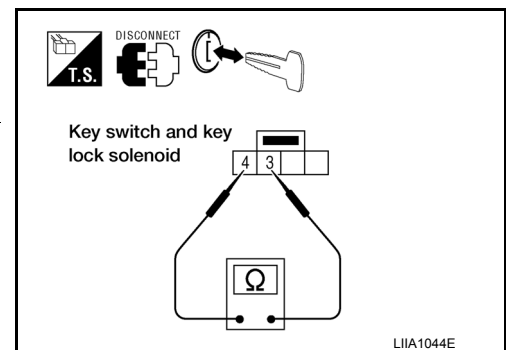
2. CHECK KEY SWITCH (INSERT)

1. Turn ignition switch OFF.
2. Disconnect key switch and key lock solenoid connector.
3. Check continuity between key switch and key lock solenoid terminals 3 and 4.

Terminals	Condition	Continuity
3 - 4	Key is inserted.	Yes
	Key is removed.	No

Is the inspection result normal?

- YES >> GO TO 3
- NO >> Replace key switch and key lock solenoid.



3. CHECK KEY SWITCH AND KEY LOCK SOLENOID CIRCUIT

1. Disconnect BCM.

KEY SWITCH (BCM INPUT)

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

2. Check continuity between the BCM harness connector M18 terminal 37 and key switch and key lock solenoid harness connector M27 terminal 4.
3. Check continuity between BCM harness connector M18 terminal 37 and ground.

37 - 4 : Continuity should exist

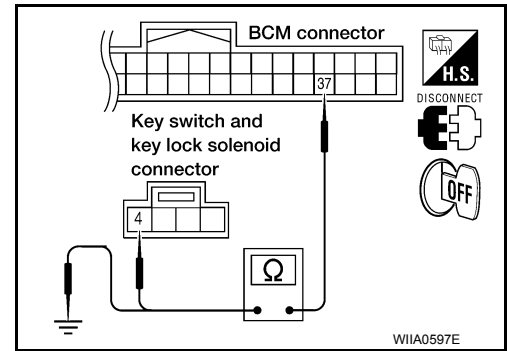
37 - Ground : Continuity should not exist

Is the inspection result normal?

YES >> Check the following:

- 10A fuse [No. 3, located in fuse block (J/B)]
- Harness for open or short between key switch and key lock solenoid and fuse

NO >> Repair or replace harness.



HEADLAMP FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:000000009823010

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-36, "Diagnosis Procedure"](#)(HI) and [EXL-39, "Diagnosis Procedure"](#)(LO).

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MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

Diagnosis Procedure

INFOID:000000009823011

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-26. "Diagnosis Procedure"](#).

KEYFOB ID SET UP WITH CONSULT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

KEYFOB ID SET UP WITH CONSULT

ID Code Entry Procedure

INFOID:000000009823012

KEYFOB ID SET UP WITH CONSULT

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. 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 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.

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KEYFOB ID SET UP WITHOUT CONSULT

< DTC/CIRCUIT DIAGNOSIS >

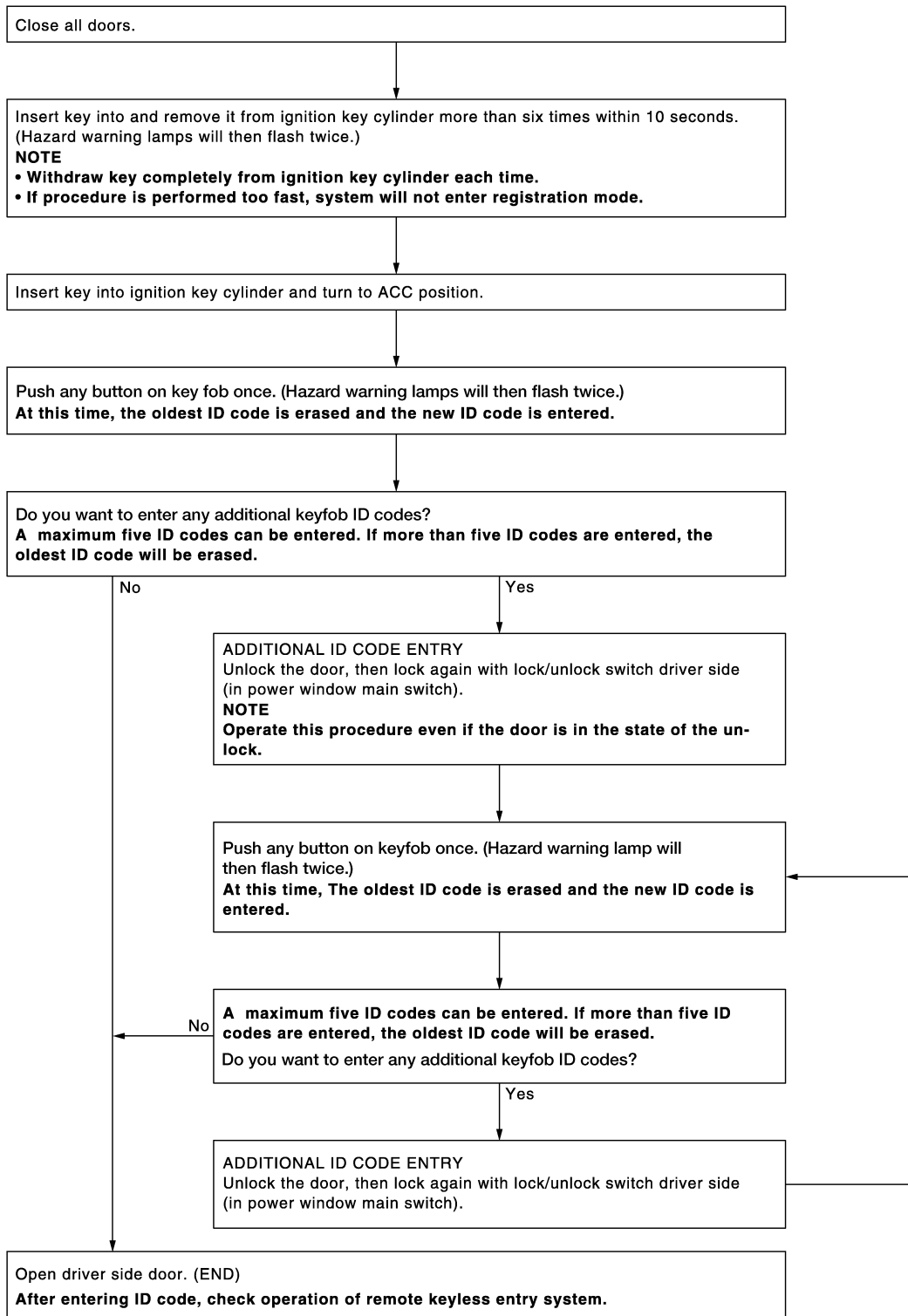
[WITHOUT INTELLIGENT KEY SYSTEM]

KEYFOB ID SET UP WITHOUT CONSULT

ID Code Entry Procedure

INFOID:000000009823013

KEYFOB ID SET UP WITHOUT CONSULT



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NOTE:

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

KEYFOB ID SET UP WITHOUT CONSULT

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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.

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AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

Self-Diagnosis Procedure

INFOID:00000009823014

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 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 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	DLK-308
Back door close switch (CLOSE)	OFF → ON	DLK-310
Back door close switch (CANCEL)	OFF → ON	DLK-311
Back door handle switch	OFF → ON	DLK-317
A/T shift selector (park switch)	P position → other than P position	TM-48
Vehicle speed*	Vehicle speed	—
Remote keyless entry signal	Keyfob switch OFF → ON	DLK-288
Door lock/unlock signal	LOCK → UNLOCK	DLK-274
Pinch strip LH signal	OFF → ON	DLK-312
Pinch strip RH signal	OFF → ON	DLK-312

*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

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT 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	DLK-398
3. Back door clutch diagnosis result	Back door clutch does not operate	DLK-398
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	DLK-398
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	DLK-398

Turn ignition switch OFF to end input signal check mode.

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POWER LIFTGATE SWITCH FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

POWER LIFTGATE SWITCH FUNCTION

Diagnosis Procedure

INFOID:00000009823015

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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

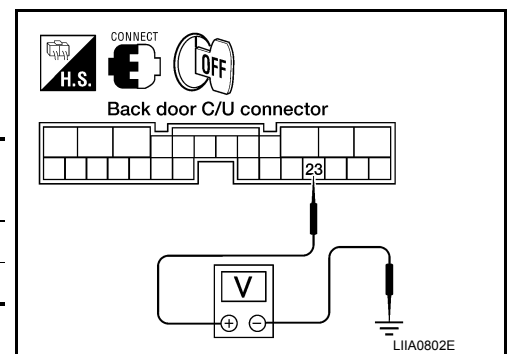
2. POWER LIFTGATE SWITCH SIGNAL INSPECTION

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.

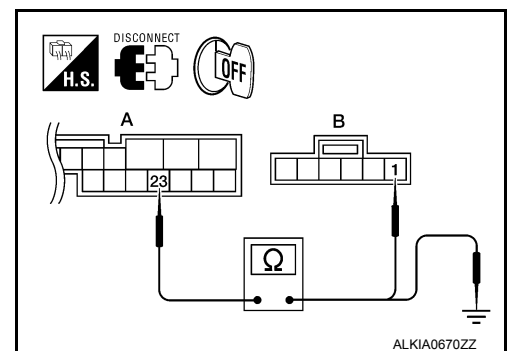
23 - 1 : Continuity should exist.

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.



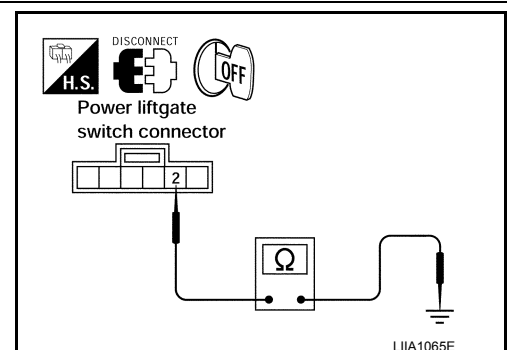
4. POWER LIFTGATE SWITCH GROUND INSPECTION

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.



POWER LIFTGATE SWITCH FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

5. POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

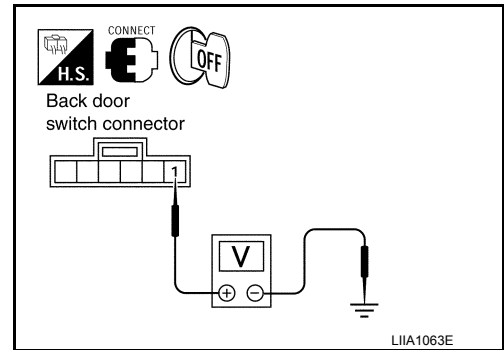
1. Reconnect back door control unit.
2. Ensure liftgate is closed.
3. Check voltage between power liftgate switch connector M92 terminal 1 and ground.

1 - Ground

:Approx. battery voltage

Is the inspection result normal?

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



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GLASS HATCH AJAR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]


GLASS HATCH AJAR SWITCH

Diagnosis Procedure

INFOID:00000009823016

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

 With CONSULT


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

• When glass hatch is open:

TRNK OPN MNTR : ON

• When glass hatch is closed:

TRNK OPN MNTR : OFF

 Without CONSULT

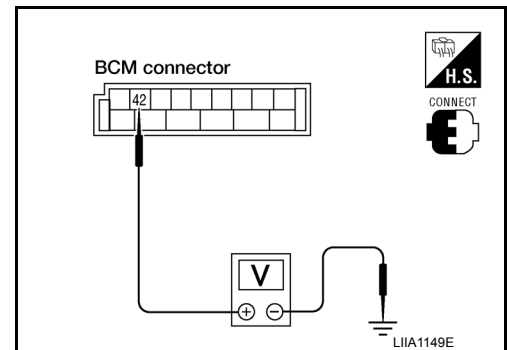
Check voltage between BCM connector M19 terminal 42 and ground.

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.

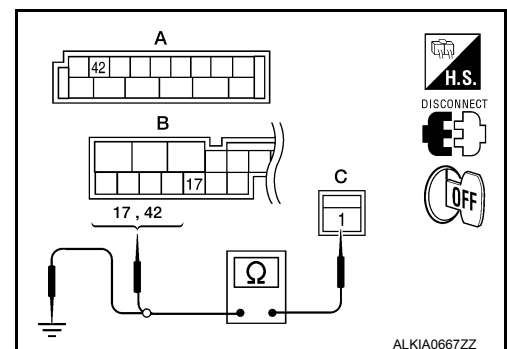
Is the inspection result normal?

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.



GLASS HATCH AJAR SWITCH

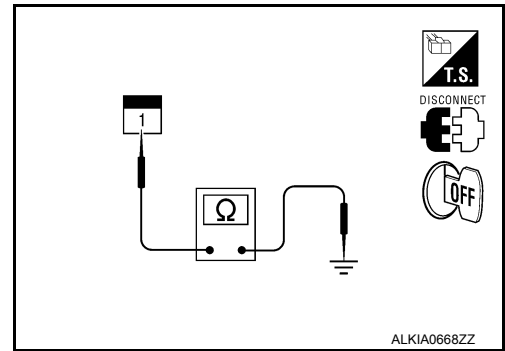
[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

	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.



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

BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

Diagnosis Procedure

INFOID:00000009823017

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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

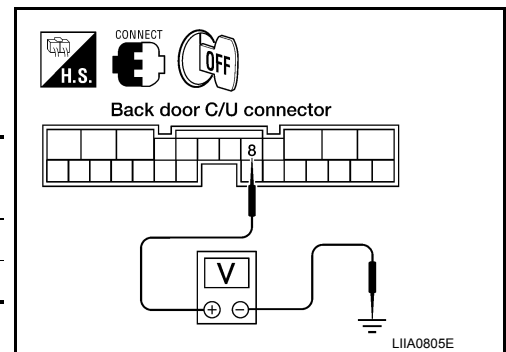
2. BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

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.

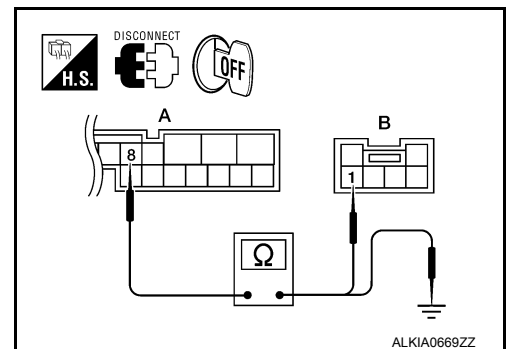
8 - 1 : Continuity should exist.

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.



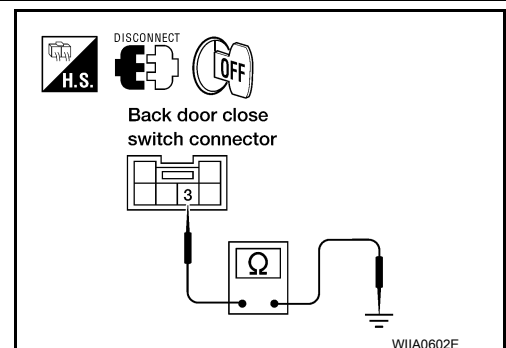
4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

Diagnosis Procedure

INFOID:000000009823018

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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

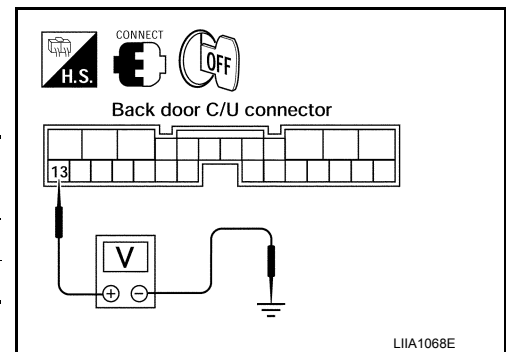
2. BACK DOOR CLOSE (CANCEL) SWITCH SIGNAL INSPECTION

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.

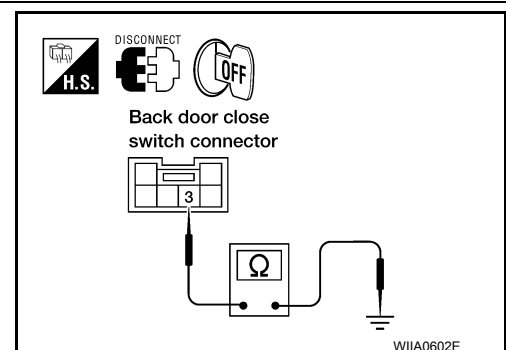
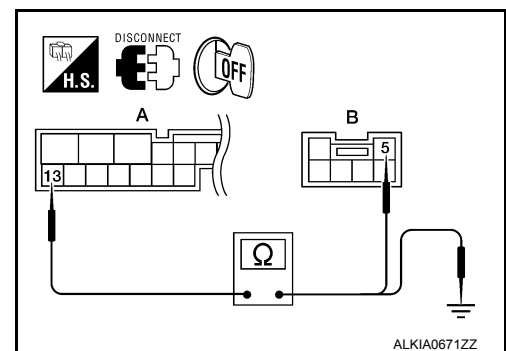
4. BACK DOOR CLOSE SWITCH GROUND INSPECTION

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]

< DTC/CIRCUIT DIAGNOSIS >

PINCH STRIP SYSTEM

Diagnosis Procedure

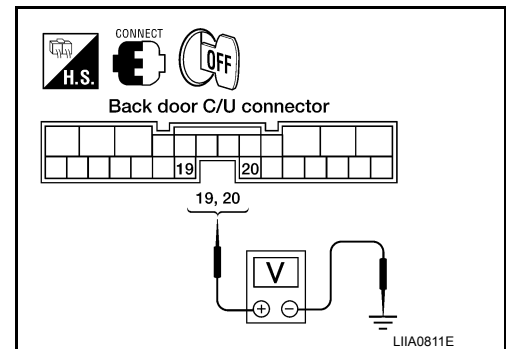
INFOID:00000009823019

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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	5
20	Ground	Pinch strip LH operation	0
		Other	5



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.

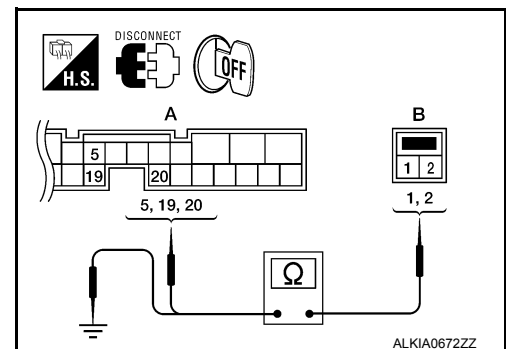
LH: 1 - 20 : Continuity should exist.

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.

BACK DOOR WARNING CHIME SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< DTC/CIRCUIT DIAGNOSIS >

BACK DOOR WARNING CHIME SYSTEM

Diagnosis Procedure

INFOID:000000009823020

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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.

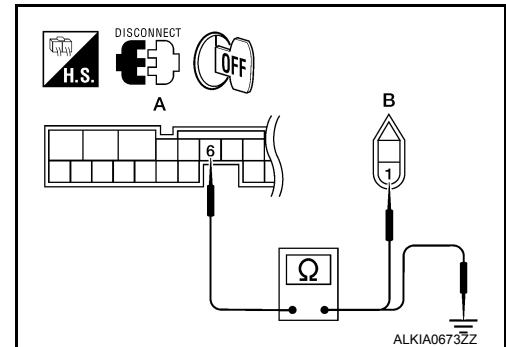
3. Check continuity between back door control unit connector (A) B55 terminal 6 and ground.

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.

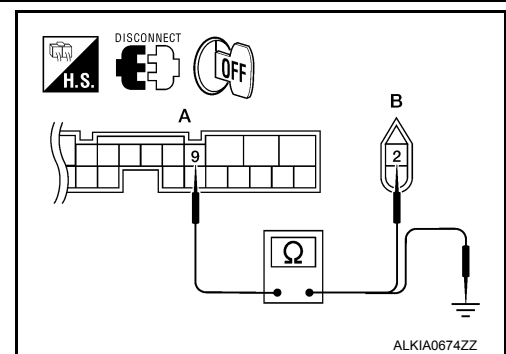
2. Check continuity between back door control unit connector (A) B55 terminal 9 and ground.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HALF-LATCH SWITCH SYSTEM

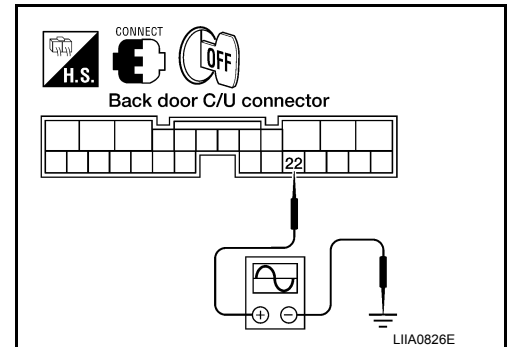
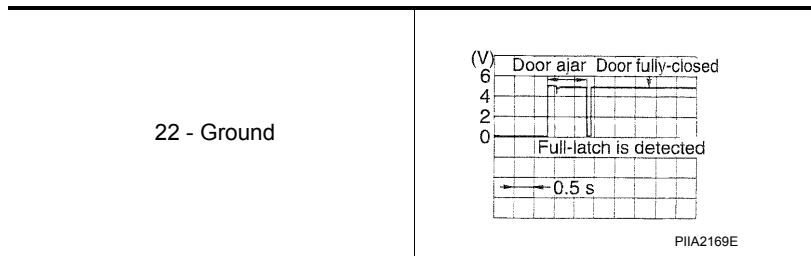
Diagnosis Procedure

INFOID:00000009823021

Regarding Wiring Diagram information, refer to [DLK-358, "Wiring Diagram - Without Intelligent Key System"](#).

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.

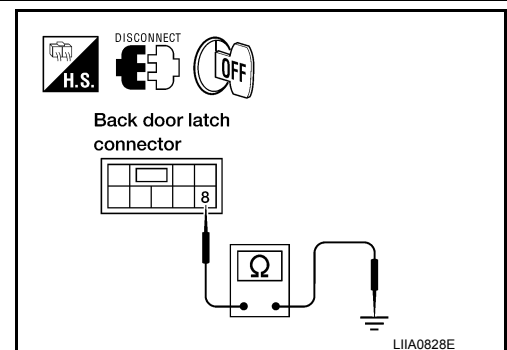
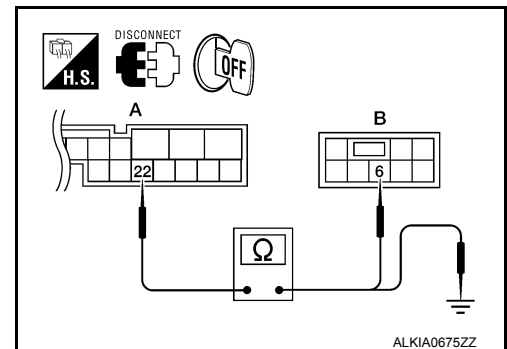
3. HALF-LATCH SWITCH GROUND INSPECTION

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.



BACK DOOR OPEN SWITCH SYSTEM

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR OPEN SWITCH SYSTEM

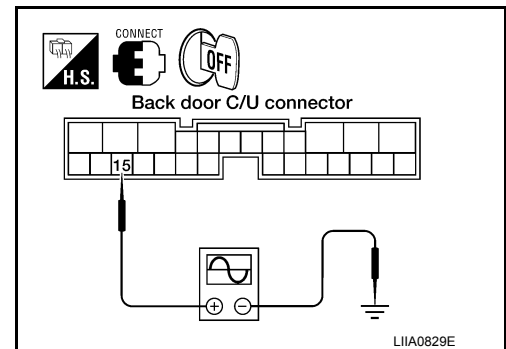
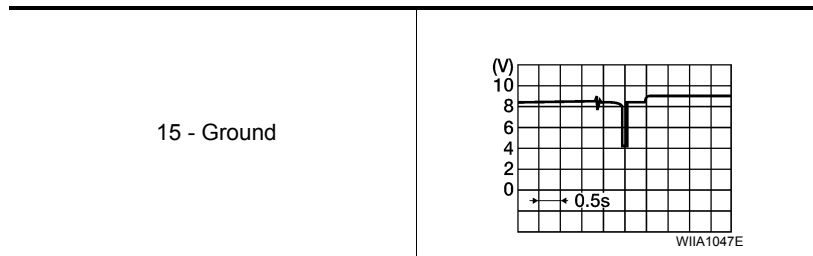
Diagnosis Procedure

INFOID:00000009823022

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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.

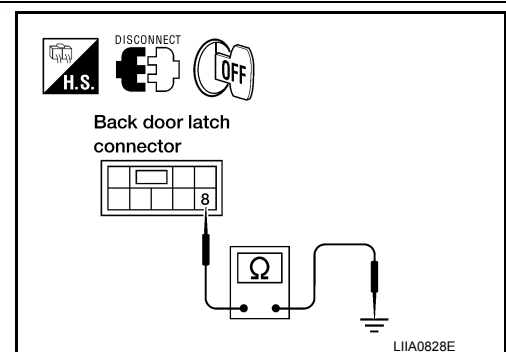
3. OPEN SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR CLOSE SWITCH SYSTEM

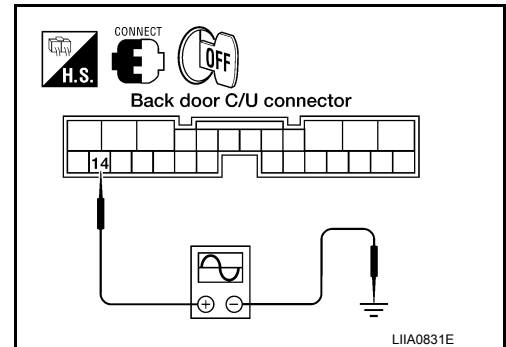
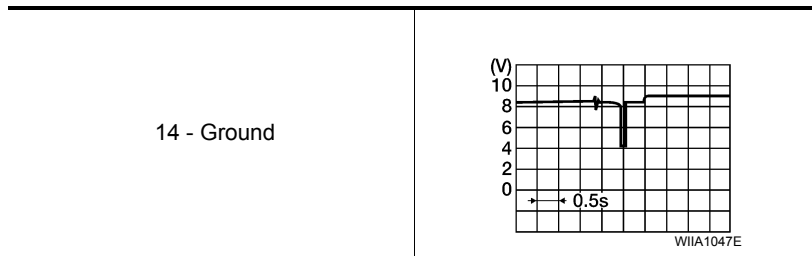
Diagnosis Procedure

INFOID:00000009823023

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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.

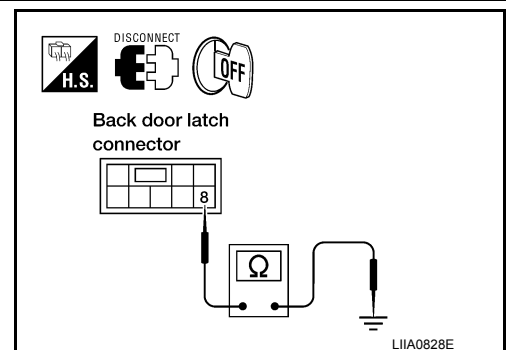
3. CLOSE SWITCH GROUND INSPECTION

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR HANDLE SWITCH SYSTEM

Diagnosis Procedure

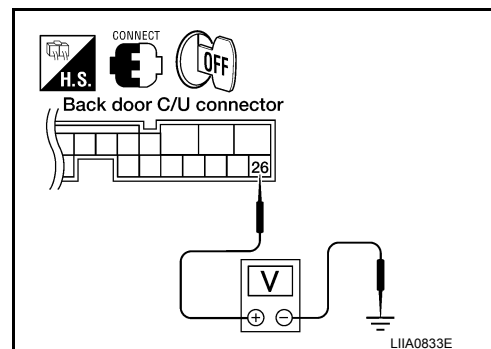
INFOID:000000009823024

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

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 3

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

3. BACK DOOR HANDLE SWITCH GROUND INSPECTION

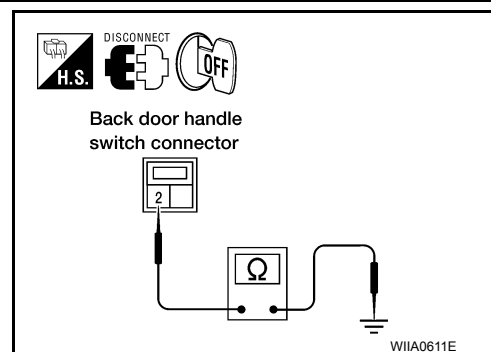
Check continuity between back door handle switch connector D706 terminal 2 and ground.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

CINCH LATCH MOTOR SYSTEM

Diagnosis Procedure

INFOID:000000009823025

Regarding Wiring Diagram information, refer to [DLK-358. "Wiring Diagram - Without Intelligent Key System"](#).

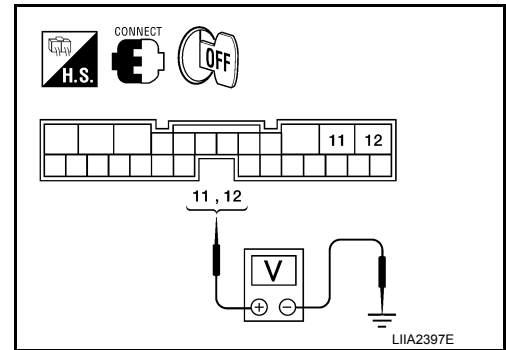
1. CINCH LATCH MOTOR SIGNAL INSPECTION

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.

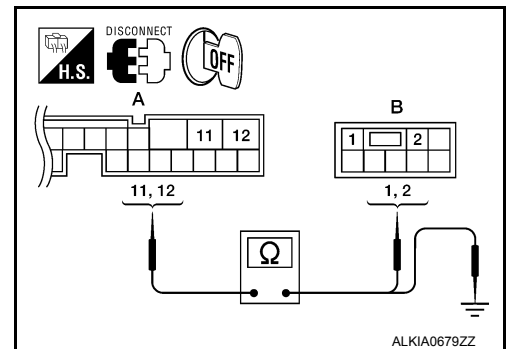
11 - 2 : Continuity should exist.

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

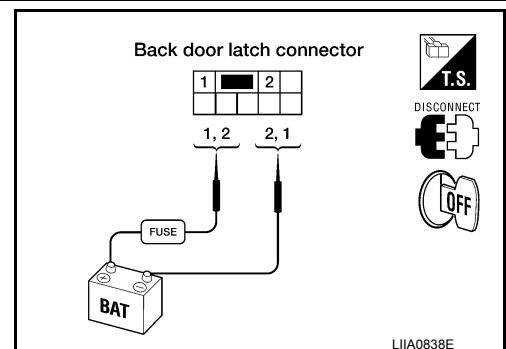
Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

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

< DTC/CIRCUIT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Description

INFOID:000000009823026

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:000000009823027

1.CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

Is the inspection result normal?

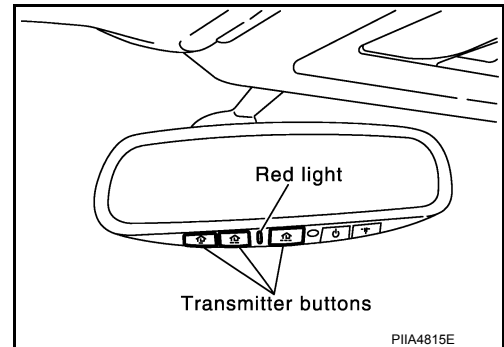
- YES >> GO TO 2
- NO >> Receiver or hand-held transmitter is malfunctioning.

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-319, "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).

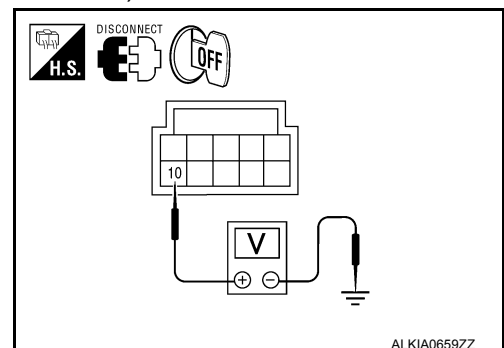
Diagnosis Procedure

INFOID:000000009823028

Regarding Wiring Diagram information, refer to [DLK-334, "Wiring Diagram"](#).

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]

< DTC/CIRCUIT DIAGNOSIS >

Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R7	10	Ground	Ignition switch position: LOCK	Battery voltage

Is the inspection result normal?

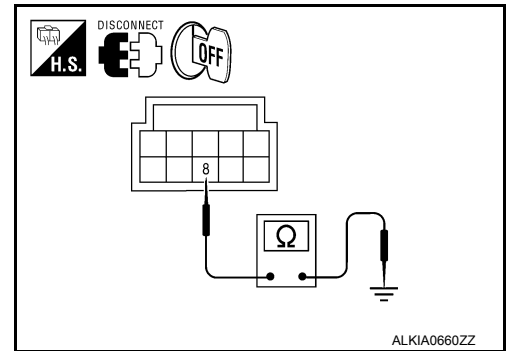
YES >> GO TO 2

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
R7	8		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

3.CHECK INTERMITTENT INCIDENT

Refer to [GI-42. "Intermittent Incident"](#).

>> INSPECTION END.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000009823029

NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- Confirm vehicle Intelligent Key antenna signal strength
- Test remote keyless entry keyfob relative signal strength

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF or ON	Off
	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm ² , psi
AUTO LIGHT SW	Lighting switch OFF	Off
	Lighting switch AUTO	On
BACK DOOR SW	Back door closed	Off
	Back door opened	On
BRAKE SW	Brake pedal released	Off
	Brake pedal applied	On
BUCKLE SW	Seat belt buckle unfastened	Off
	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
	Cargo lamp switch ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
	Front door RH opened	On
DOOR SW-DR	Front door LH closed	Off
	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
	Rear door LH opened	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
DOOR SW-RR	Rear door RH closed	Off
	Rear door RH opened	On
FAN ON SIG	Blower motor fan switch OFF	Off
	Blower motor fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
	When hazard switch is pressed	On
HEAD LAMP SW1	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HEAD LAMP SW2	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
	ID registration of rear right tire complete	DONE
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK ¹	LOCK button of Intelligent Key is not pressed	Off
	LOCK button of Intelligent Key is pressed	On
I-KEY PANIC ¹	PANIC button of Intelligent Key is not pressed	Off
	PANIC button of Intelligent Key is pressed	On
I-KEY PW DWN ¹	UNLOCK button of Intelligent Key is not pressed	Off
	UNLOCK button of Intelligent Key is pressed for greater than 3 seconds and driver's window operating in DOWN direction	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	
I-KEY UNLOCK ¹	UNLOCK button of Intelligent Key is not pressed	Off	A
	UNLOCK button of Intelligent Key is pressed	On	
KEY CYL LK-SW	Door key cylinder LOCK position	Off	B
	Door key cylinder other than LOCK position	On	
KEY CYL UN-SW	Door key cylinder UNLOCK position	Off	C
	Door key cylinder other than UNLOCK position	On	
KEY ON SW	Mechanical key is removed from key cylinder	Off	
	Mechanical key is inserted to key cylinder	On	D
KEYLESS LOCK ²	LOCK button of key fob is not pressed	Off	
	LOCK button of key fob is pressed	On	E
KEYLESS PANIC ²	PANIC button of key fob is not pressed	Off	
	PANIC button of key fob is pressed	On	F
KEYLESS UNLOCK ²	UNLOCK button of key fob is not pressed	Off	
	UNLOCK button of key fob is pressed	On	G
LIGHT SW 1ST	Lighting switch OFF	Off	
	Lighting switch 1st	On	H
OIL PRESS SW	<ul style="list-style-type: none"> • Ignition switch OFF or ACC • Engine running 	Off	
	Ignition switch ON	On	I
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5V	
	Dark outside of the vehicle	Close to 0V	J
PASSING SW	Other than lighting switch PASS	Off	
	Lighting switch PASS	On	K
PUSH SW ¹	Return to ignition switch to LOCK position	Off	
	Press ignition switch	On	L
REAR DEF SW	Rear window defogger switch OFF	Off	
	Rear window defogger switch ON	On	DLK
RR WASHER SW	Rear washer switch OFF	Off	
	Rear washer switch ON	On	M
RR WIPER INT	Rear wiper switch OFF	Off	
	Rear wiper switch INT	On	N
RR WIPER ON	Rear wiper switch OFF	Off	
	Rear wiper switch ON	On	O
RR WIPER STOP	Rear wiper stop position	Off	
	Other than rear wiper stop position	On	P
RR WIPER STP2	Rear wiper stop position	Off	
	Other than rear wiper stop position	On	
TURN SIGNAL L	Turn signal switch OFF	Off	
	Turn signal switch LH	On	
TURN SIGNAL R	Turn signal switch OFF	Off	
	Turn signal switch RH	On	
VEHICLE SPEED	While driving	Equivalent to speedometer reading	
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off	
	Low tire pressure warning lamp in combination meter ON	On	

1: With Intelligent Key

BCM (BODY CONTROL MODULE)

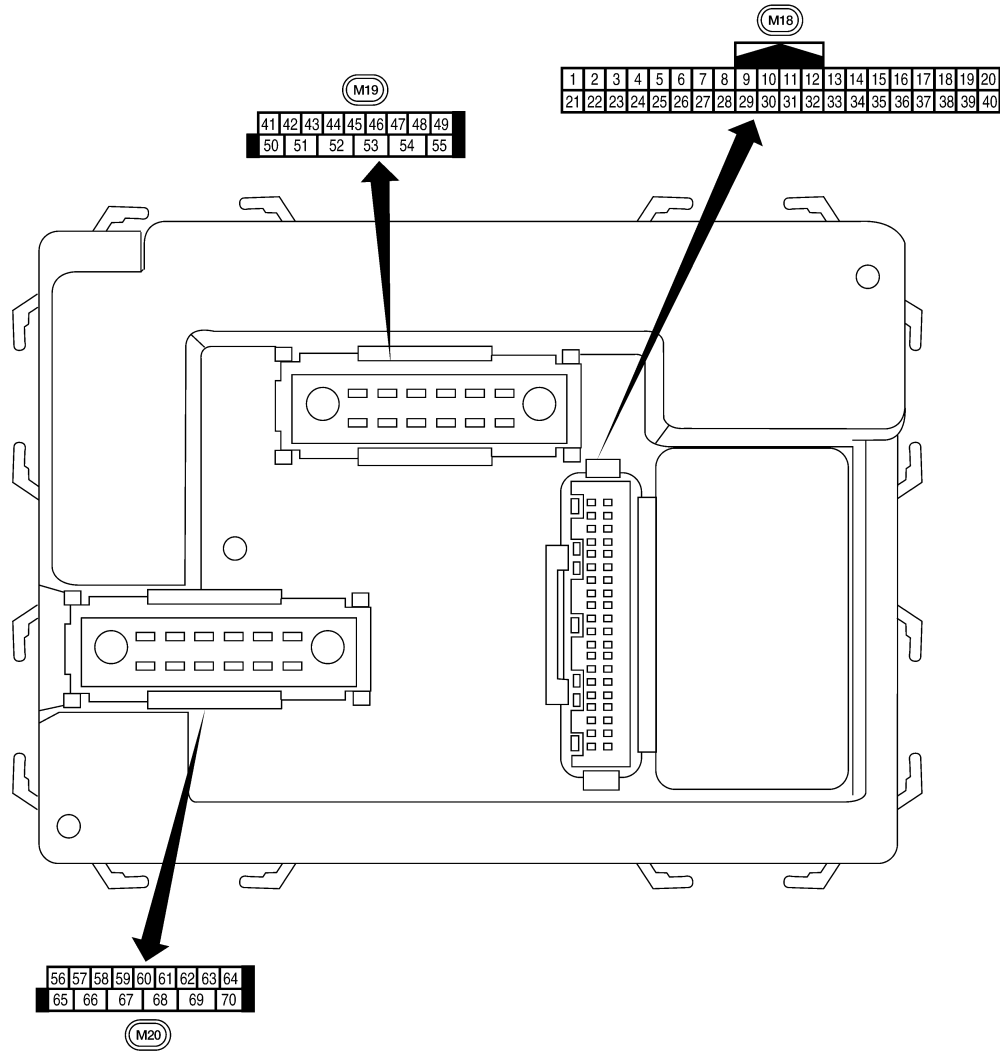
< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

2: With remote keyless entry system

Terminal Layout

INFOID:000000009823030



Physical Values

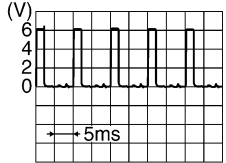
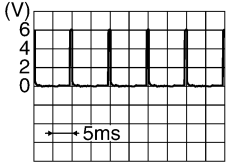
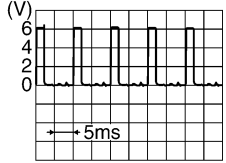
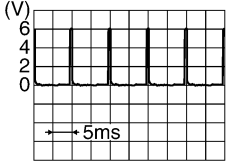
LIIA2443E

INFOID:000000009823031

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
6	V	Combination switch input 1				
9	R/G	Stop lamp switch	Input	OFF	Brake pedal depressed	Battery voltage
					Brake pedal released	0V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

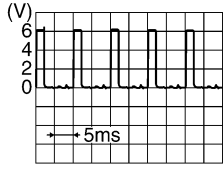
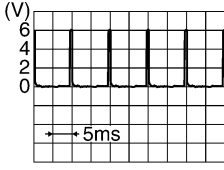
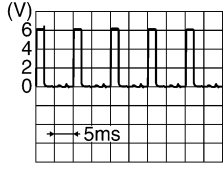

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	<p style="text-align: right;">LIA1893E</p>
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	<p style="text-align: right;">LIA1894E</p>
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	<p style="text-align: right;">LIA1895E</p>
21	G	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	W/V	BUS	—	—	Ignition switch ON or power window timer operates	<p style="text-align: right;">PIIA2344E</p>
23	G/O	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5291E</p>
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 <p style="text-align: right; font-size: small;">SKIA5292E</p>
36	R/W	Combination switch output 1				
37 ¹	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key removed	0V
37 ²	B/R	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
41	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery

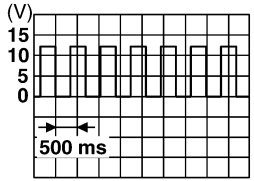
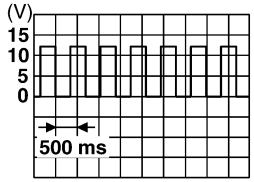
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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

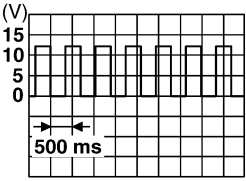
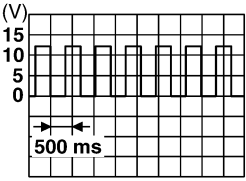
[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
43	R/B	Back door switch (without power back door) or back door latch (door ajar switch) (with power back door)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	Y/B	Trailer turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
56	R/G	Battery saver output	Output	OFF	10 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 <p style="text-align: right; font-size: small;">SKIA3009J</p>
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch	ON (open) 0V OFF (closed) Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

1: With Intelligent Key system

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

2: With remote keyless entry system

Fail Safe

INFOID:000000009823032

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID:000000009823033

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">• U1000: CAN COMM CIRCUIT
2	<ul style="list-style-type: none">• B2190: NATS ANTENNA AMP• B2191: DIFFERENCE OF KEY• B2192: ID DISCORD BCM-ECM• B2193: CHAIN OF BCM-ECM• B2013: STRG COMM 1• B2552: INTELLIGENT KEY• B2590: NATS MALFUNCTION
3	<ul style="list-style-type: none">• C1729: VHCL SPEED SIG ERR• C1735: IGNITION SIGNAL
4	<ul style="list-style-type: none">• C1708: [NO DATA] FL• C1709: [NO DATA] FR• C1710: [NO DATA] RR• C1711: [NO DATA] RL• C1712: [CHECKSUM ERR] FL• C1713: [CHECKSUM ERR] FR• C1714: [CHECKSUM ERR] RR• C1715: [CHECKSUM ERR] RL• C1716: [PRESSDATA ERR] FL• C1717: [PRESSDATA ERR] FR• C1718: [PRESSDATA ERR] RR• C1719: [PRESSDATA ERR] RL• C1720: [CODE ERR] FL• C1721: [CODE ERR] FR• C1722: [CODE ERR] RR• C1723: [CODE ERR] RL• C1724: [BATT VOLT LOW] FL• C1725: [BATT VOLT LOW] FR• C1726: [BATT VOLT LOW] RR• C1727: [BATT VOLT LOW] RL

DTC Index

INFOID:000000009823034

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.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-29
B2013: STRG COMM 1	—	—	—	SEC-30
B2190: NATS ANTENNA AMP	—	—	—	SEC-33 (with I- Key), SEC-140 (without I-Key)
B2191: DIFFERENCE OF KEY	—	—	—	SEC-36 (with I- Key), SEC-143 (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-37 (with I- Key), SEC-144 (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-39 (with I- Key), SEC-146 (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	SEC-41
B2590: NATS MALFUNCTION	—	—	—	SEC-42
C1708: [NO DATA] FL	—	—	—	WT-13
C1709: [NO DATA] FR	—	—	—	WT-15
C1710: [NO DATA] RR	—	—	—	WT-15
C1711: [NO DATA] RL	—	—	—	WT-15
C1712: [CHECKSUM ERR] FL	—	—	—	WT-15
C1713: [CHECKSUM ERR] FR	—	—	—	WT-15
C1714: [CHECKSUM ERR] RR	—	—	—	WT-15
C1715: [CHECKSUM ERR] RL	—	—	—	WT-15
C1716: [PRESSDATA ERR] FL	—	—	—	WT-17
C1717: [PRESSDATA ERR] FR	—	—	—	WT-15
C1718: [PRESSDATA ERR] RR	—	—	—	WT-15
C1719: [PRESSDATA ERR] RL	—	—	—	WT-15
C1720: [CODE ERR] FL	—	—	—	WT-15
C1721: [CODE ERR] FR	—	—	—	WT-15
C1722: [CODE ERR] RR	—	—	—	WT-15
C1723: [CODE ERR] RL	—	—	—	WT-15
C1724: [BATT VOLT LOW] FL	—	—	—	WT-15
C1725: [BATT VOLT LOW] FR	—	—	—	WT-15
C1726: [BATT VOLT LOW] RR	—	—	—	WT-15
C1727: [BATT VOLT LOW] RL	—	—	—	WT-15
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19
C1735: IGN_CIRCUIT_OPEN	—	—	—	WT-20

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BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

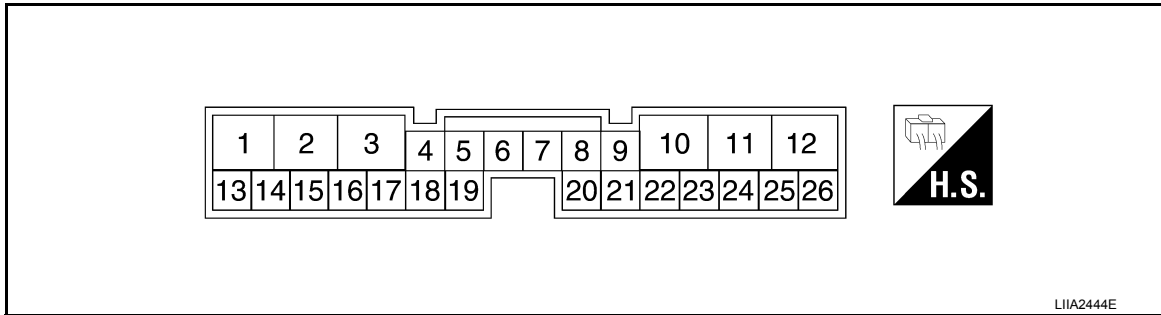
[WITHOUT INTELLIGENT KEY SYSTEM]

BACK DOOR CONTROL UNIT

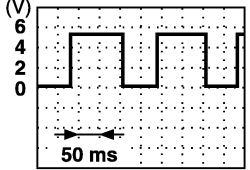
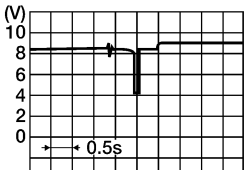
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TERMINAL LAYOUT



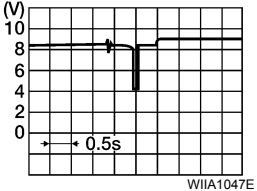
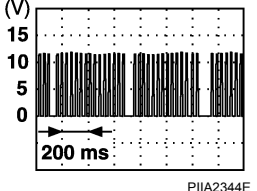
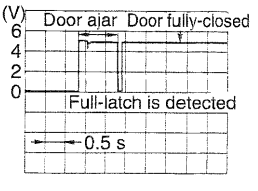
PHYSICAL VALUES

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

< ECU DIAGNOSIS INFORMATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

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;">WIIA1047E</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	V/G	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

Fail Safe

INFOID:000000009823036

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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DLK

INTEGRATED HOMELINK TRANSMITTER

< WIRING DIAGRAM >

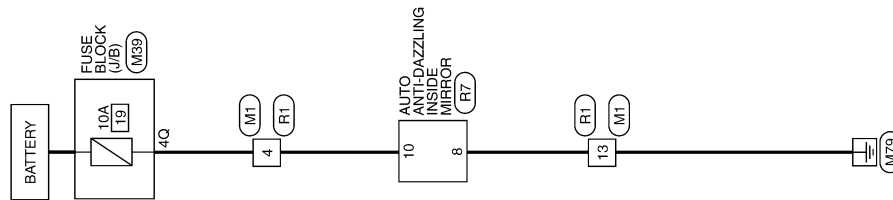
[WITHOUT INTELLIGENT KEY SYSTEM]

WIRING DIAGRAM

INTEGRATED HOMELINK TRANSMITTER

Wiring Diagram

INFOID:000000009823037



INTEGRATED HOMELINK TRANSMITTER

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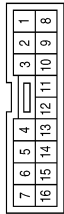
INTEGRATED HOMELINK TRANSMITTER

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

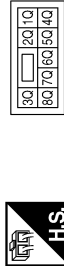
INTEGRATED HOMELINK TRANSMITTER CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



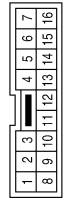
Terminal No.	Color of Wire	Signal Name
4	Y/R	-
13	B	-

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



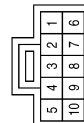
Terminal No.	Color of Wire	Signal Name
4Q	Y/R	-

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.	R7
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
8	B	-
10	Y/R	-

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ABKIA3954GB

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

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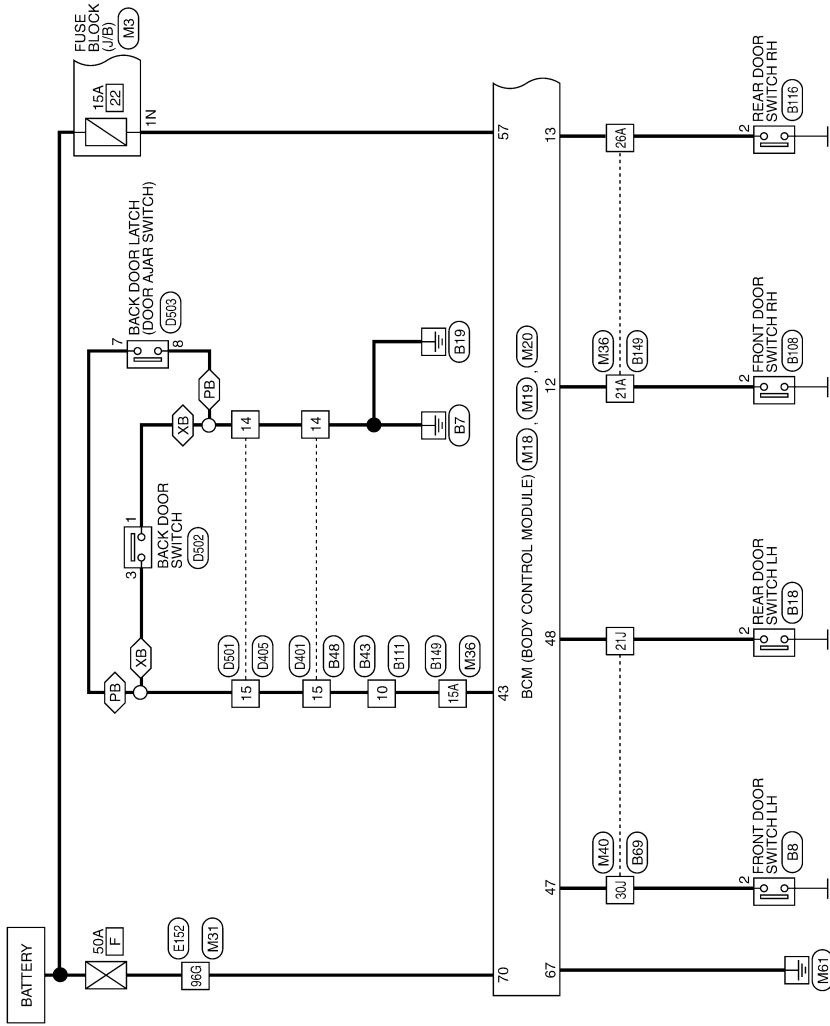
POWER DOOR LOCK SYSTEM

Wiring Diagram - Without Intelligent Key System

INFOID:000000009823038

POWER DOOR LOCK SYSTEM - WITHOUT INTELLIGENT KEY SYSTEM

PB : WITH POWER BACK DOOR
XB : WITHOUT POWER BACK DOOR

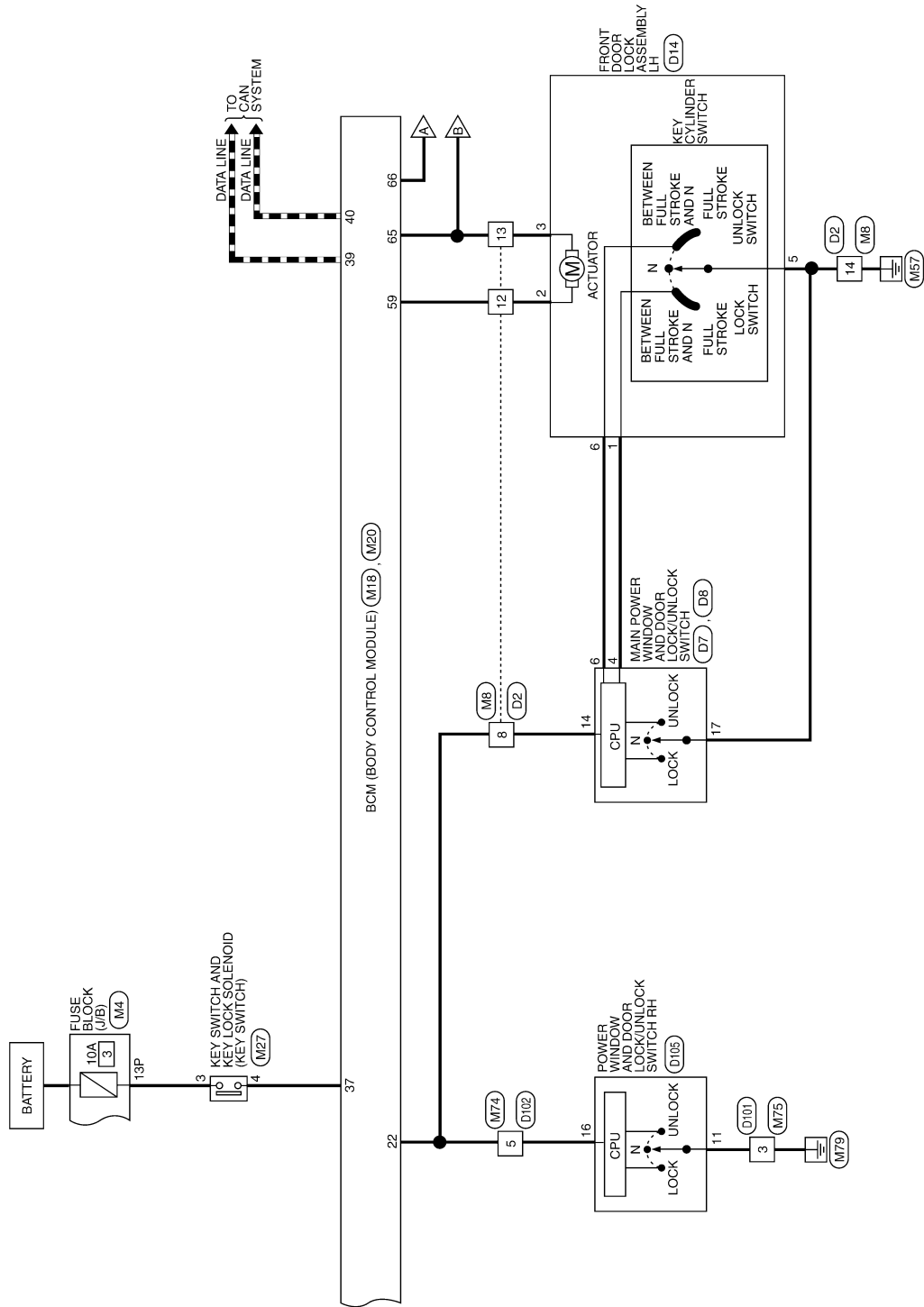


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POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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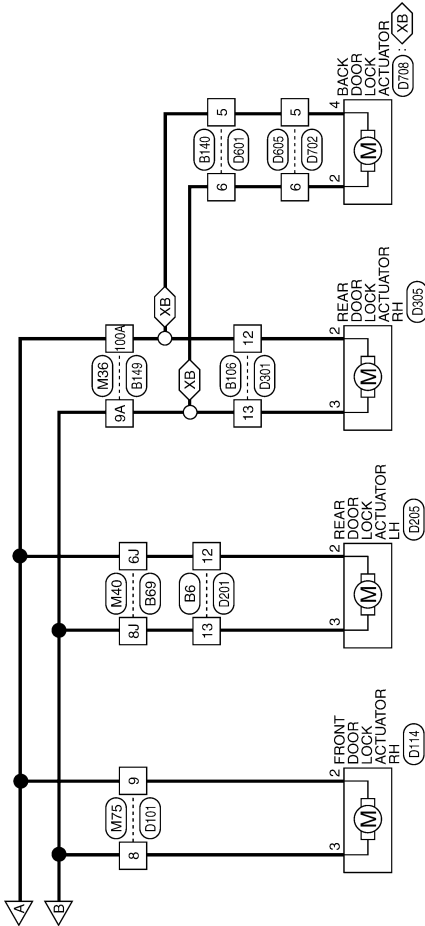
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POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

XB : WITHOUT POWER BACK DOOR



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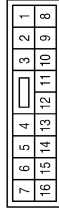
POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

POWER DOOR LOCK SYSTEM CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	WHITE



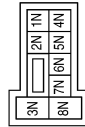
Terminal No.	Color of Wire	Signal Name
8	W/V	-
12	G	-
13	V	-
14	B	-

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



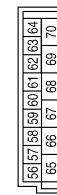
Terminal No.	Color of Wire	Signal Name
13P	P	-

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



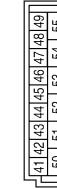
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



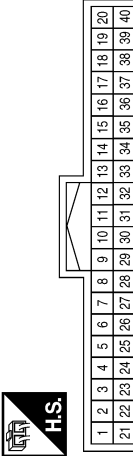
Terminal No.	Color of Wire	Signal Name
57	Y/R	BAT (FUSE)
59	G	DOOR UNLOCK OUTPUT (DR)
65	V	DOOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W/B	BAT (F/L)

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.	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 (FX, TX)
37	B/R	KEY SW
39	L	CAN-H
40	P	CAN-L

ABKIA3976GB

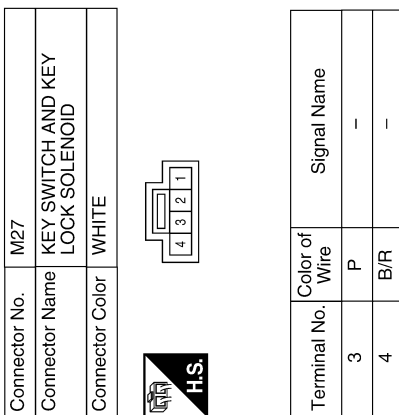
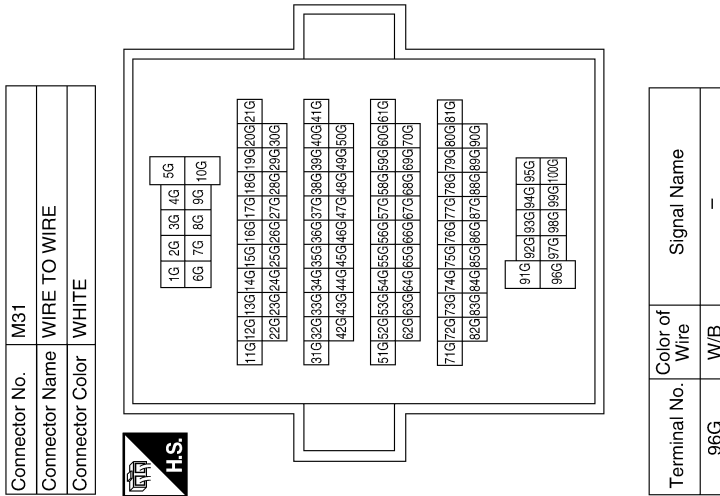
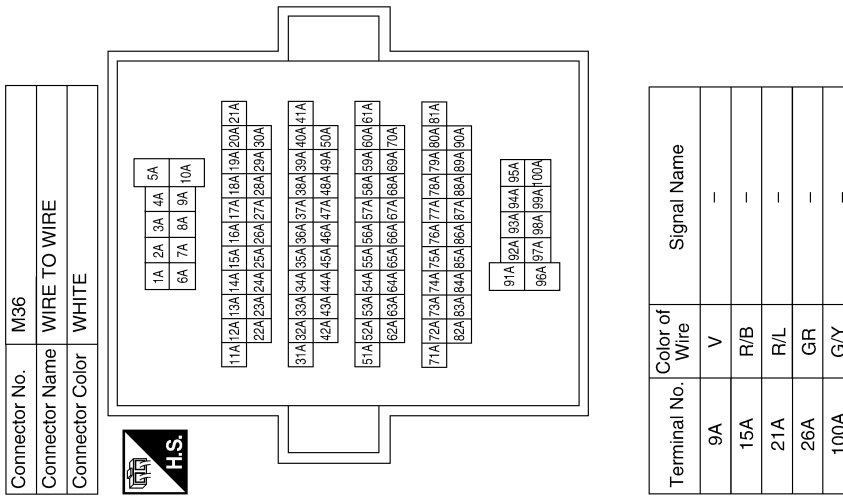
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DLK

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



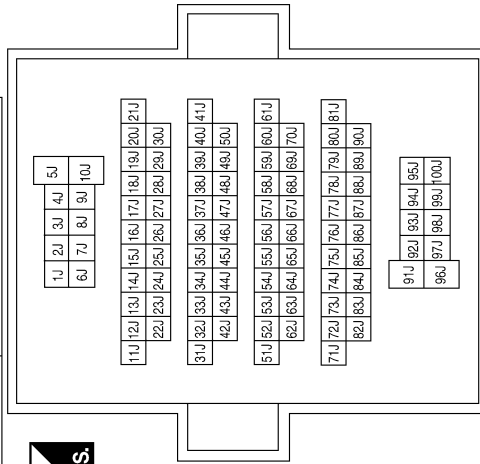
ABKIA3977GB

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

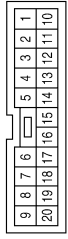
< WIRING DIAGRAM >

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



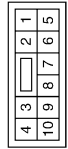
Terminal No.	Color of Wire	Signal Name
6J	G/Y	-
8J	V	-
21J	R/Y	-
30J	SB	-

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN

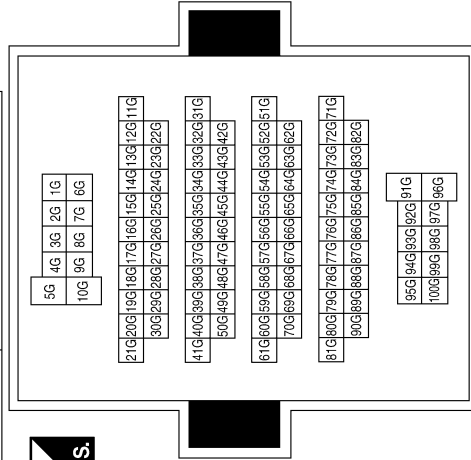


Terminal No.	5	Color of Wire	W/V	Signal Name	-
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Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



Terminal No.	96G	Color of Wire	W/B	Signal Name	-
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Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

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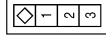
DLK

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

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



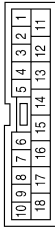
Terminal No.	2	Color of Wire	R/Y	Signal Name	-
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Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



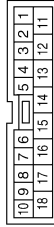
Terminal No.	2	Color of Wire	SB	Signal Name	-
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Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



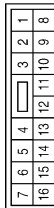
Terminal No.	12	Color of Wire	G/Y	Signal Name	-
Terminal No.	13	Color of Wire	V	Signal Name	-

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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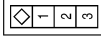
ABKIA3979GB

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

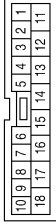
< WIRING DIAGRAM >

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



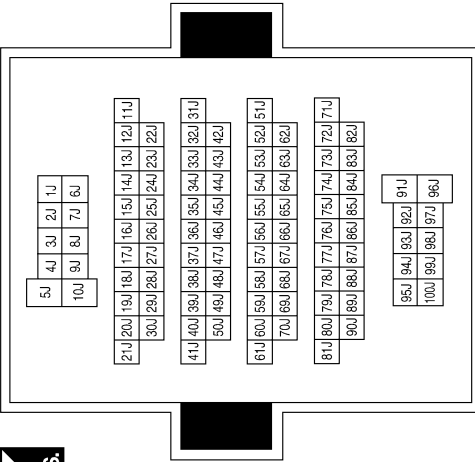
Terminal No.	Color of Wire	Signal Name
2	R/L	-

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.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



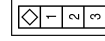
Terminal No.	Color of Wire	Signal Name
6J	G/Y	-
8J	V	-
21J	R/Y	-
30J	SB	-

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	-

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	-

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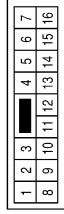
DLK

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

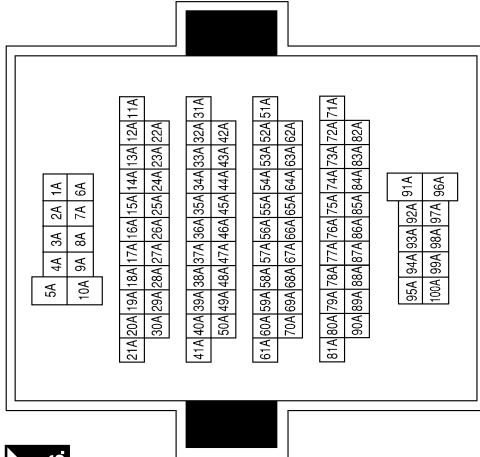
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



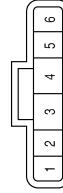
Terminal No.	Color of Wire	Signal Name
8	LG/W	-
12	G	-
13	V	-
14	B	-

Terminal No.	Color of Wire	Signal Name
9A	V	-
15A	R/W	-
21A	R/L	-
26A	GR	-
100A	G/Y	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE

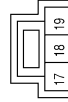


Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	BLACK



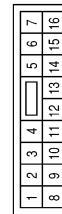
Terminal No.	Color of Wire	Signal Name
1	L	-
2	G	-
3	V	-
5	B	-
6	R	-

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	KEY CYLINDER LOCK
6	R	KEY CYLINDER UNLOCK
14	LG/W	COMMUNICATION

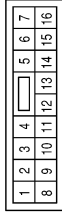
ABKIA3981GB

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

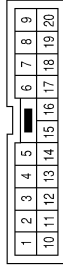
< WIRING DIAGRAM >

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



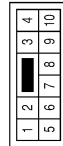
Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	COMMUNICATION

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	BROWN



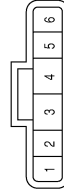
Terminal No.	Color of Wire	Signal Name
5	LG/W	-

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



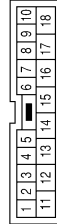
Terminal No.	Color of Wire	Signal Name
3	B	-
8	V	-
9	G/Y	-

Connector No.	D205
Connector Name	REAR DOOR LOCK ACTUATOR LH
Connector Color	BLACK



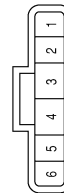
Terminal No.	Color of Wire	Signal Name
2	G/Y	-
3	V	-

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	-
3	V	-

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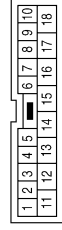
DLK

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

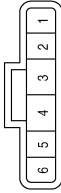
< WIRING DIAGRAM >

Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



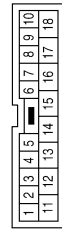
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	D305
Connector Name	REAR DOOR LOCK ACTUATOR RH
Connector Color	BLACK



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

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



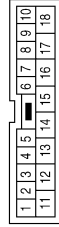
Terminal No.	Color of Wire	Signal Name
12	G/Y	-
13	V	-

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



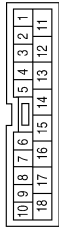
Terminal No.	Color of Wire	Signal Name
1	B	-
3	R/W	-

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	-

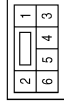
ABKIA3983GB

POWER DOOR LOCK SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

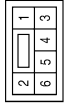
< WIRING DIAGRAM >

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



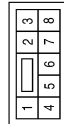
Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

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



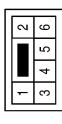
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

Connector No.	D708
Connector Name	BACK DOOR LOCK ACTUATOR
Connector Color	WHITE



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

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	G/Y	-
6	V	-

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ABKIA3984GB

REMOTE KEYLESS ENTRY SYSTEM

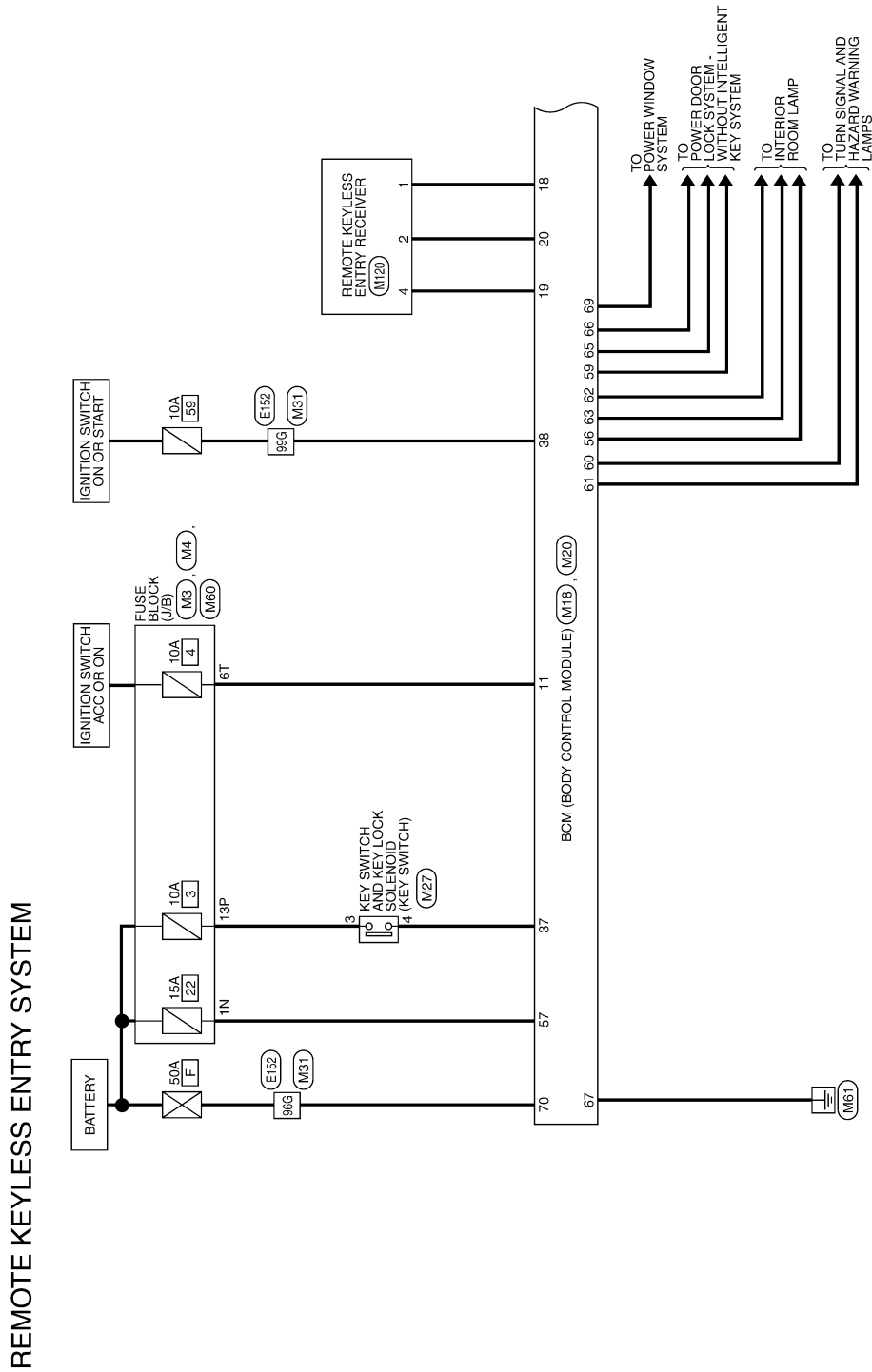
[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram

INFOID:000000009823039



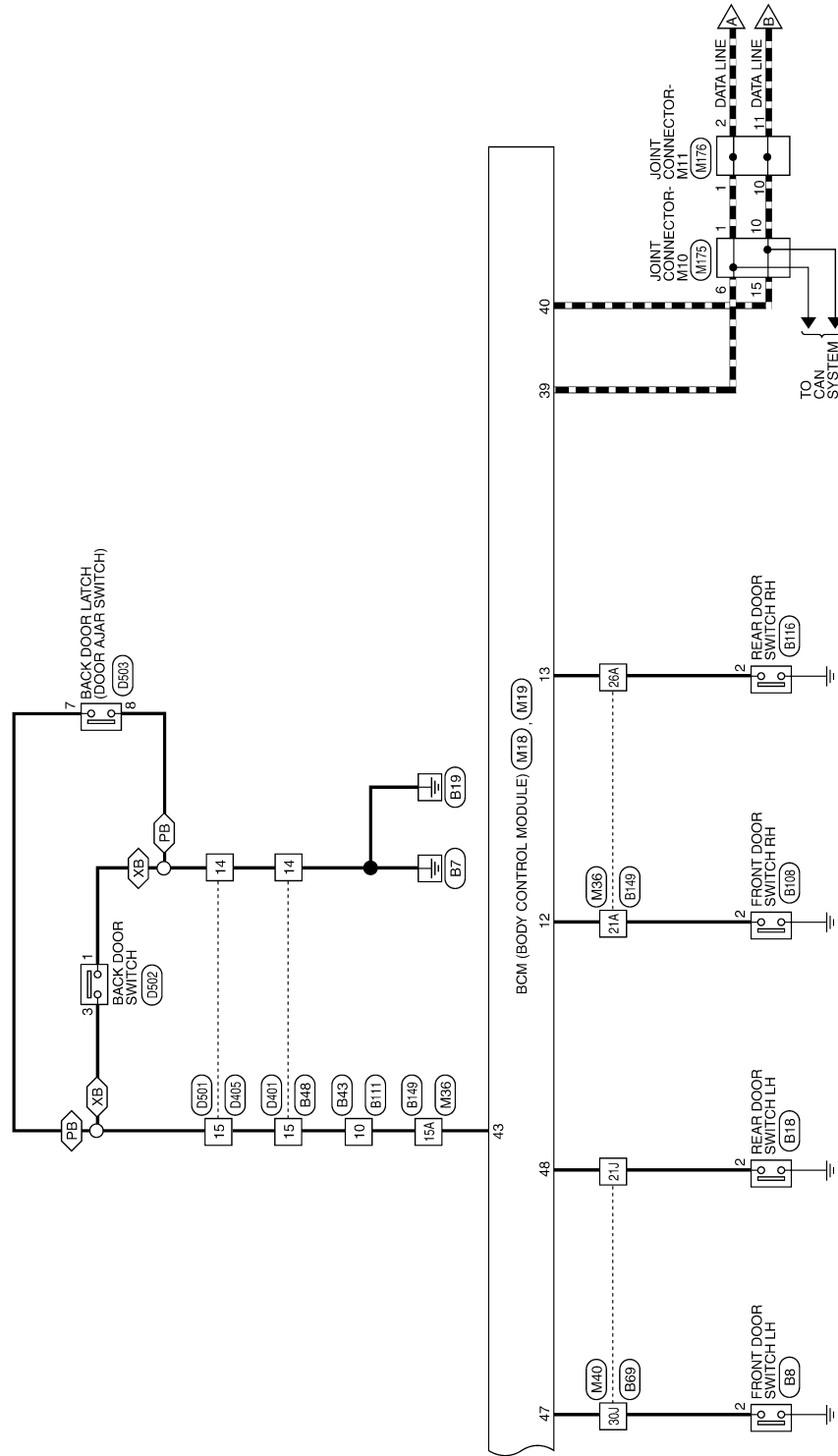
ABKWA1880GB

REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

PB : WITH POWER BACK DOOR
XB : WITHOUT POWER BACK DOOR



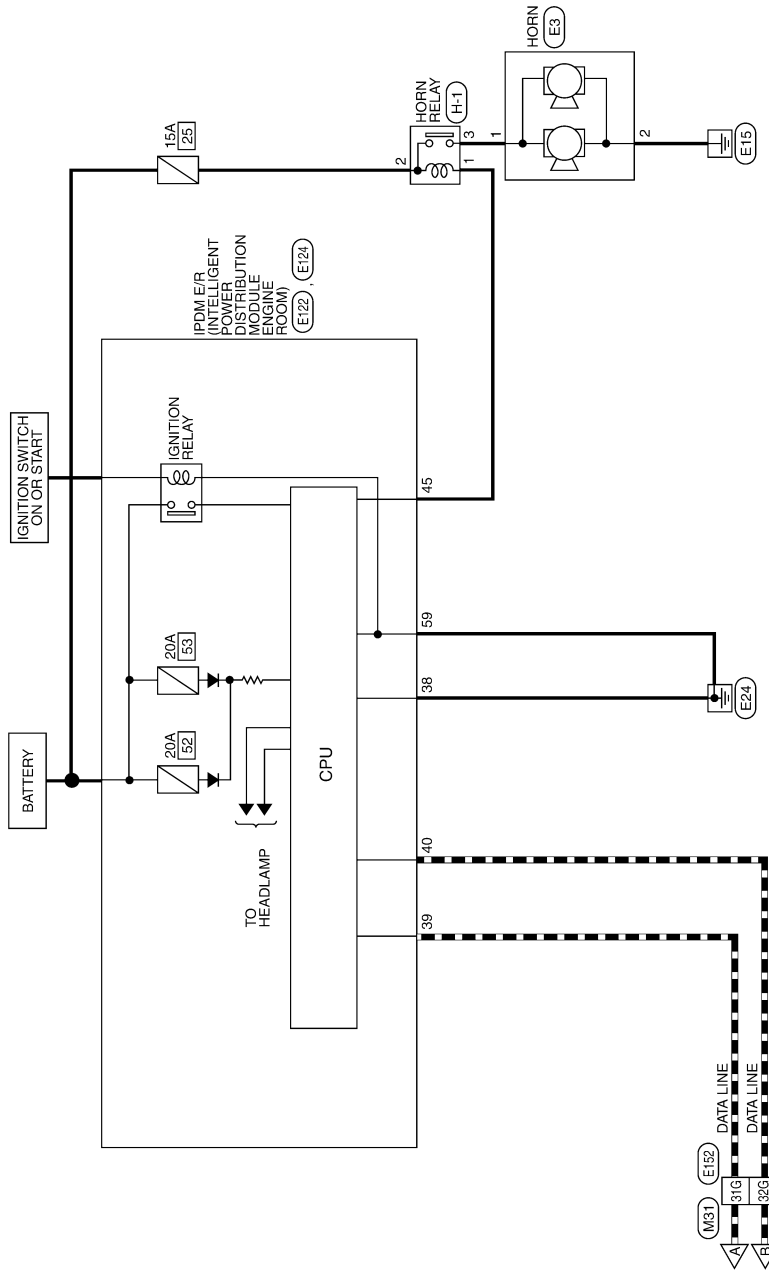
ABKWA1881GB

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REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



ABKWA1882GB

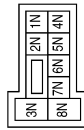
REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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



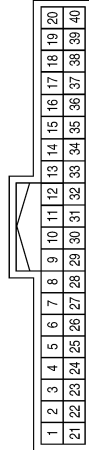
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



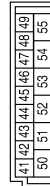
Terminal No.	Color of Wire	Signal Name
13P	P	-

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



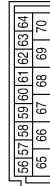
Terminal No.	Color of Wire	Signal Name
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
18	P	KEYLESS AND AUTO LIGHT SENSOR GND
19	V/W	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G/W	KEYLESS TUNER SIGNAL
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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	F/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
65	V	DOOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
69	W/R	POWER WINDOW POWER SUPPLY (BAT)
70	W/B	BAT (F/L)

ABKIA3985GB

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

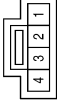
DLK

REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

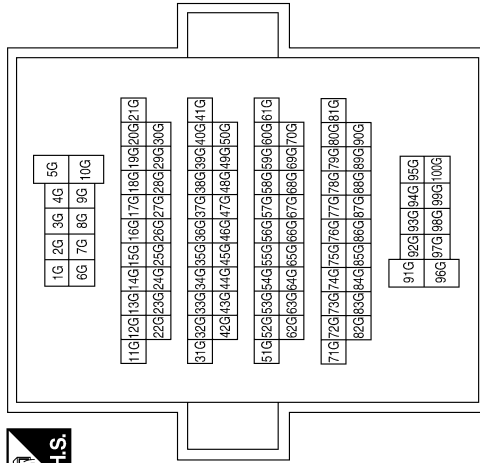
< WIRING DIAGRAM >

Connector No.	M27
Connector Name	KEY SWITCH AND KEY LOCK SOLENOID
Connector Color	WHITE



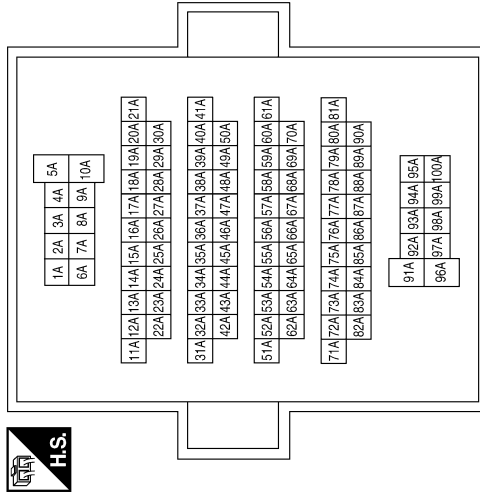
Terminal No.	Color of Wire	Signal Name
3	P	-
4	B/R	-

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



Terminal No.	Color of Wire	Signal Name
31G	L	-
32G	P	-
96G	W/B	-
99G	W/L	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15A	R/B	-
21A	R/L	-
26A	GR	-

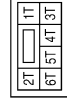
ABKIA3986GB

REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

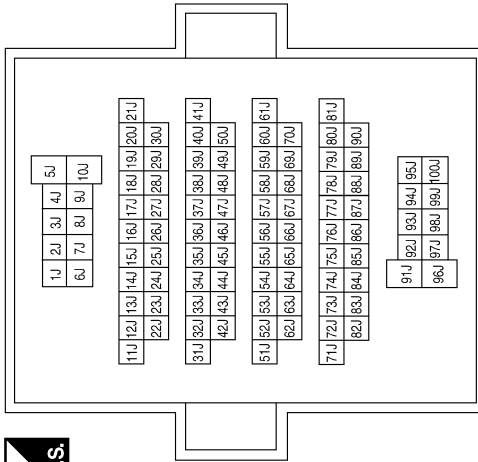
Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



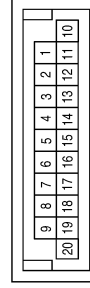
Terminal No.	Color of Wire	Signal Name
6T	O	-

Terminal No.	Color of Wire	Signal Name
21J	R/Y	-
30J	SB	-

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

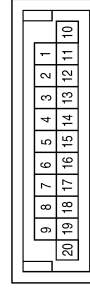


Connector No.	M176
Connector Name	JOINT CONNECTOR-M11
Connector Color	BLUE



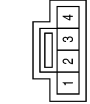
Terminal No.	Color of Wire	Signal Name
1	L	-
2	L	-
10	P	-
11	P	-

Connector No.	M175
Connector Name	JOINT CONNECTOR-M10
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	L	-
6	L	-
10	P	-
15	P	-

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



Terminal No.	Color of Wire	Signal Name
1	P	-
2	G/W	-
4	V/W	-

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REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

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

59	58	57
62	61	60



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

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

42	41	40	39	38	37
48	47	46	45	44	43



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
45	G/W	ANTI THEFT HORN

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK



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

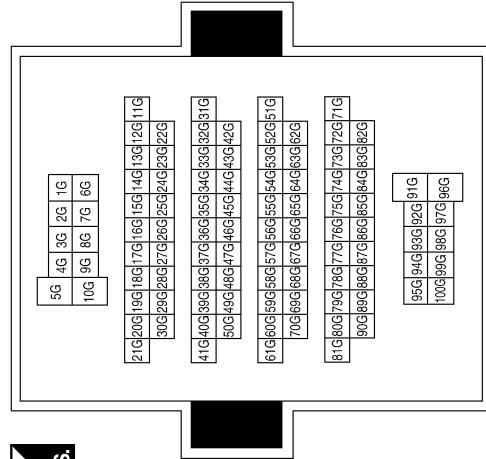
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SB	-

Terminal No.	Color of Wire	Signal Name
31G	L	-
32G	P	-
96G	W/B	-
99G	L/W	-

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



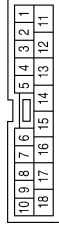
ABKIA3988GB

REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

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



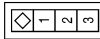
Terminal No.	Color of Wire	Signal Name
2	R/Y	-

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



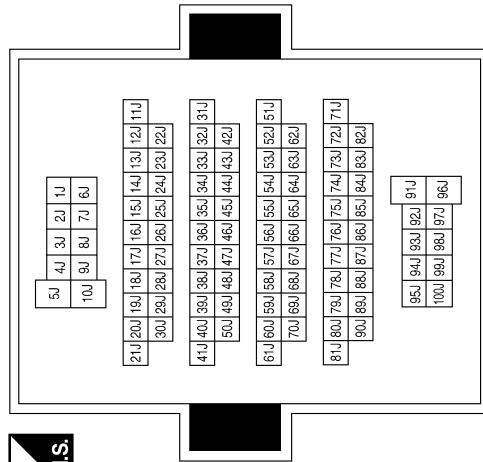
Terminal No.	Color of Wire	Signal Name
10	R/W	-

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
21J	R/Y	-
30J	SB	-

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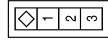
REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

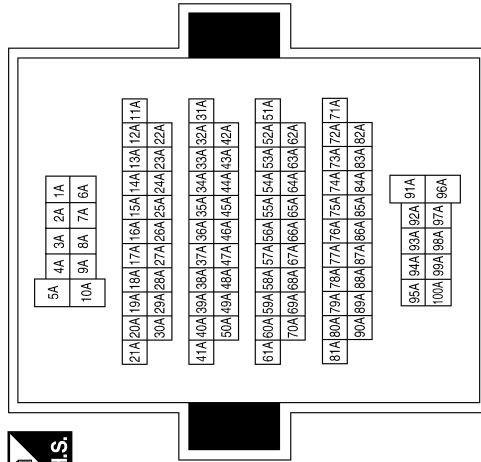
< WIRING DIAGRAM >

Terminal No.	Color of Wire	Signal Name
15A	R/W	-
21A	R/L	-
26A	GR	-

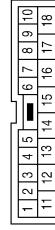
Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



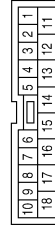
Terminal No.	Color of Wire	Signal Name
2	GR	-



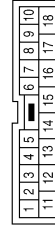
Connector No.	D501
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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



Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

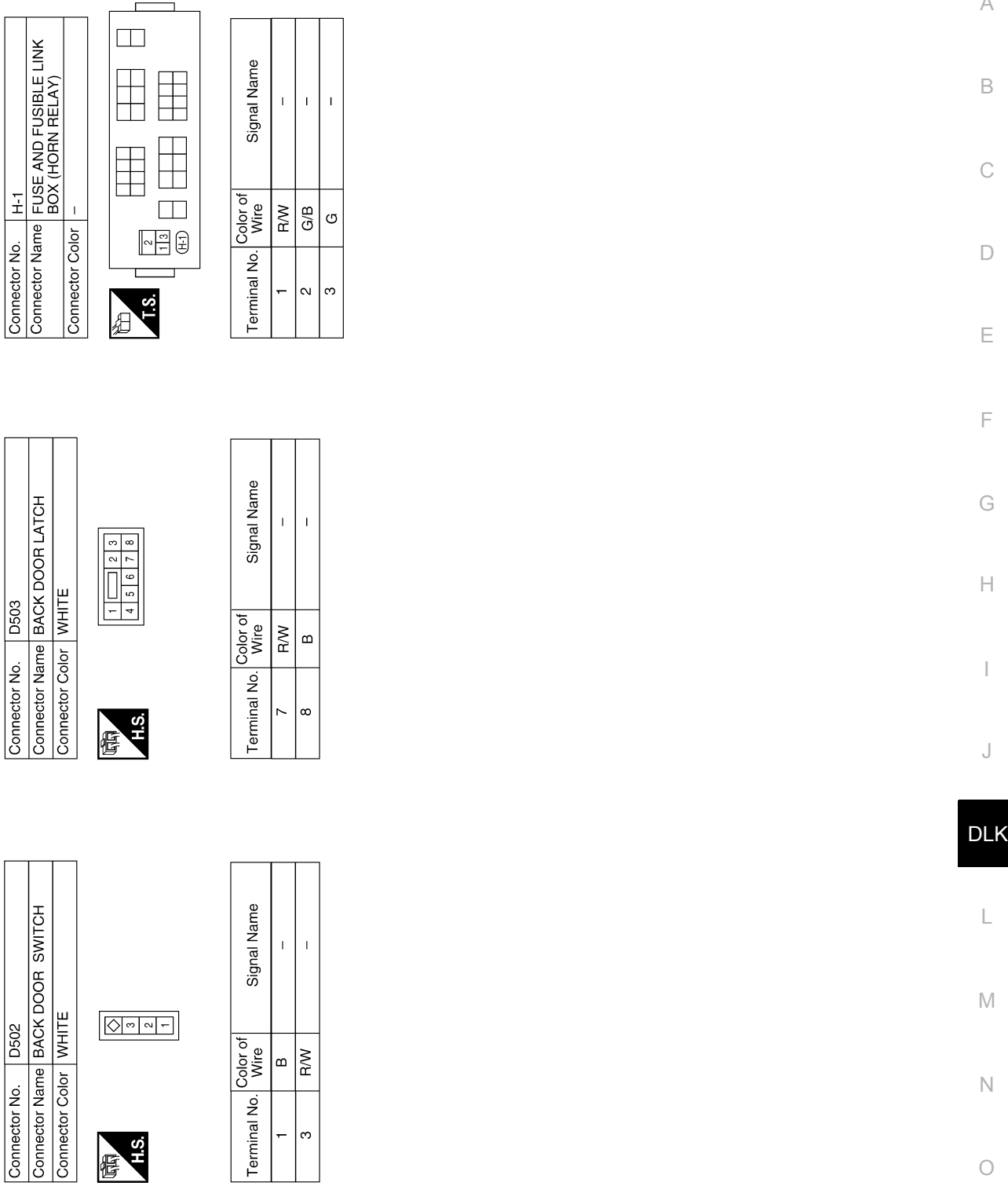
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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REMOTE KEYLESS ENTRY SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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AUTOMATIC BACK DOOR SYSTEM

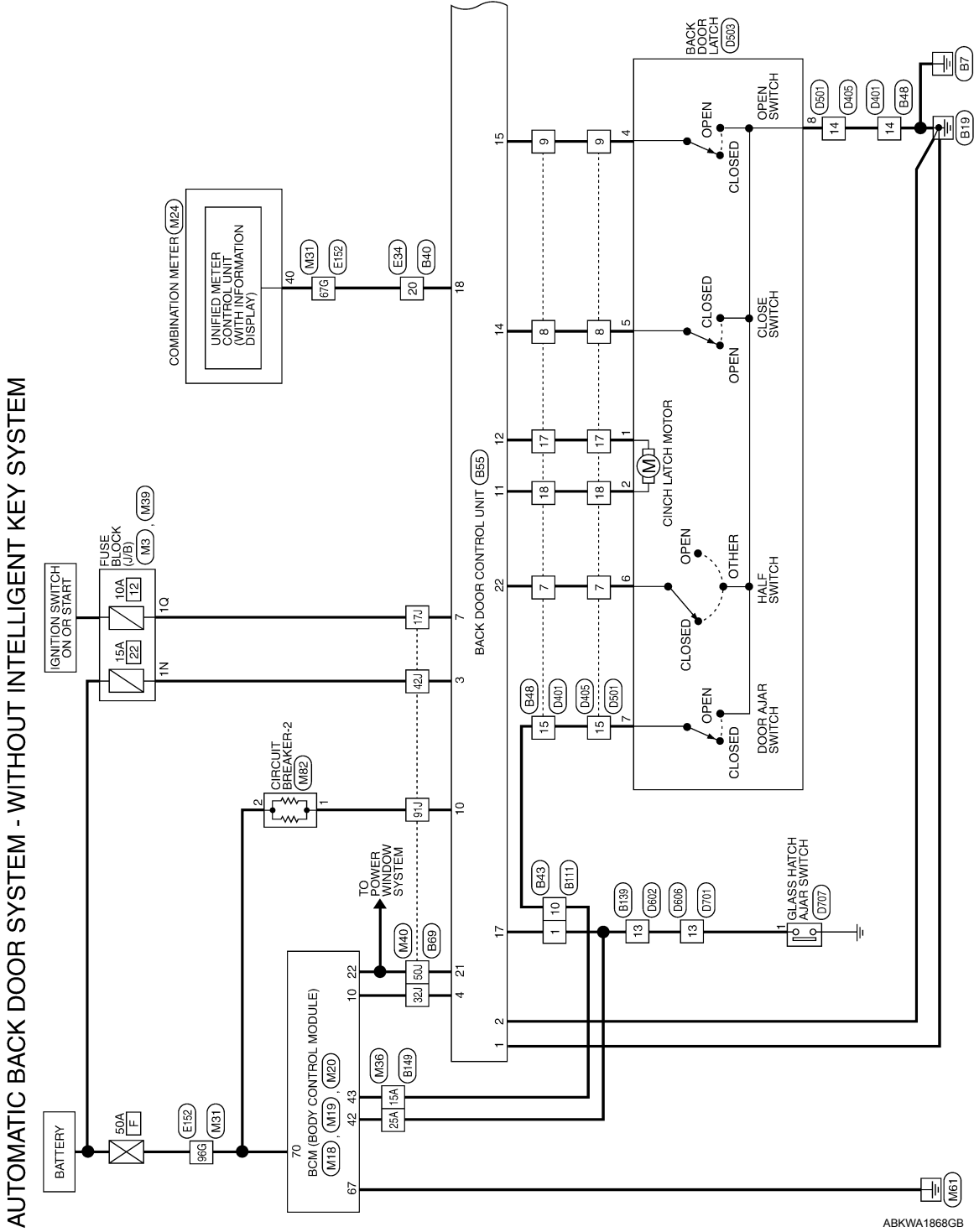
[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

AUTOMATIC BACK DOOR SYSTEM

Wiring Diagram - Without Intelligent Key System

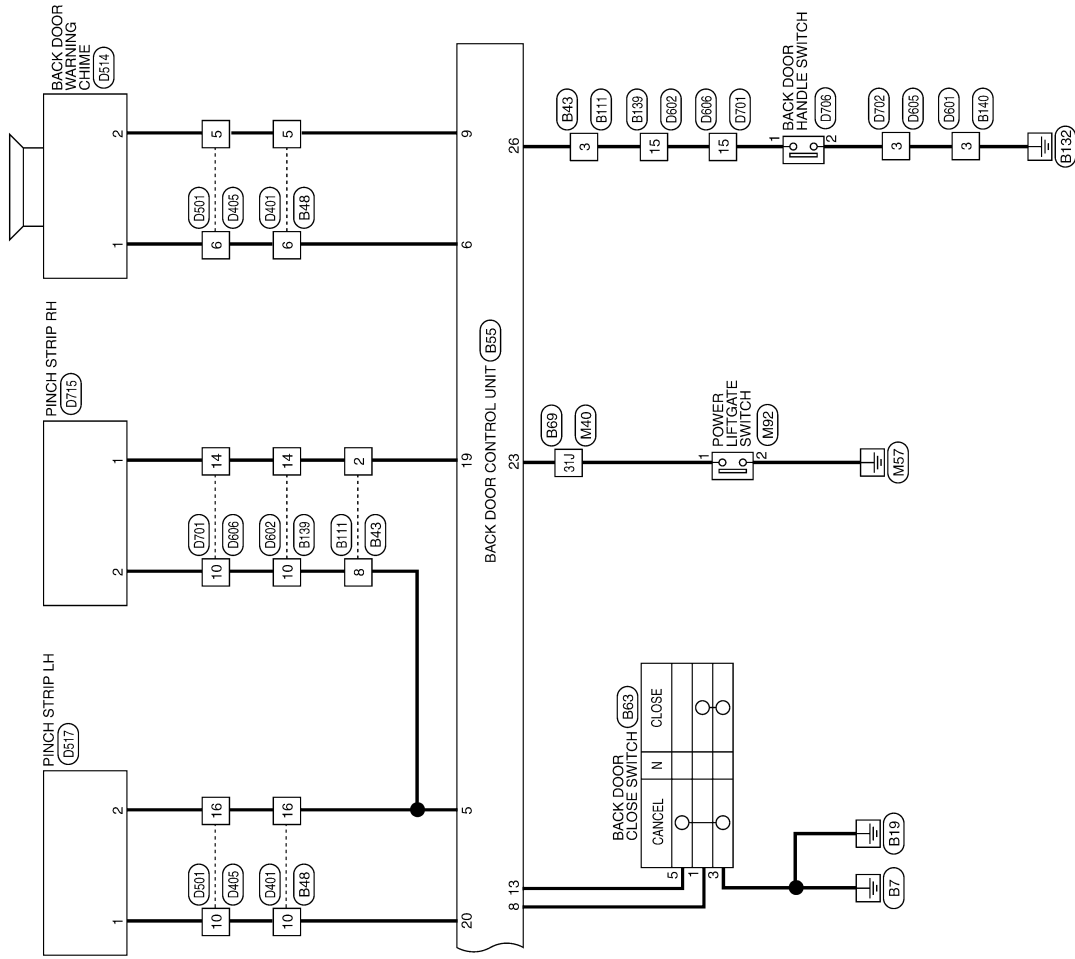
INFOID:00000009823040



AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



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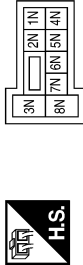
AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

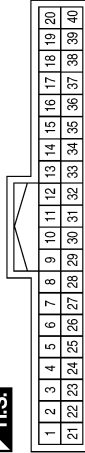
AUTOMATIC BACK DOOR SYSTEM CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

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



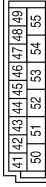
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



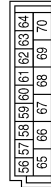
Terminal No.	Color of Wire	Signal Name
10	G	IVCS INPUT
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)

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



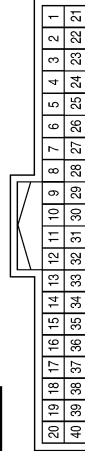
Terminal No.	Color of Wire	Signal Name
42	GR	GLASS HATCH SW
43	R/B	BACK DOOR SW

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	BAT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



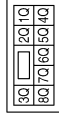
Terminal No.	Color of Wire	Signal Name
40	GR/R	PN REVERSE

AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

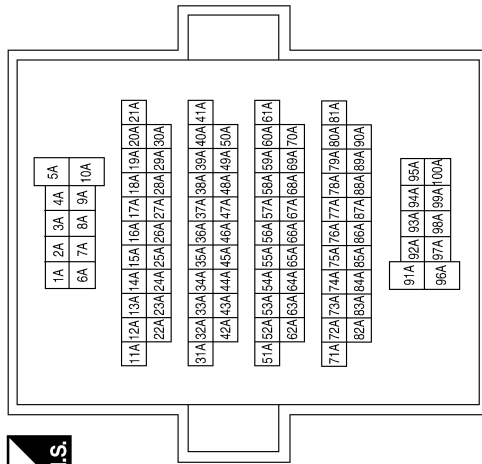
< WIRING DIAGRAM >

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



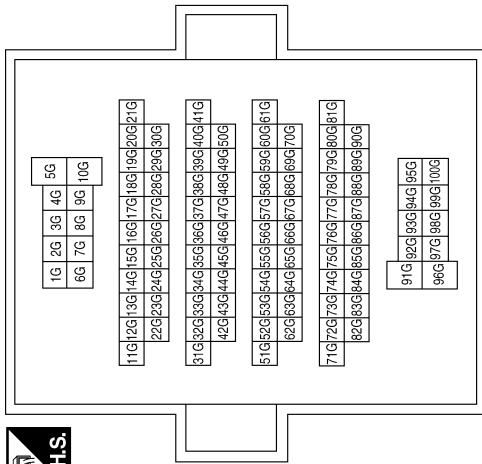
Terminal No.	Color of Wire	Signal Name
1Q	G/R	-

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
15A	R/B	-
25A	GR	-

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



Terminal No.	Color of Wire	Signal Name
67G	GR/R	-
96G	W/B	-

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AUTOMATIC BACK DOOR SYSTEM

< WIRING DIAGRAM >

[WITHOUT INTELLIGENT KEY SYSTEM]

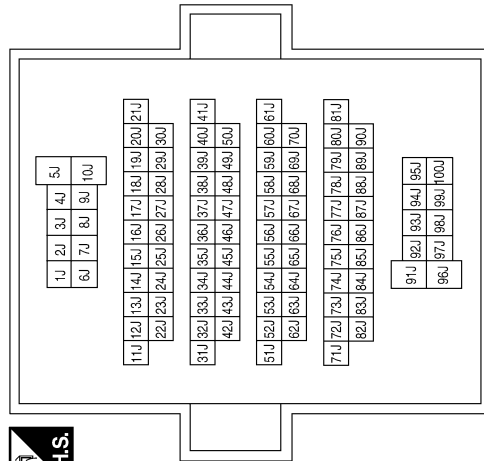
Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	WHITE



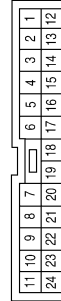
Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

Terminal No.	Color of Wire	Signal Name
17J	G/R	-
31J	L/W	-
32J	G	-
42J	Y/R	-
50J	W/W	-
91J	L/B	-

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

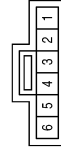


Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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	-

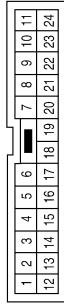
ABKIA3947GB

AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

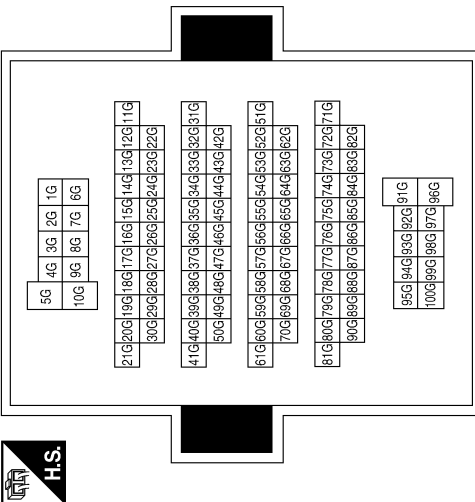
Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

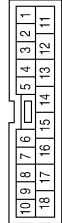
Terminal No.	Color of Wire	Signal Name
67G	GR/R	-
96G	W/B	-

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



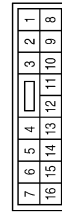
Terminal No.	Color of Wire	Signal Name
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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	-

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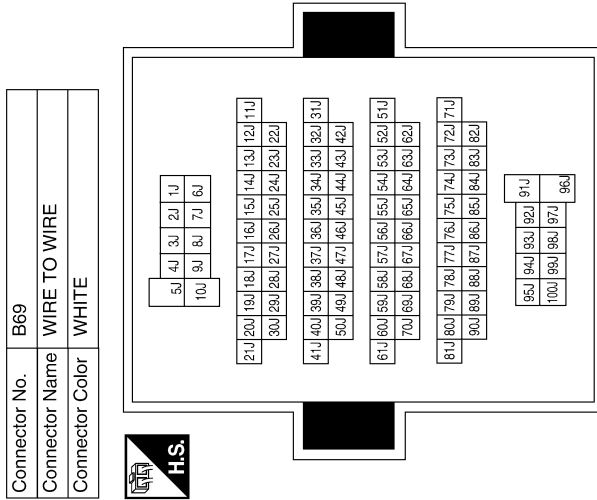
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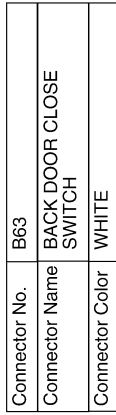
AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >



Terminal No.	Color of Wire	Signal Name
17J	G/R	-
31J	L/W	-
32J	G	-
42J	Y/R	-
50J	W/V	-
91J	L/B	-



Terminal No.	Color of Wire	Signal Name
1	GR/B	-
2	-	-
3	B	-
4	-	-
5	P/L	-
6	-	-



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	B	GND
3	Y/R	POWER SUPPLY (CONTROL SYSTEM)
4	G	FLASH SIGNAL OUTPUT
5	B/P	PINCH STRIP GND
6	R	SPEAKER OUTPUT (+)
7	G/R	IGN SW INPUT
8	GR/B	D-PILLAR SW INPUT
9	L	SPEAKER OUTPUT (-)
10	L/B	POWER SUPPLY (POWER SYSTEM)
11	Y	CINCH LATCH MOTOR (+)
12	L	CINCH LATCH MOTOR (-)
13	P/L	MAIN SW INPUT
14	P	CLOSE SW INPUT
15	O/L	OPEN SW INPUT
17	GR	GLASS SW INPUT
18	GR/R	P RANGE SW INPUT
19	BR/B	PINCH STRIP RH
20	V/G	PINCH STRIP LH
21	W/V	P/WINDOW SERIAL LINK
22	BR	HALF SW INPUT
23	L/W	OVERHEAD SW INPUT
26	V	OUTSIDE HANDLE SW INPUT

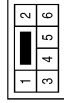
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AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

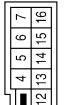
< WIRING DIAGRAM >

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



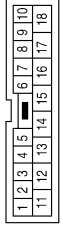
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

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	-

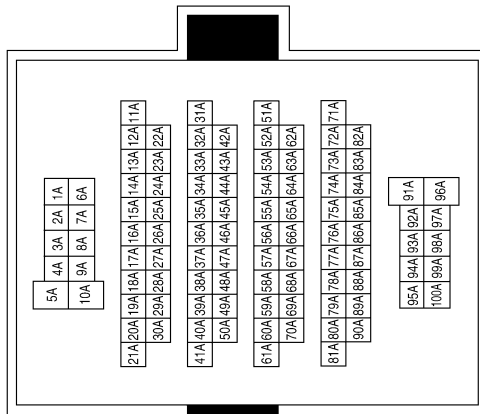
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

Terminal No.	Color of Wire	Signal Name
15A	R/W	-
25A	GR	-

Connector No.	B149
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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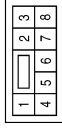
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AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

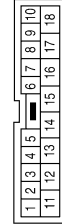
< WIRING DIAGRAM >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



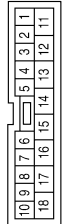
Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
3	-	-
4	O/L	-
5	P	-
6	BR	-
7	R/W	-
8	B	-

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



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
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	-
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



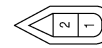
Terminal No.	Color of Wire	Signal Name
3	B	-

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	-

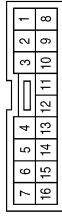
ABKIA3951GB

AUTOMATIC BACK DOOR SYSTEM

[WITHOUT INTELLIGENT KEY SYSTEM]

< WIRING DIAGRAM >

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



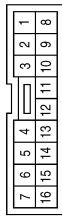
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

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



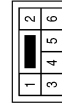
Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D706
Connector Name	BACK DOOR HANDLE SWITCH
Connector Color	GRAY



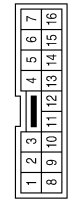
Terminal No.	Color of Wire	Signal Name
1	V	-
2	B	-

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	-

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AUTOMATIC BACK DOOR SYSTEM

< WIRING DIAGRAM >

[WITHOUT INTELLIGENT KEY SYSTEM]

Connector No.	D715
Connector Name	PINCH STRIP RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	BR/B	-
2	B/P	-

Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	GR	-

ABKIA3953GB

DOOR LOCK

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

DOOR LOCK

Symptom Table

INFOID:000000009823041

DOOR LOCK SYSTEM

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-242. "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	DLK-271
	2. Key switch (Insert) check	DLK-297
	3. Replace BCM.	BCS-54
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)	DLK-274
	2. Door lock/unlock switch check (passenger side)	DLK-276
Specific door lock actuator does not operate.	1. Door lock actuator check (Front LH)	DLK-281
	2. Door lock actuator check (Front RH)	DLK-282
	3. Door lock actuator check (Rear LH)	DLK-283
	4. Door lock actuator check (Rear RH)	DLK-285
	5. Back door lock actuator check (without power back door)	DLK-286
	6. Back door lock operation (with power back door)	DLK-287
Power door lock does not operate with front door key cylinder LH operation.	1. Front door lock assembly LH (key cylinder switch) check	DLK-279
	2. Replace BCM.	BCS-54
Power door lock does not operate.	1. BCM power supply and ground circuit check	BCS-30
	2. Door lock/unlock switch check	DLK-274
Vehicle speed sensing auto LOCK operation does not operate.	1. Insure "AUTOMATIC DOOR LOCK/UNLOCK FUNCTION (LOCK OPERATION)" is enabled.	DLK-246
	2. Check combination meter vehicle speed signal.	MWI-31
	3. Check intermittent incident.	GI-42
Ignition OFF interlock door UNLOCK function does not operate.	1. Insure "AUTOMATIC DOOR LOCK/UNLOCK FUNCTION (UNLOCK OPERATION)" is enabled.	DLK-246
	2. Check BCM for DTC.	BCS-44
	3. Check intermittent incident.	GI-42

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DLK

REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

REMOTE KEYLESS ENTRY SYSTEM

Symptom Table

INFOID:000000009823042

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 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-291
	2. Check BCM and remote keyless entry receiver.	DLK-288
The new ID of keyfob cannot be entered.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-291
	2. Key switch (insert) check	DLK-297
	3. Door switch check	DLK-271
	4. ACC power check	BCS-30
	5. Replace BCM.	BCS-54
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 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-291
	2. Replace BCM.	BCS-54
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 NOTE: Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	DLK-252
	2. Door switch check	DLK-271
	3. Replace BCM.	BCS-54
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder OK)	1. Check hazard reminder mode with CONSULT NOTE: Hazard reminder mode can be changed. First check the hazard reminder mode setting.	DLK-252
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	BCS-54
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	1. Check horn reminder mode with CONSULT NOTE: Horn reminder mode can be changed. First check the horn reminder mode setting.	DLK-252
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	DLK-293
	4. Replace BCM.	BCS-54

REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-291	A
	2. Key switch (insert) check	DLK-297	B
	3. Remote keyless entry receiver system inspection	DLK-288	C
	4. Replace BCM.	BCS-54	
Room lamp, ignition keyhole illumination and step lamp operation do not activate properly.	1. Room lamp operation check	DLK-300	D
	2. Ignition keyhole illumination operation check	DLK-300	
	3. Step lamp operation check	DLK-300	E
	4. Door switch check	DLK-271	
	5. Replace BCM.	BCS-54	
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 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-291	F
	2. Key switch (insert) check	DLK-297	G
	3. Replace BCM.	BCS-54	H
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode with CONSULT NOTE: Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	DLK-250	I
	2. Replace BCM.	BCS-54	
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 NOTE: Power window down operation mode can be changed. First check the power window down operation mode setting.	DLK-265	J
	2. Check power window function with switch	—	DLK
	3. Replace BCM.	BCS-54	

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:000000009823043

BACK DOOR OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-242, "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	DLK-306
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	DLK-312
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	DLK-306
	Back door close switch system inspection	DLK-316
	Auto back door power supply and ground circuit system inspection.	DLK-270
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	DLK-312
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	DLK-304
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	DLK-317
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	DLK-288
	Power window serial link	—
	Pinch strip system inspection	DLK-312
Auto closure does not operate.	Half-latch switch system	DLK-314
	Cinch latch motor system	DLK-318
	Handle switch system	DLK-317
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	DLK-315
	Handle switch system	DLK-317
Warning chime does not sound.	Back door warning chime system	DLK-313
Auto closure operation works, but the back door is not fully closed	Close switch system	DLK-316
	Handle switch system	DLK-317
	Cinch latch motor system	DLK-318
	Back door latch assembly mechanism damaged or worn.	DLK-314
Auto open operation releases lock, but does not fully open back door.	Glass hatch ajar switch check	DLK-308

BACK DOOR HANDLE

BACK DOOR OPENER FUNCTION

[WITHOUT INTELLIGENT KEY SYSTEM]

< SYMPTOM DIAGNOSIS >

BACK DOOR HANDLE : Symptom Table

INFOID:000000009823044

BACK DOOR OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-242, "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.	DLK-372
	2. Check Intermittent Incident.	GI-42

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HOMELINK UNIVERSAL TRANSCEIVER

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

INFOID:000000009823045

HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	DLK-319
	2. Check Intermittent Incident.	GI-42

SQUEAK AND RATTLE TROUBLE DIAGNOSES

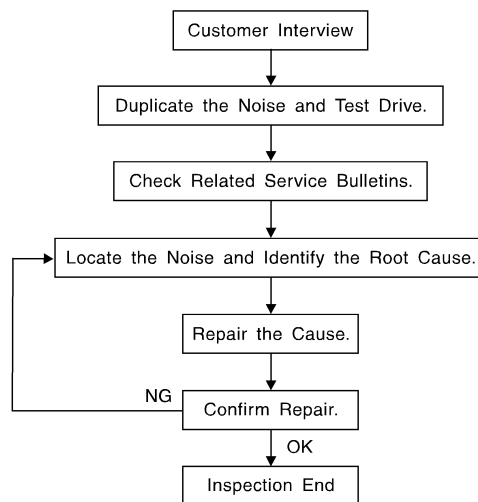
< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:00000009823046



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-379, "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 CVT and A/T models).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: 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-377. "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.

SILICONE GREASE

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

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:000000009823047

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and the instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar finisher
4. Instrument panel to windshield
5. Instrument panel 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. Shift selector 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

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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 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.

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 lens 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 installed to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator installation 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.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

Diagnostic Worksheet

INFOID:000000009823048

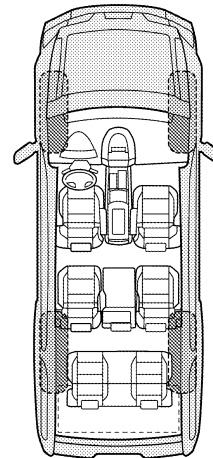
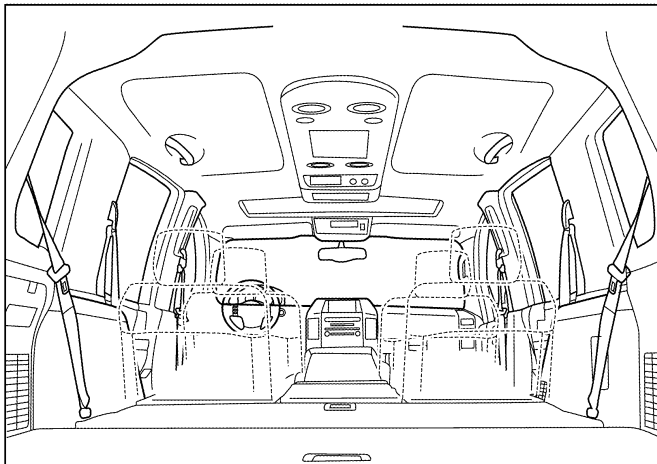
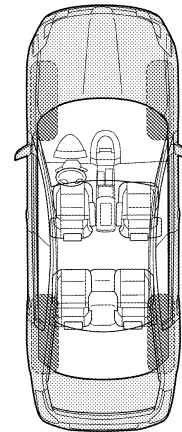
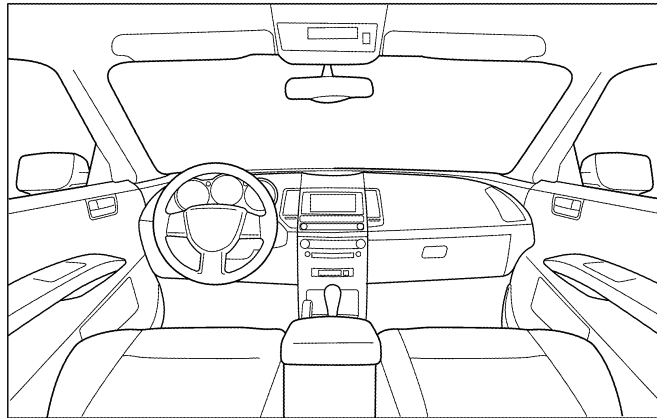
Dear Customer:

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.

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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:

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

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

III. WHEN DRIVING:

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

IV. WHAT TYPE OF NOISE

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

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

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

VIN: _____ Customer Name _____
W.O.# _____ Date: _____

This form must be attached to Work Order

LAI0071E

PRECAUTIONS

< PRECAUTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

PRECAUTION

PRECAUTIONS

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

INFOID:000000009823049

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

WARNING:

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

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

WARNING:

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

Precaution for Work for Door and Lock

INFOID:000000009823050

- 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.
- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components.
 - Water soluble dirt: Dip a soft cloth into lukewarm water, and wring the water out of the cloth to wipe the dirty area.
Then rub with a soft and dry cloth.
 - Oily dirt: Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%), and wipe the dirty area.
Then dip a cloth into fresh water, and wring the water out of the cloth to wipe the detergent off. Then rub with a soft and dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol, or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

[WITHOUT INTELLIGENT KEY SYSTEM]

< PREPARATION >

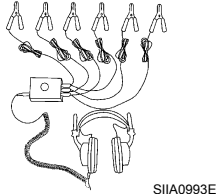
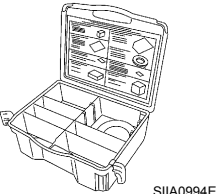
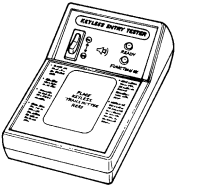

PREPARATION

PREPARATION

Special Service Tool

INFOID:000000009823051

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>SIIA0993E</p>	<p>Locating the noise</p>
<p>— (J-43980) NISSAN Squeak and Rattle Kit</p>  <p>SIIA0994E</p>	<p>Repairing the cause of noise</p>
<p>— (J-43241) Remote Keyless Entry Tester</p>  <p>LEL946A</p>	<p>Used to test key fobs</p>
<p>— (J-50190) Signal Tech II</p>  <p>ALEIA0131ZZ</p>	<ul style="list-style-type: none"> • Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Test remote keyless entry keyfob relative signal strength

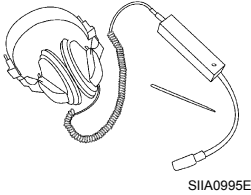
PREPARATION

< PREPARATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

Commercial Service Tool

INFOID:000000009823052

(Kent-Moore No.) Tool name	Description
<p data-bbox="191 317 293 373">(J-39565) Engine ear</p>  <p data-bbox="781 533 846 552">SIIA0995E</p>	Locating the noise

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HOOD

< REMOVAL AND INSTALLATION >

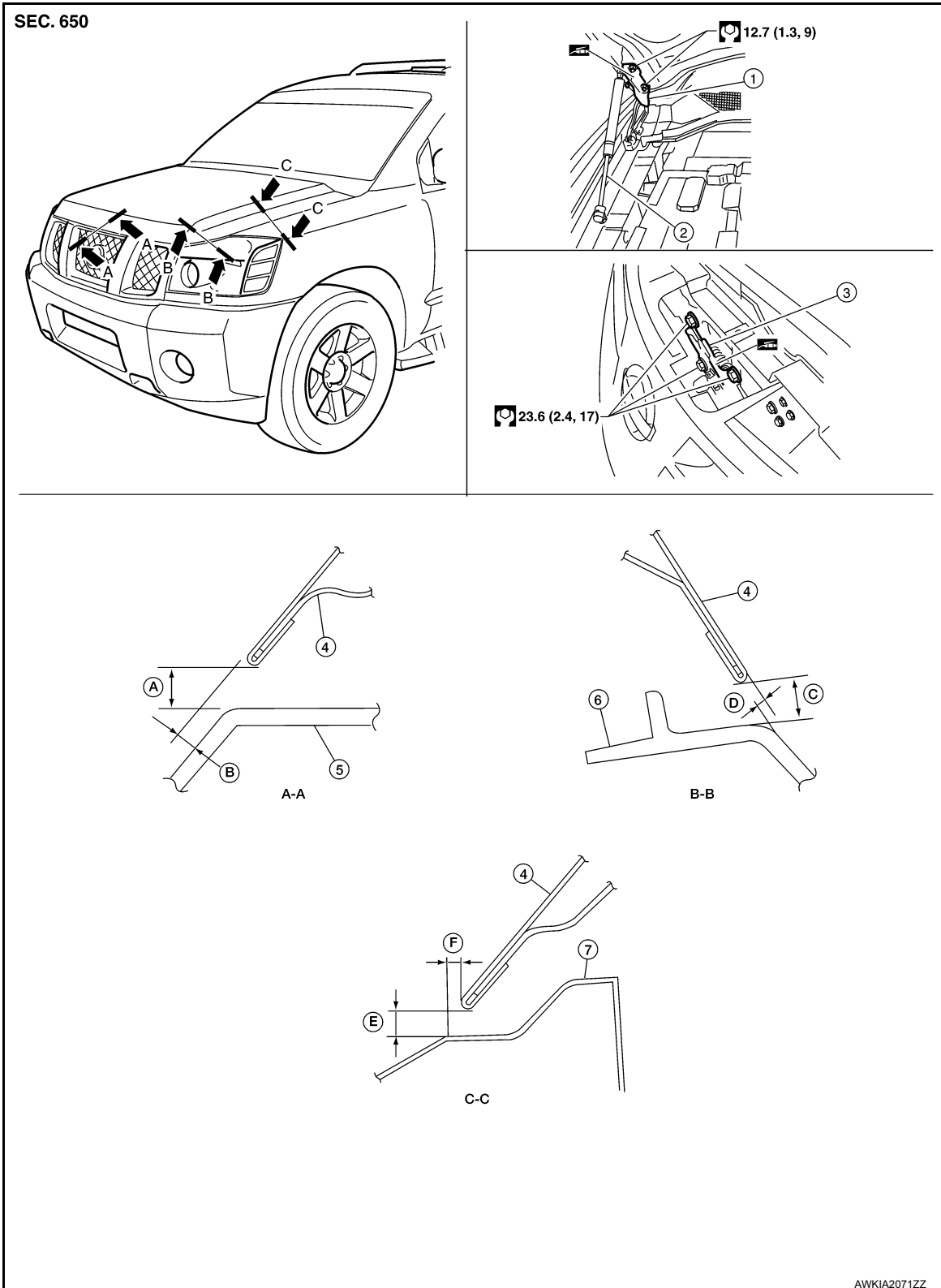
[WITHOUT INTELLIGENT KEY SYSTEM]

REMOVAL AND INSTALLATION

HOOD

Fitting Adjustment

INFOID:000000009823053



HOOD

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

- | | | |
|---------------------|---------------------|---------------------------|
| 1. Hood hinge | 2. Hood stay | 3. Hood lock assembly |
| 4. Hood assembly | 5. Front grille | 6. Front combination lamp |
| 7. Front fender | A. 8.0 mm (0.31 in) | B. 2.0 mm (0.08 in) |
| C. 8.0 mm (0.31 in) | D. 0.8 mm (0.03 in) | E. 3.4 mm (0.14 in) |
| F. 0.0 mm (0.00 in) | | |

CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-23, "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-23, "Removal and Installation"](#).

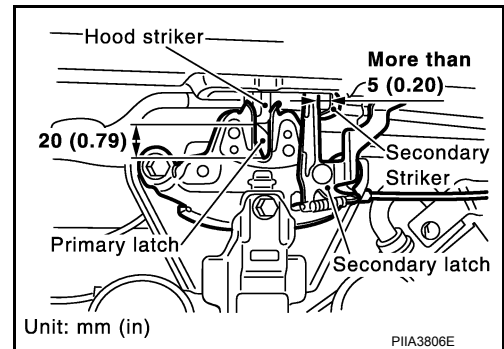
HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to [EXT-23, "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, 7 lb).

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-23, "Removal and Installation"](#).



Removal and Installation of Hood Assembly

INFOID:000000009823054

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.

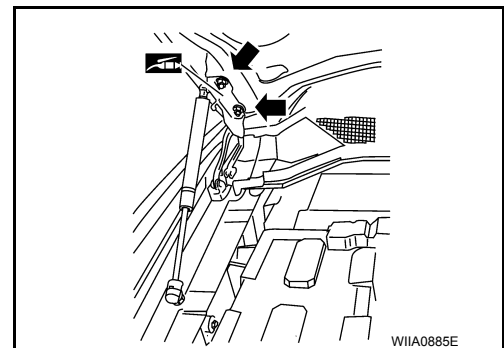
2. Remove the hinge nuts from the hood to remove the hood assembly.

CAUTION:

Operate with two workers, because of its heavy weight.

Installation is in the reverse order of removal.

- Adjust the hood. Refer to [DLK-384, "Fitting Adjustment"](#).
- Adjust the hood lock. Refer to [DLK-384, "Fitting Adjustment"](#).



HOOD

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

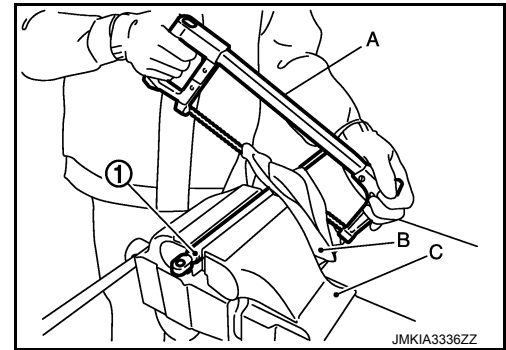
Hood Stay Disposal

INFOID:000000009823055

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

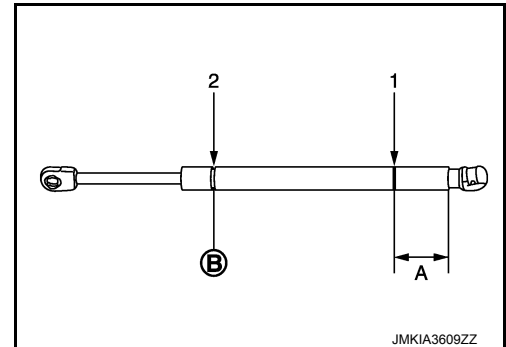
CAUTION:

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



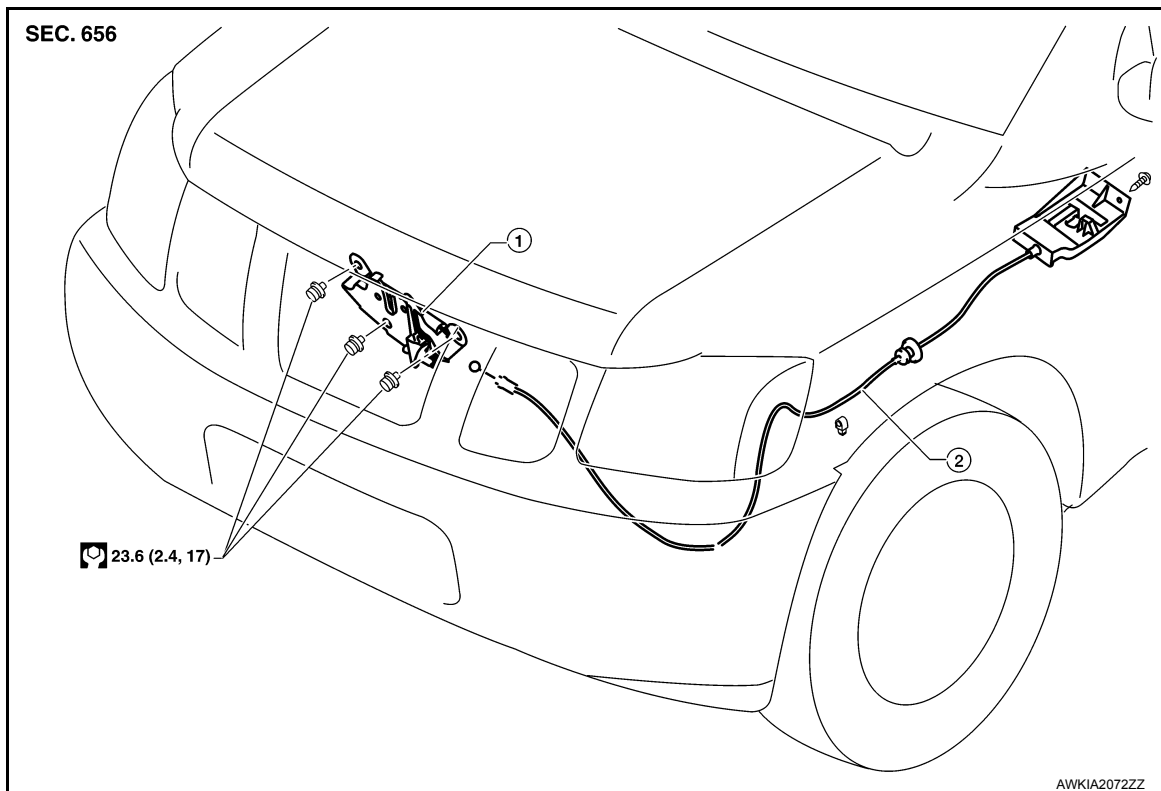
A: 20 mm (0.8 in)

B: Cut at the groove.



Removal and Installation of Hood Lock Control

INFOID:000000009823056



1. Hood lock assembly

2. Hood lock release cable

REMOVAL

1. Remove the hood lock assembly bolts.

HOOD

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

2. Disconnect the hood lock release cable from the hood lock and unclip it from the radiator core support upper and hoodledge.
3. Remove the bolt and the hood opener.
4. Remove the grommet from the dash lower and pull the hood lock release cable toward the passenger compartment.

CAUTION:

While pulling, be careful not to damage the outside of the hood lock release cable, keep the radius 100 mm (3.94 in) or more.

INSTALLATION

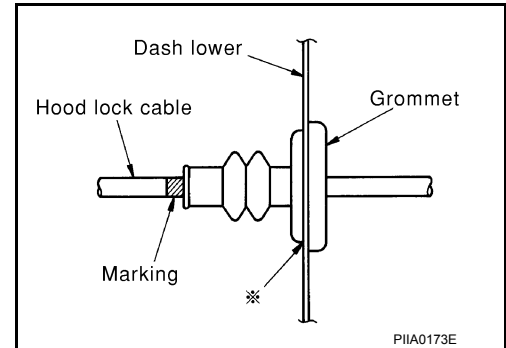
1. Pull the hood lock release cable through the hole in dash lower panel into the engine compartment.

CAUTION:

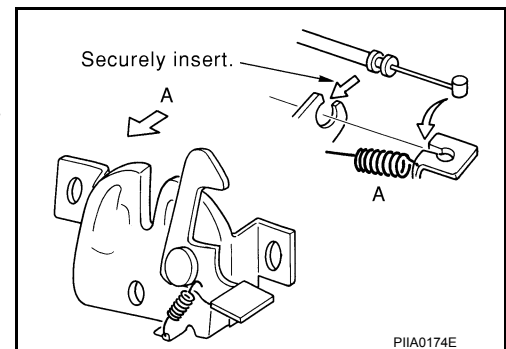
While pulling, be careful not to damage the outside of the hood lock release cable.

Be careful not to bend the cable too much, keeping the radius 100 mm (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 hood lock assembly.
5. After installing, check the hood lock adjustment and hood opener operation.
6. Install the remaining components in the reverse order of removal.



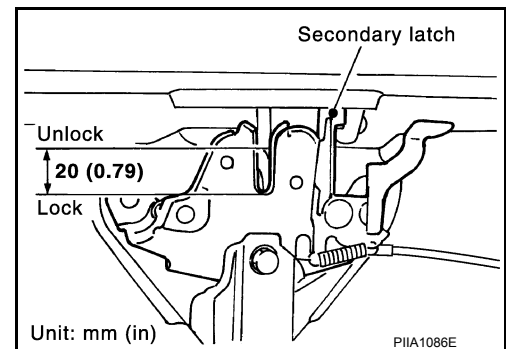
Hood Lock Control Inspection

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CAUTION:

If the hood lock release 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 (0.8 in). Also make sure the hood opener returns to the original position.

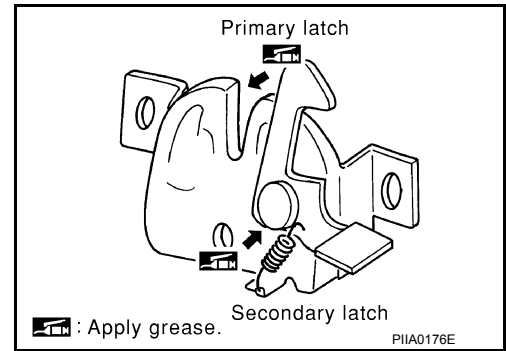


HOOD

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

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



DOOR

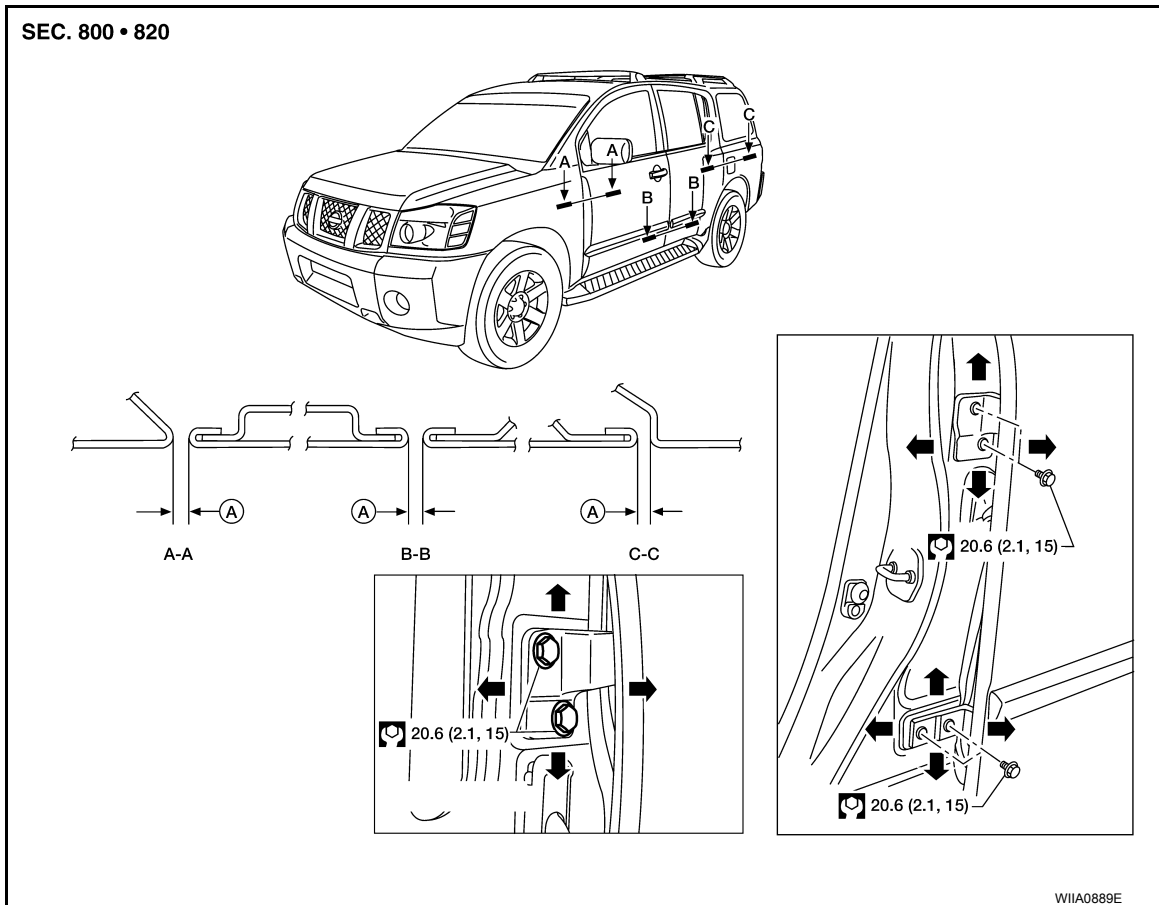
< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

DOOR

Fitting Adjustment

INFOID:00000009823058



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

FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the front fender. Refer to [EXT-26, "Removal and Installation"](#).
2. Loosen the hinge bolts.
3. Raise the front door at rear end to adjust.
4. Tighten the hinge bolts.
5. Install the front fender. Refer to [EXT-26, "Removal and Installation"](#).

REAR DOOR

Longitudinal clearance and surface height adjustment at front end

1. Loosen the hinge bolts.
2. Open the rear door, and raise the rear door at rear end to adjust.
3. Tighten the hinge bolts.

STRIKER ADJUSTMENT

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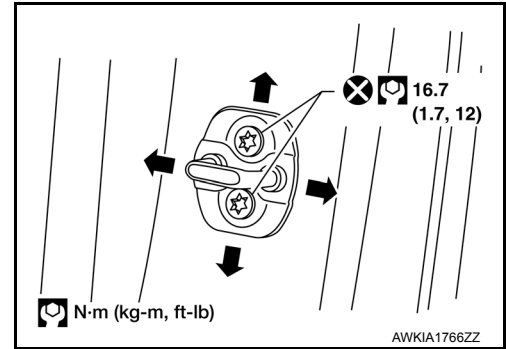
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DOOR

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

1. Loosen the striker bolts.
2. Adjust the striker so that it becomes parallel with the lock insertion direction.
3. Tighten the striker bolts.



Removal and Installation

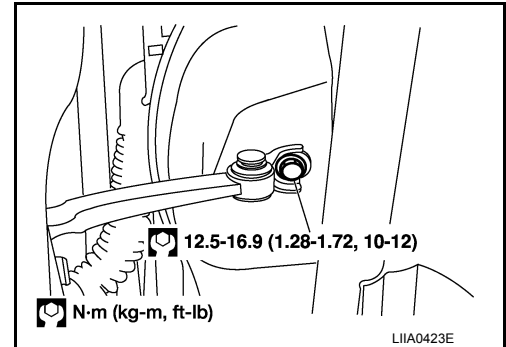
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FRONT DOOR

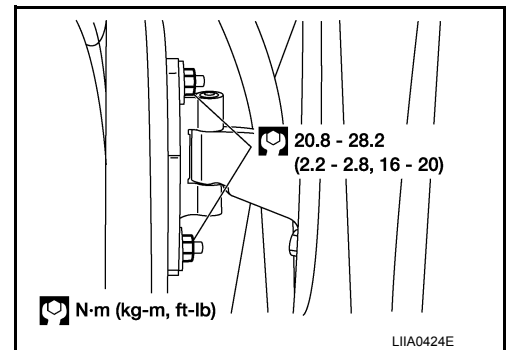
Removal

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-13, "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:

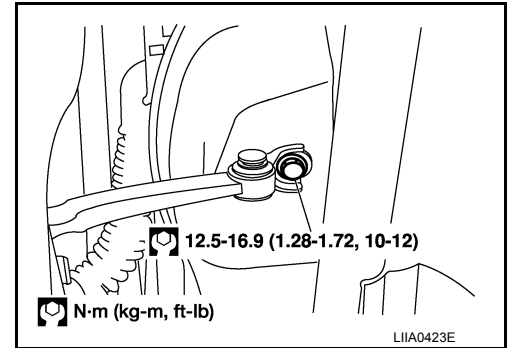
- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

DOOR

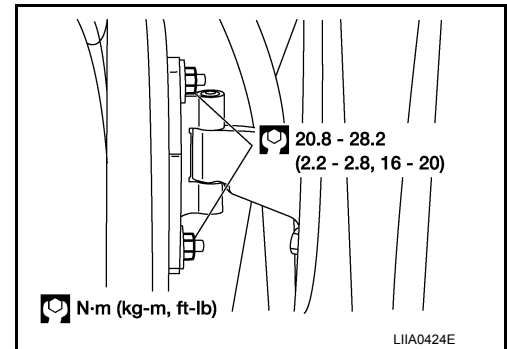
< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

1. Remove the door window and module assembly. Refer to [GW-16. "Removal and Installation"](#).
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



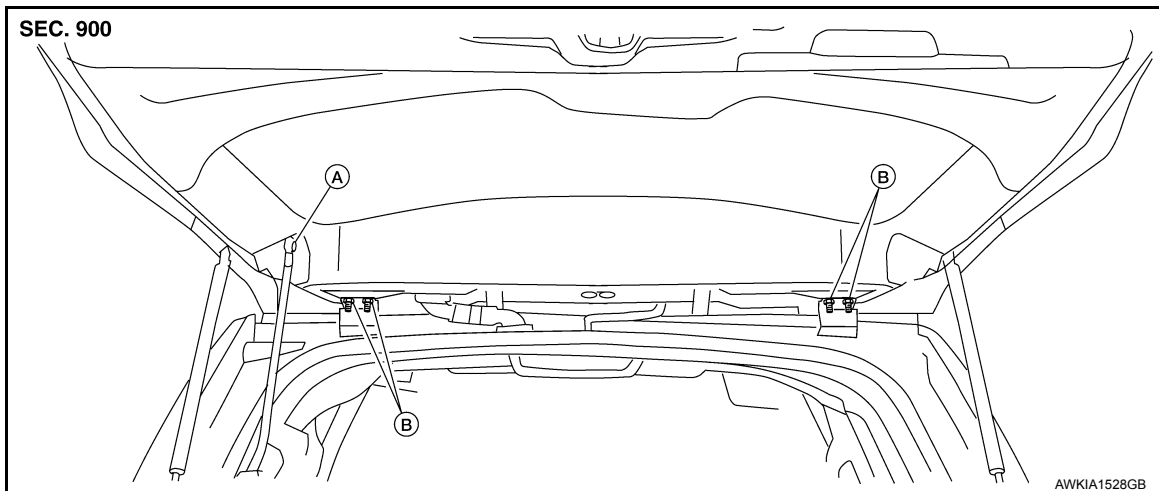
5. Remove the door-side hinge nuts and bolts, and remove the door assembly.



Installation

Installation is in the reverse order of removal.

BACK DOOR



- A. 15.2 N-m (1.6 kg-m, 11 ft-lb) B. 17.0 N-m (1.7 kg-m, 13ft-lb)

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-21. "Removal and Installation"](#).
2. Remove the back door lock assembly. Refer to [DLK-399. "Door Lock Assembly"](#).
3. Remove the rear wiper motor. Refer to [WW-76. "Rear Wiper Motor"](#).
4. Remove the back door wire harness.

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DOOR

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

5. Remove the rear washer nozzle and hose from the back door. Refer to [WW-78. "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.
9. Remove the door side nuts and the back door assembly.

Installation

Installation is in the reverse order of removal.

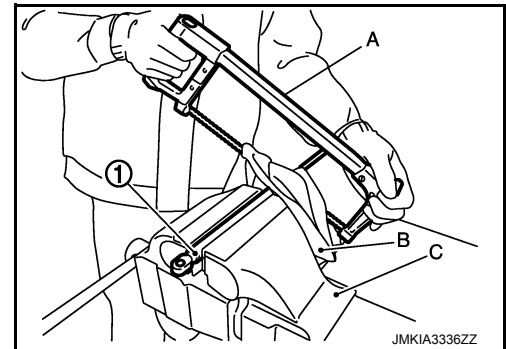
Back Door Stay Disposal

INFOID:000000009823060

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

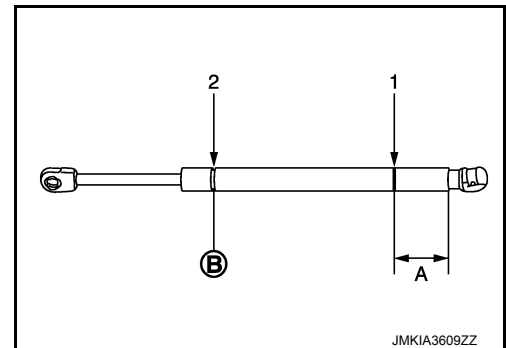
CAUTION:

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



A: 20 mm (0.8 in)

B: Cut at the groove.



FRONT DOOR LOCK

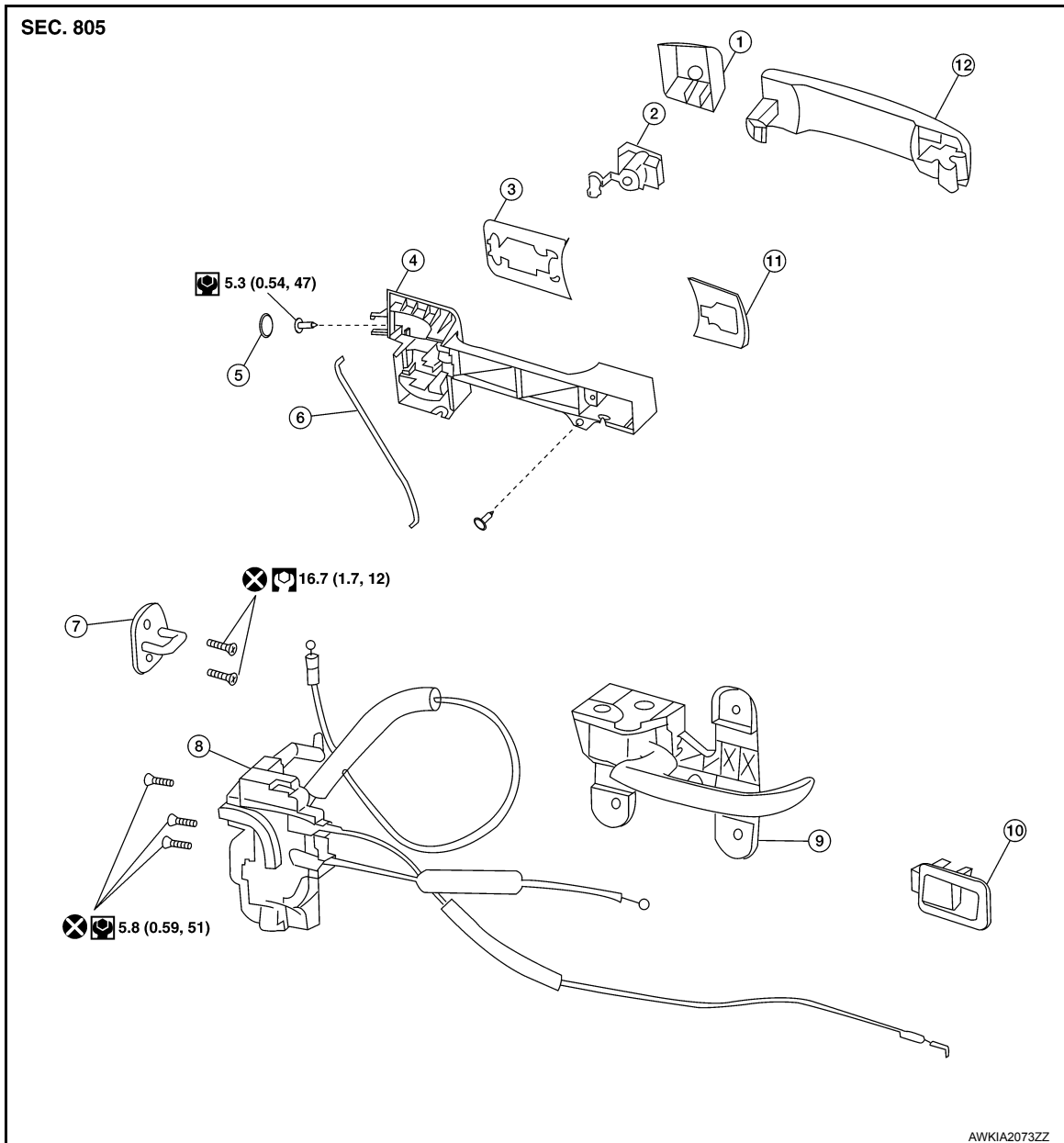
< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

FRONT DOOR LOCK

Component Structure

INFOID:000000009823061



- | | | |
|------------------------------|---|--|
| 1. Outside handle escutcheon | 2. Door key cylinder assembly (driver side) | 3. Rear gasket |
| 4. Outside handle bracket | 5. Grommet | 6. Door key cylinder rod (driver side) |
| 7. Door striker | 8. Door lock assembly | 9. Inside handle |
| 10. Inside door lock lever | 11. Front gasket | 12. Outside handle |

Removal and Installation

INFOID:000000009823062

REMOVAL

1. Remove the front door glass regulator. Refer to [GW-13, "Removal and Installation"](#).
2. Remove the front door glass rear run.

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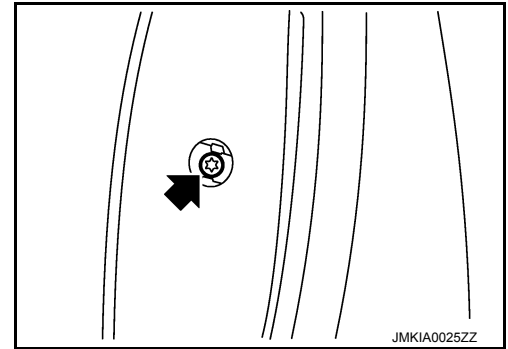
FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

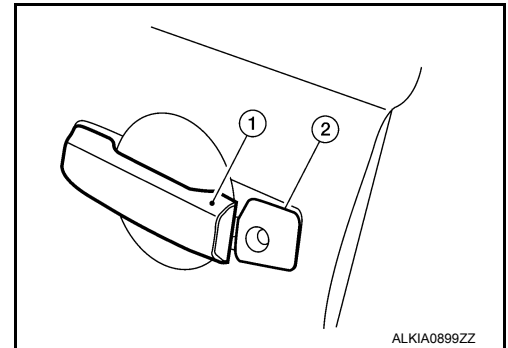
[WITHOUT INTELLIGENT KEY SYSTEM]

3. Remove the door side grommet and the bolt from the grommet hole.

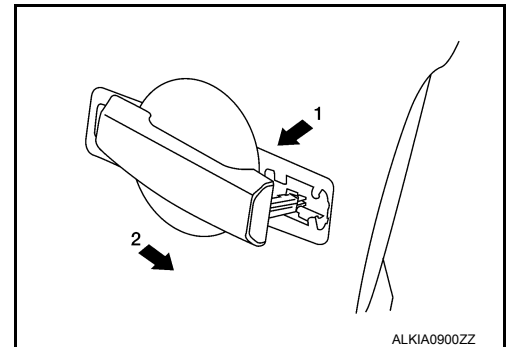
Bolt **5.3 N·m (0.54 kg-m, 47 in-lb)**



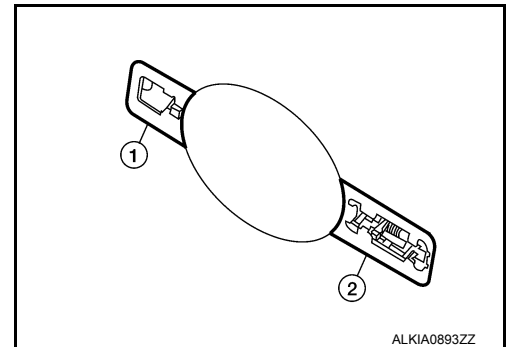
4. While pulling the outside handle (1), remove the door key cylinder assembly (LH) (2) or outside handle escutcheon (RH) (2).



5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling (1) the outside handle, slide (2) toward rear of vehicle to remove.



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

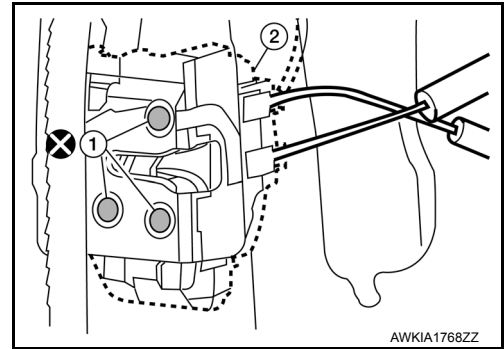


FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

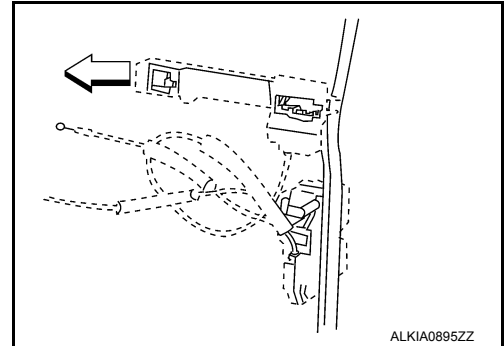
[WITHOUT INTELLIGENT KEY SYSTEM]

8. Remove the bolts (1) and separate the door lock assembly (2) from the door.

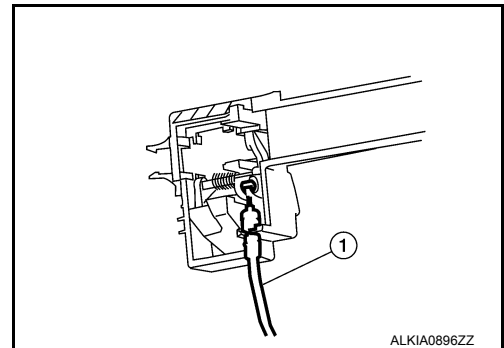


9. While pulling the outside handle bracket, slide toward the front of the vehicle to remove the bracket and the door lock assembly as shown.

⇐: Front



10. Disconnect the harness connector from the door lock actuator.
11. Disconnect the outside handle cable (1) from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

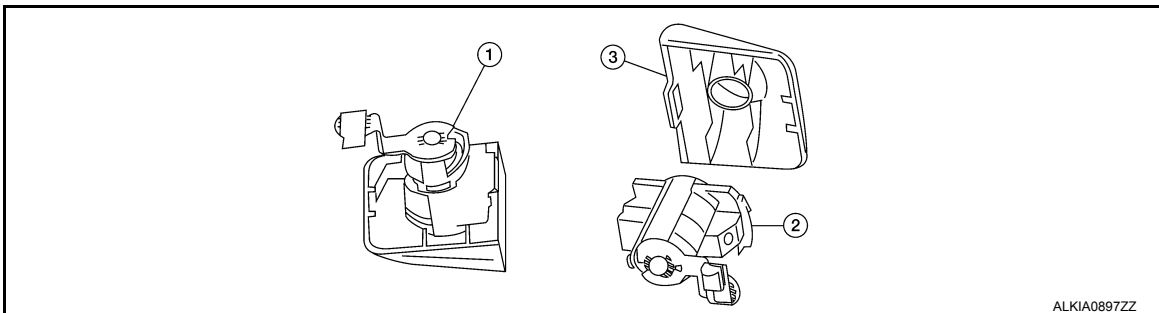
CAUTION:

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

Disassembly and Assembly

INFOID:000000009823063

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

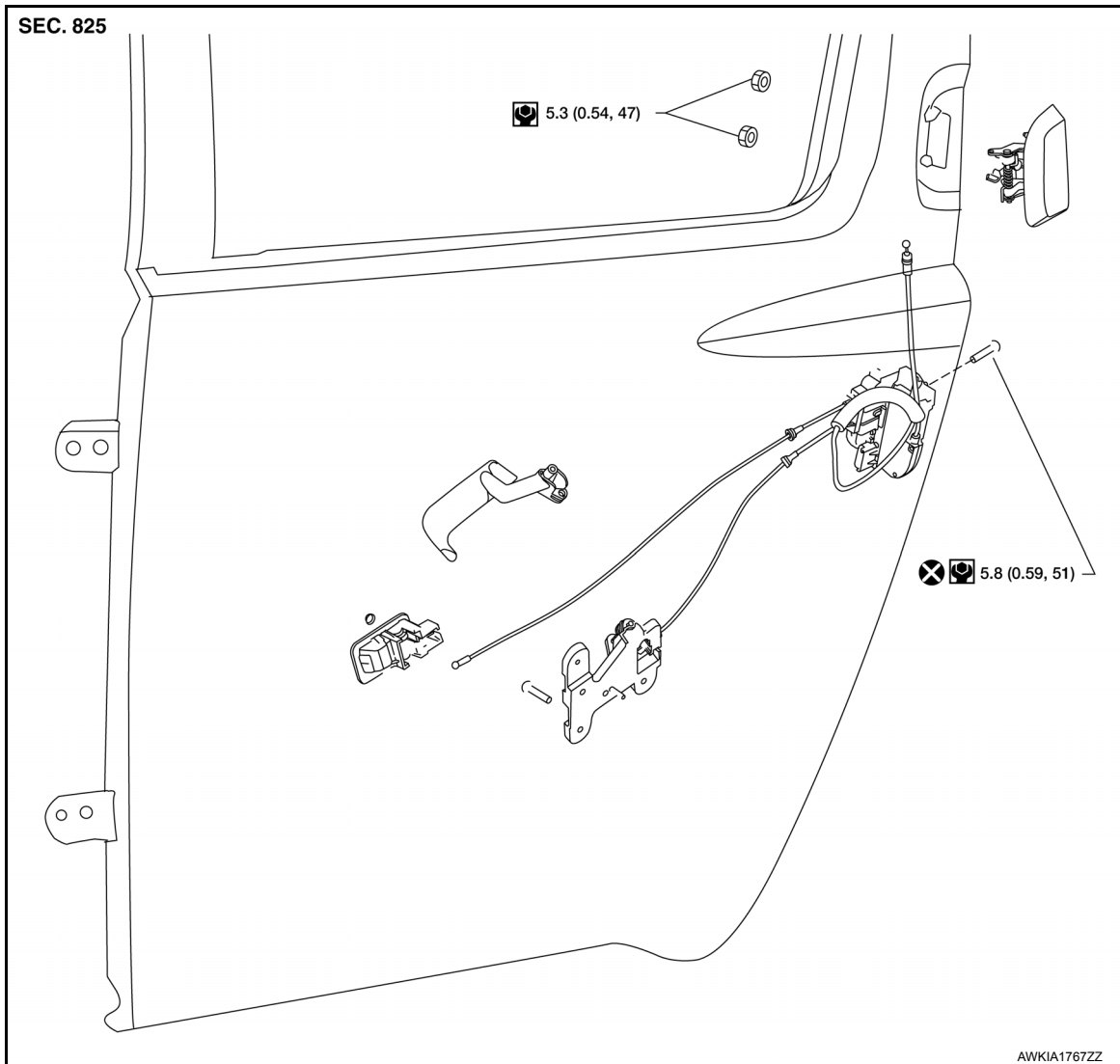
< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

REAR DOOR LOCK

Component Structure

INFOID:00000009823064

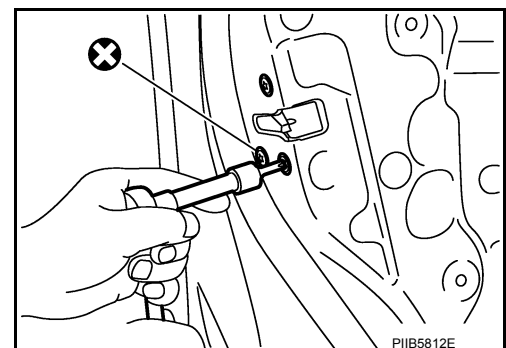


Removal and Installation

INFOID:00000009823065

REMOVAL

1. Remove the rear door finisher. Refer to [INT-15. "Removal and Installation"](#).
2. Position aside the vapor barrier.
3. Remove door grommets, and remove outside handle nuts from grommet hole.
4. Remove outside handle and disconnect the cable.
5. Remove the door lock bolts, remove the door lock and disconnect the actuator connector.
6. Reach inside the door to separate outside handle rod connector.



REAR DOOR LOCK

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

INSTALLATION

Installation is in the reverse order of removal.

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BACK DOOR LOCK

< REMOVAL AND INSTALLATION >

[WITHOUT INTELLIGENT KEY SYSTEM]

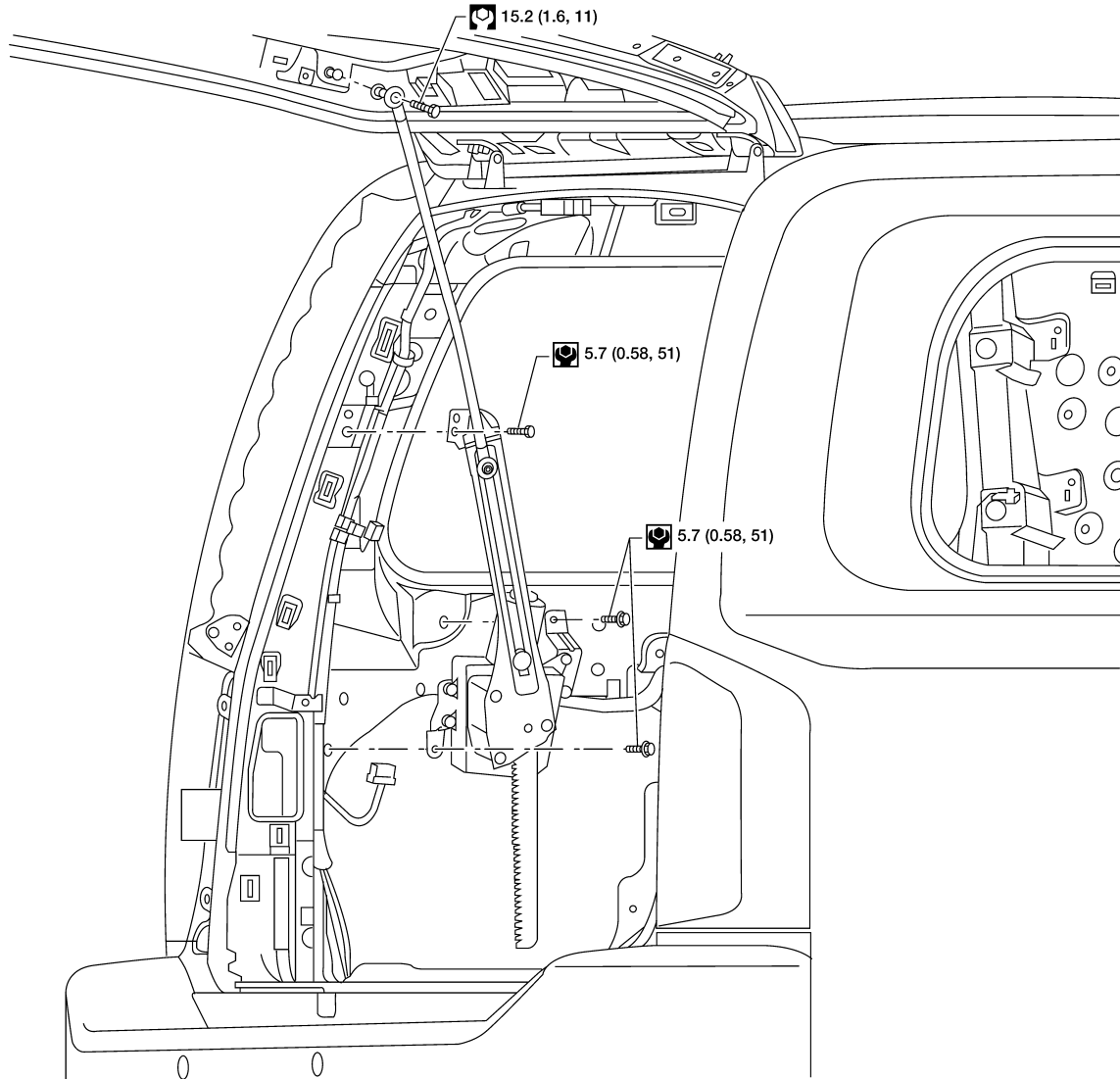
BACK DOOR LOCK

Power Back Door Opener

INFOID:00000009823066

Removal

SEC. 905



WIA0893E

1. Remove the LH luggage side upper. Refer to [INT-24, "Removal and Installation"](#).
2. Disconnect the battery negative terminal. Refer to [PG-77, "Removal and Installation"](#).
3. Disconnect the power back door motor electrical connector.
4. Disconnect the ball socket from the back door.
5. Remove the power back door motor assembly.

Installation

Installation is in the reverse order of removal.

BACK DOOR LOCK

< REMOVAL AND INSTALLATION >

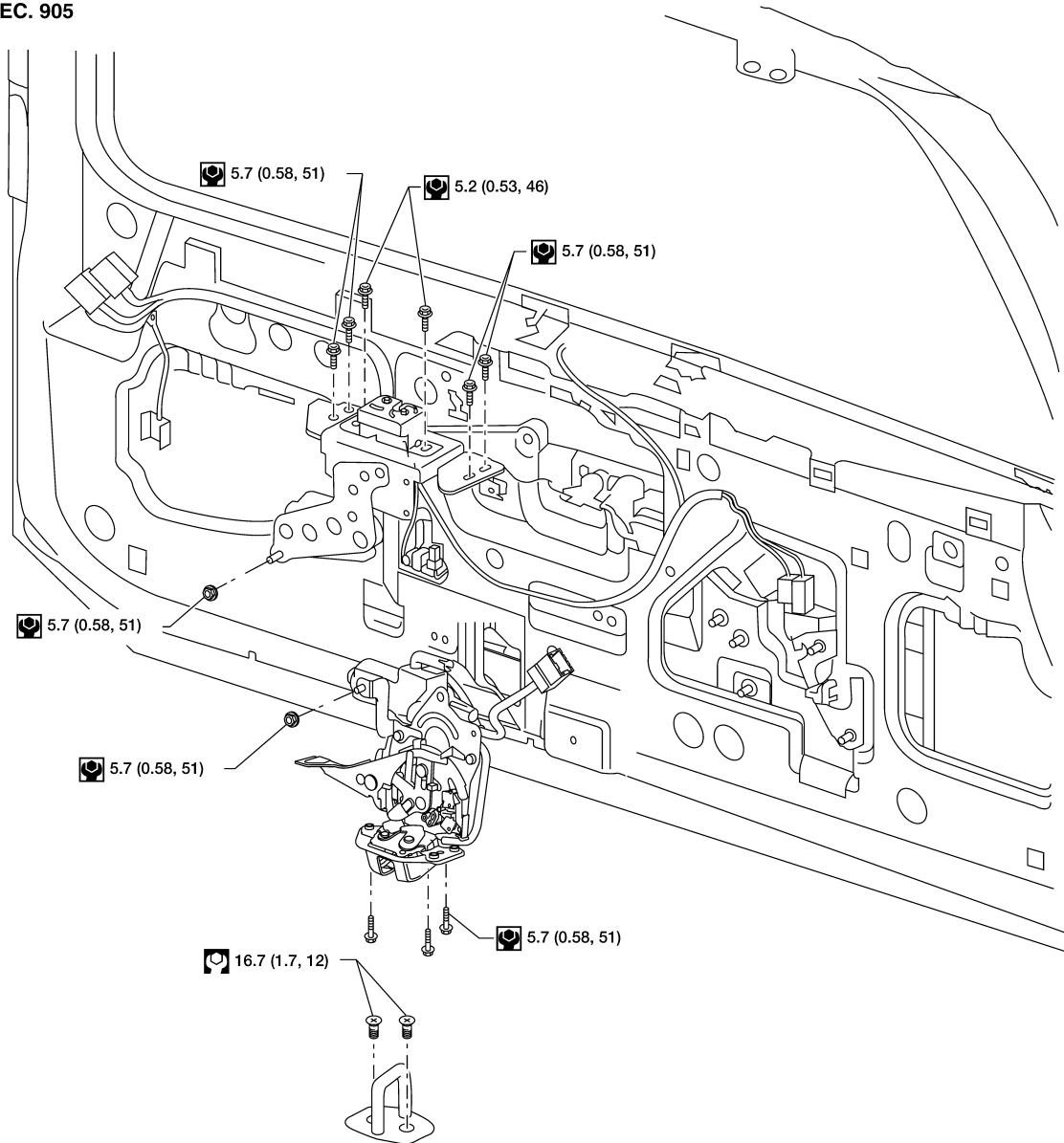
[WITHOUT INTELLIGENT KEY SYSTEM]

Door Lock Assembly

INFOID:00000009823067

Removal

SEC. 905



WIA0894E

1. Remove the lower back door trim panel. Refer to [INT-26, "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.

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