SECTION DLK
DOOR & LOCK

CONTENTS

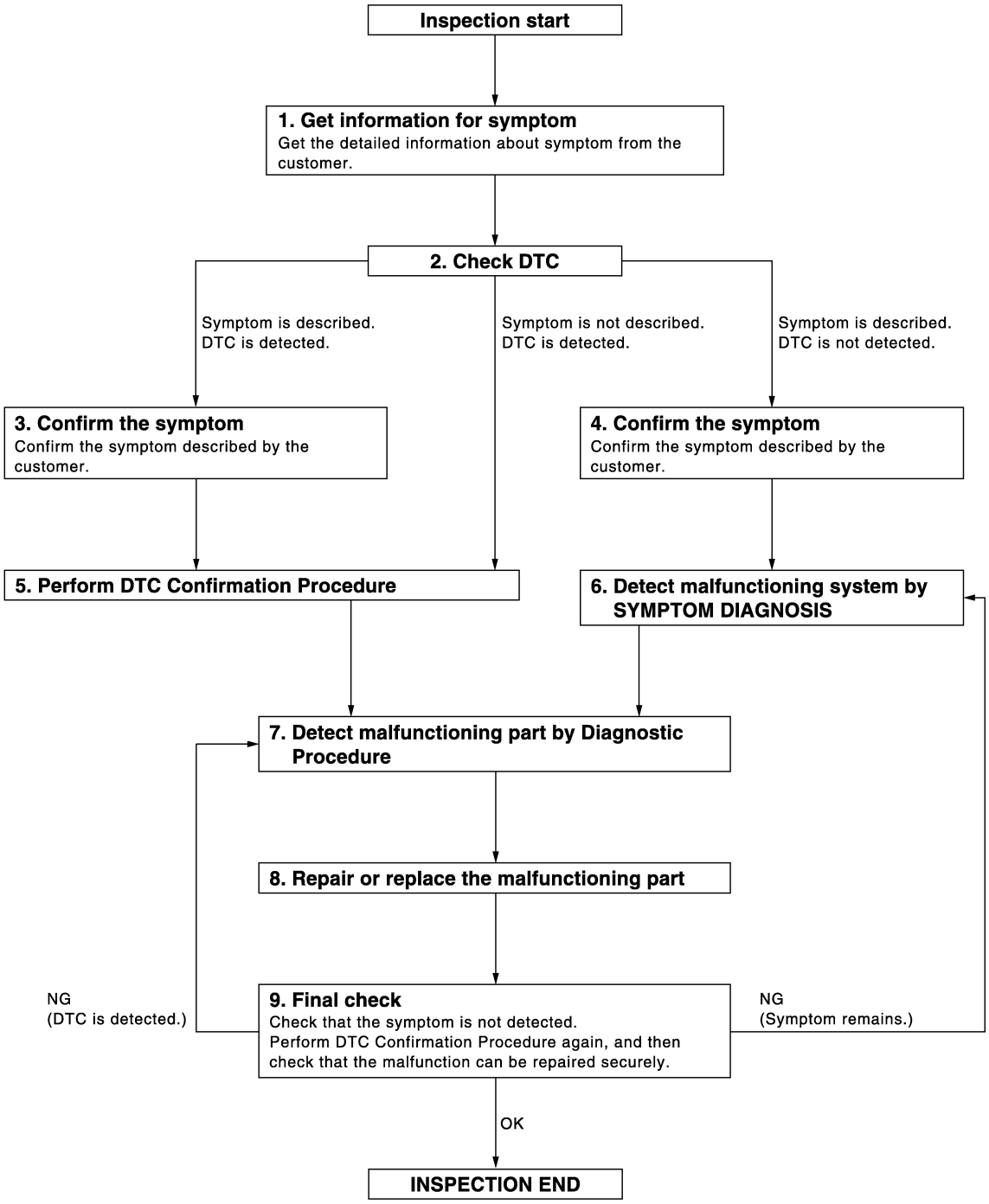
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000003775672

OVERALL SEQUENCE



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DETAILED FLOW

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3.
Symptom is described, DTC is not displayed>>GO TO 4.
Symptom is not described, DTC is displayed>>GO TO 5.

3.CONFIRM THE SYMPTOM

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.
At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.
If two or more DTCs are detected, refer to DLK-169, "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-38, "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.
NOTE:

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

Is malfunctioning part detected?

Yes >> GO TO 8.
No >> Check voltage of related BCM terminals using CONSULT-III.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9.

9. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.
When symptom was described from the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Does the symptom reappear?

YES (DTC is detected)>>GO TO 7.
YES (Symptom remains)>>GO TO 6.
NO >> Inspection end

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000004190624

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:0000000004190625

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.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000003775673

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000003775674

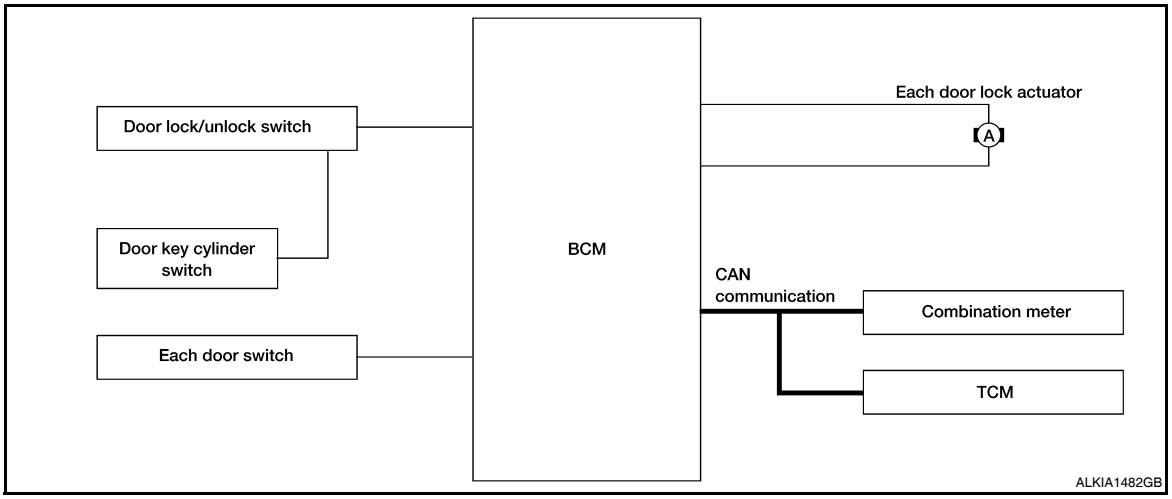
Refer to the CONSULT-III Operation Manual for the initialization procedure.

FUNCTION DIAGNOSIS

AUTOMATIC DOOR LOCKS

System Diagram

INFOID:0000000004190626



System Description

INFOID:0000000004190627

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-52, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

The automatic door locks 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.

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 24 km/h (15 MPH) or more again.

Setting change of Automatic Door Locks (LOCK) Function

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

With CONSULT-III

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-52, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Without CONSULT- III

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

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

OFF → ON	: 2 blinks
ON → OFF	: 1 blink

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

AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

IGN OFF Interlock Door Unlock*1

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

With CONSULT-III

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-52, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Without CONSULT- III

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

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

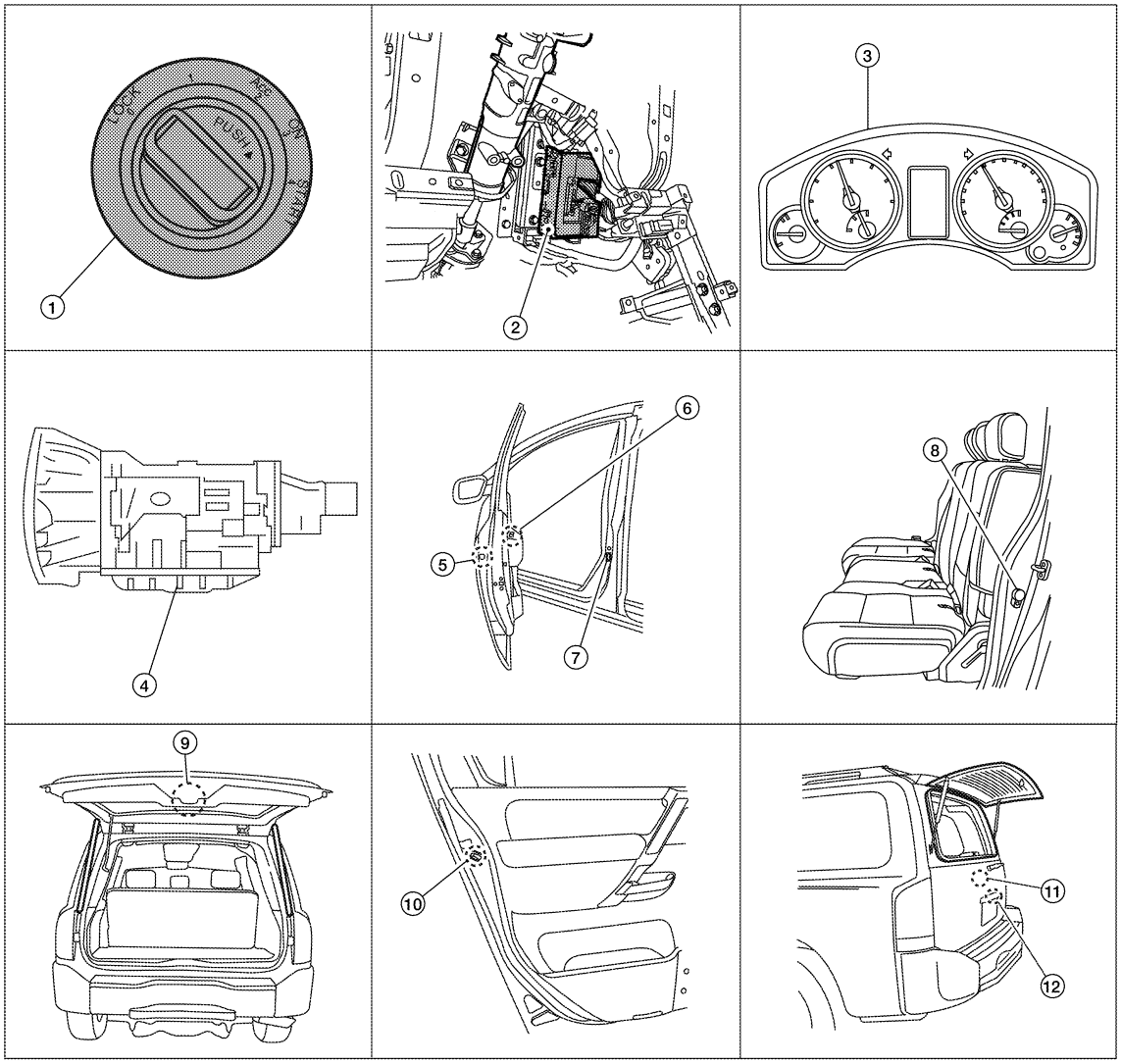
OFF → ON	: 2 blinks
ON → OFF	: 1 blink

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

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

Component Parts Location

INFOID:0000000004190628



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1. Key switch and ignition knob switch M12
2. BCM M18, M19, M20
3. Combination meter M24
4. TCM F9
5. Front door lock assembly LH (key cylinder switch) D14
   Front door lock assembly 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
11. Glass hatch lock actuator D711
12. Back door and glass hatch switch assembly (glass hatch switch) D706

Component Description

INFOID:0000000004190629

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

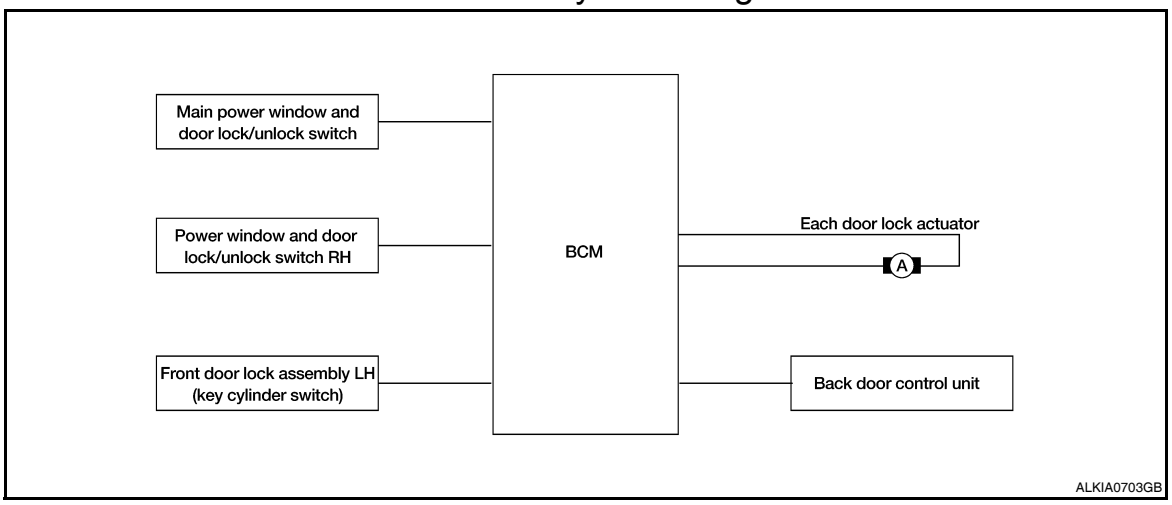
Item	Function
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Input door open/close condition to BCM.
Door key cylinder switch	• Input lock or unlock signal to main power window and door lock/unlock switch. • Main power window and door lock/unlock switch transmits door lock/unlock signal to BCM.
Combination meter	• 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.

DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:0000000003775675



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:0000000003775676

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.

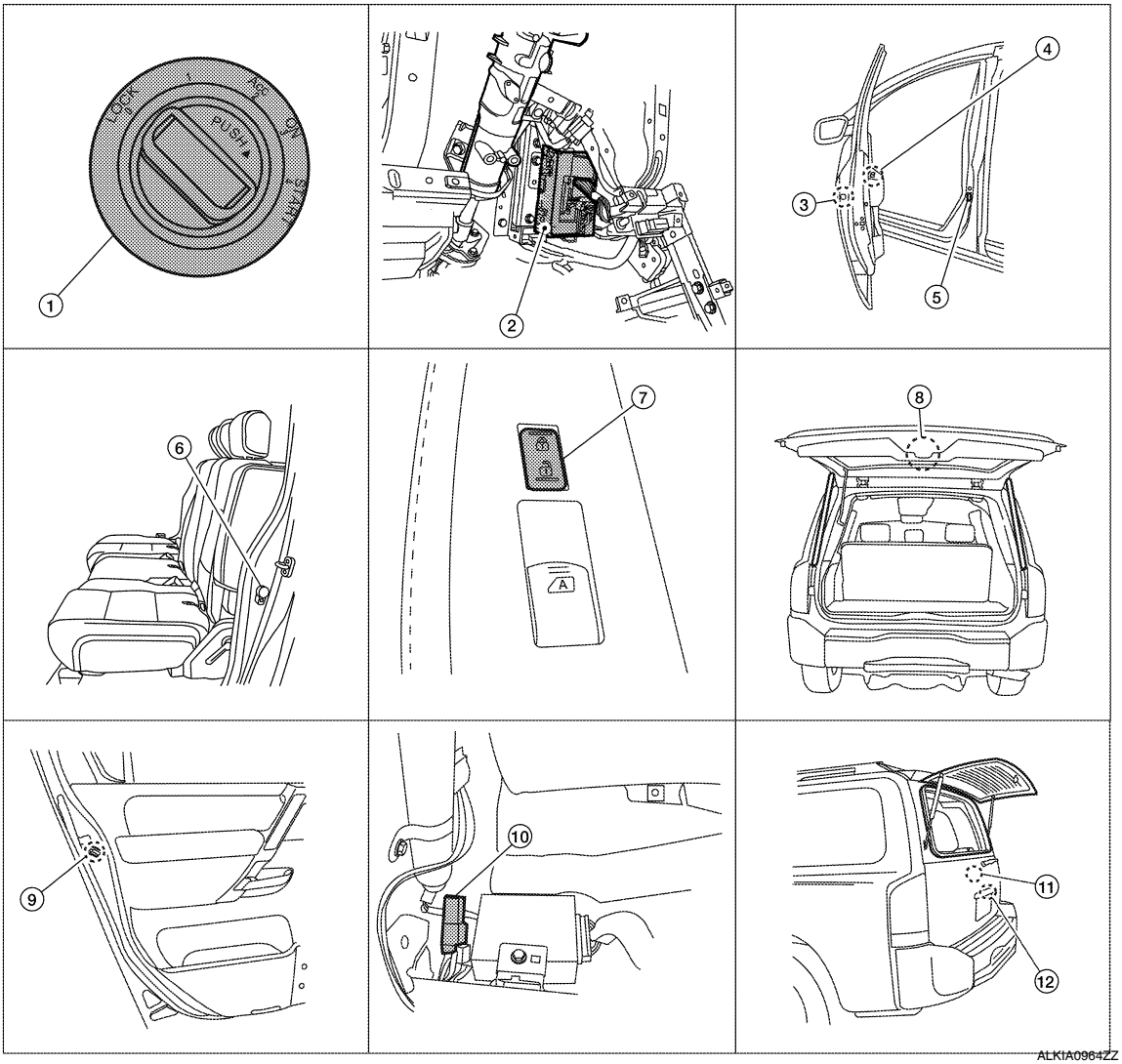
Selective Unlock Operation
- When door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in “WORK SUPPORT”. Refer to DLK-52, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Key Reminder System
Refer to DLK-44, "System Description".

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:0000000003775677



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)
11. Glass hatch lock actuator D711
12. Back door and glass hatch switch assembly (glass hatch switch) D706

DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:0000000003775678

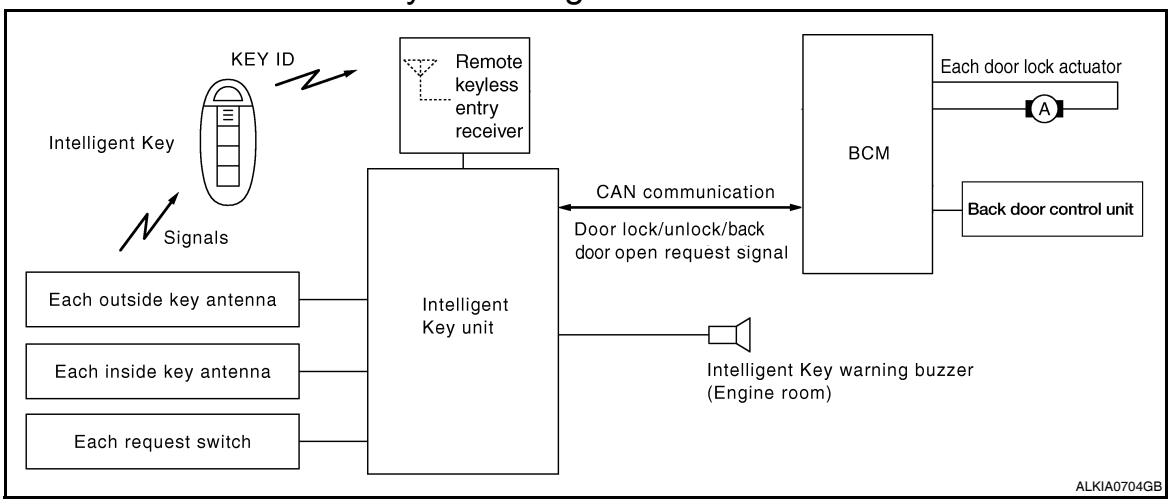
Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.

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:0000000003775679



DOOR REQUEST SWITCH : System Description

INFOID:0000000003775680

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

- The Intelligent Key system is a system that makes it possible to lock and unlock the door locks (door lock/unlock function) by carrying the Intelligent Key, which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (BCM).
  CAUTION:
  The driver should always carry the Intelligent Key
- If an action that does not meet the operating conditions of the Intelligent Key system is taken, the buzzer goes off to inform the driver (Warning chime function).
- When a door lock is locked or unlocked with request switch or remote controller button operation, the hazard lamps flash and the Intelligent Key warning buzzer or horn sounds (Hazard and buzzer/horn reminder function).
- The settings for each function can be changed with the CONSULT-III.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with the CONSULT-III.

OPERATION DESCRIPTION/DOOR LOCK/UNLOCK

- When the BCM detects that each door request switch is pressed, it starts the outside key antenna and inside key antenna corresponding to the pressed door request switch and transmits the request signal to the Intelligent Key. And then, check that the Intelligent Key is near the door.
- If the Intelligent Key is within the outside key antenna detection area, it receives the request signal and transmits the key ID signal to the BCM via remote keyless entry receiver.
- BCM receives the key ID signal and compares it with the registered key ID.
- BCM sends the door lock/unlock signal and sounds Intelligent Key buzzer warning (lock: 2 times, unlock: 1 time) at the same time as a reminder.

OPERATION CONDITION

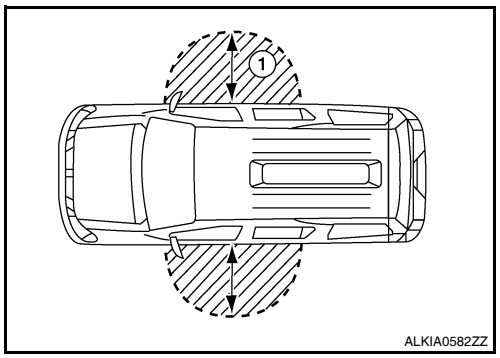
If the following conditions are not satisfied, door lock/unlock operation is not performed even if the request switch is operated.

Each request switch operation	Operation condition
Lock operation	• 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	• 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.

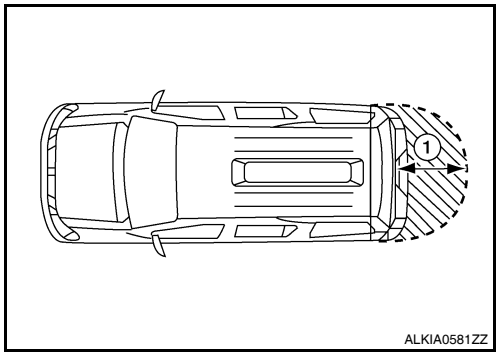
OUTSIDE KEY ANTENNA DETECTION AREA

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-55, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

AUTO DOOR LOCK FUNCTION

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, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

ROOM LAMP OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for up to 30 seconds maximum) by receiving UNLOCK signal from door request switch. For detailed description, refer to DLK-14, "DOOR LOCK AND UNLOCK SWITCH : System Description".

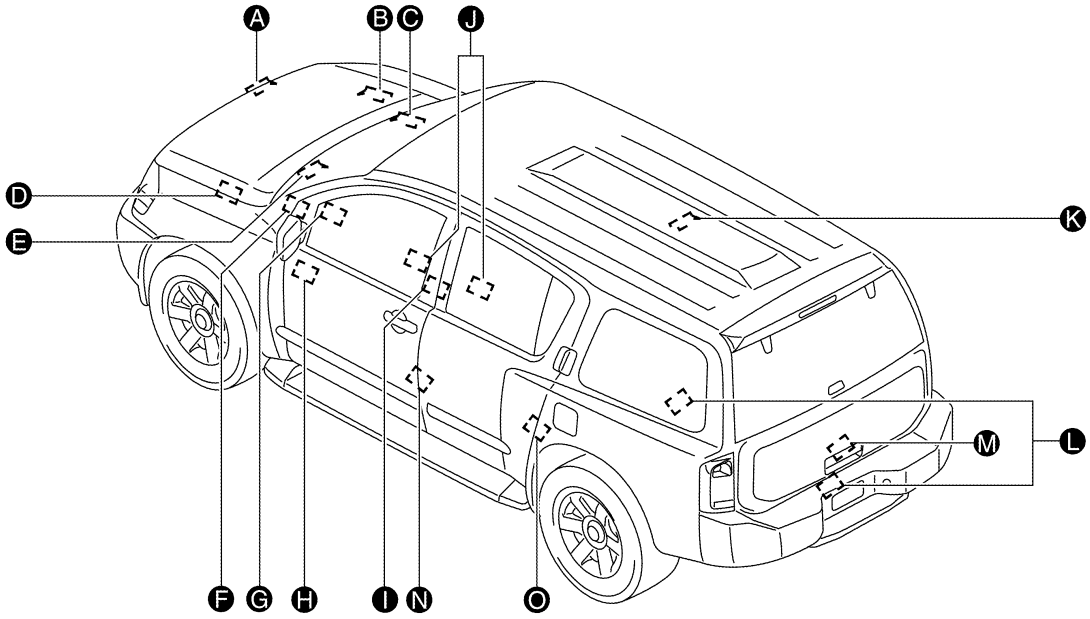
LIST OF OPERATION RELATED PARTS

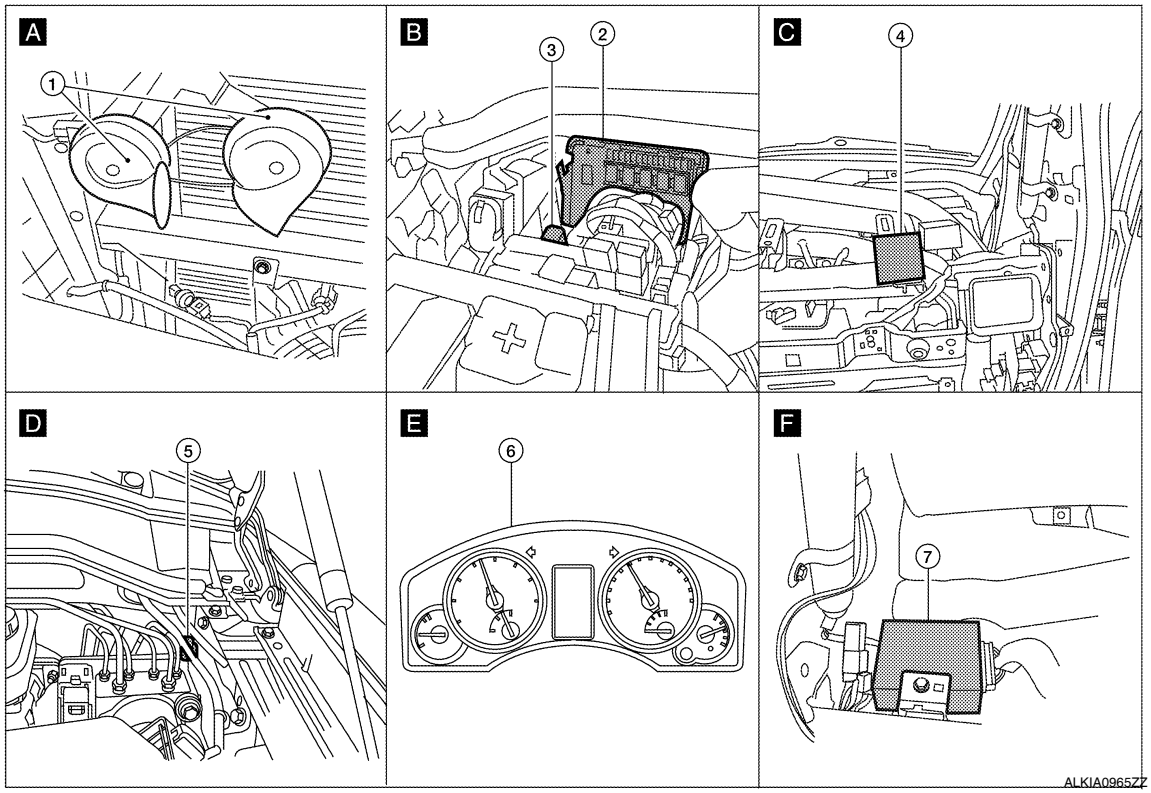
Parts marked with × are the parts related to operation.

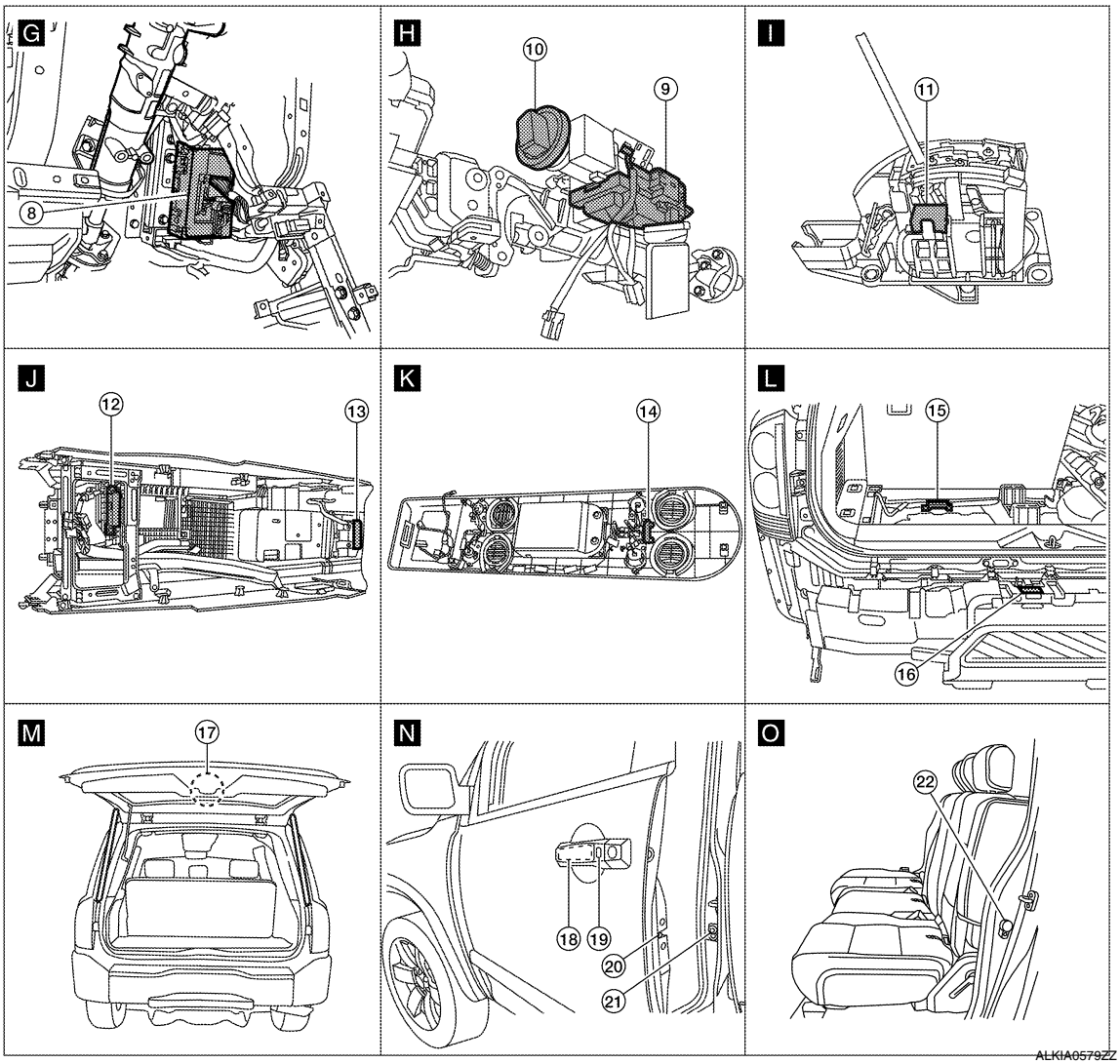
Door lock function	Intelligent Key	Ignition key switch	Remote keyless entry receiver	Door switch	Door request switch (Driver, Passenger)	Door lock actuator	Inside key antenna	Outside key antenna (Driver, Passenger)	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamp
Door lock/unlock 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 REQUEST SWITCH : Component Parts Location

INFOID:0000000003775681







1. Horn E3 (view with hood open)
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 M23, 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) M203 (view with center console removed)
12. Inside key antenna 3 (front of center console) M210 (view with center console removed)
13. Inside key antenna 1 (rear of center console) M209
14. Inside key antenna 4 (overhead console area) R210 (view with overhead console removed)
15. Inside key antenna 2 (luggage compartment) B76 (view with rear carpet removed)
16. Rear bumper antenna C7 (view with rear bumper removed)
17. Back door latch 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 REQUEST SWITCH : Component Description

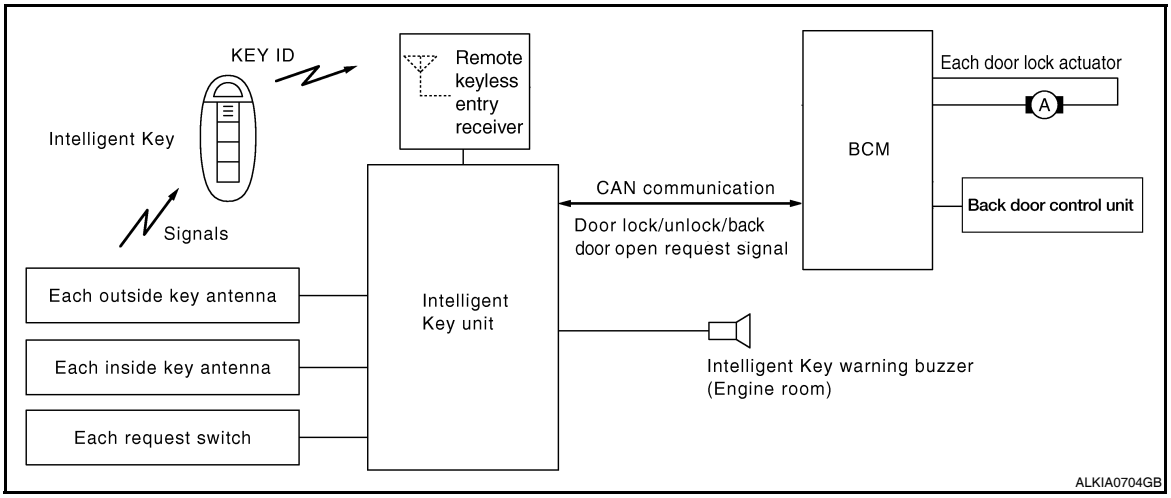
INFOID:0000000003775682

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

INTELLIGENT KEY

INTELLIGENT KEY : System Diagram

INFOID:0000000003775683



INTELLIGENT KEY : System Description

INFOID:0000000003775684

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

- 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		
Intelligent Key operation	Lock	Unlock	Back door open	Lock	Unlock	Back door open
Hazard warning lamp flash	Twice	Once	—	Twice	—	—
Horns sound	Once	—	—	—	—	—

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

How to change hazard and horn reminder mode

With CONSULT-III

Refer to DLK-56, "CONSULT-III Function (INTELLIGENT KEY)".

Without CONSULT-III

Refer to Owner's Manual for instructions.

AUTO DOOR LOCK FUNCTION

Auto Door Lock Function

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

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

Auto door lock mode can be changed by DOOR LOCK-UNLOCK SET mode in “WORK SUPPORT”. Refer to DLK-52, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

PANIC ALARM FUNCTION

When ignition switch is OFF (ignition switch is not pressed) and key switch is OFF, BCM receives PANIC ALARM signal from Intelligent Key through the remote keyless entry receiver and the Intelligent Key unit.
BCM turns on and off headlamp intermittently and transmits theft warning horn signal to IPDM E/R. Then, IPDM E/R turns on and off horn intermittently.
The headlamp flashes and the horn sounds intermittently.
The alarm automatically turns off:

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

Panic alarm function mode can be changed by PANIC ALARM SET mode in “WORK SUPPORT”. Refer to DLK-56, "CONSULT-III Function (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.

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-56, "CONSULT-III Function (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-21, "INTELLIGENT KEY : System Description".

LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

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

INTELLIGENT KEY : Component Parts Location

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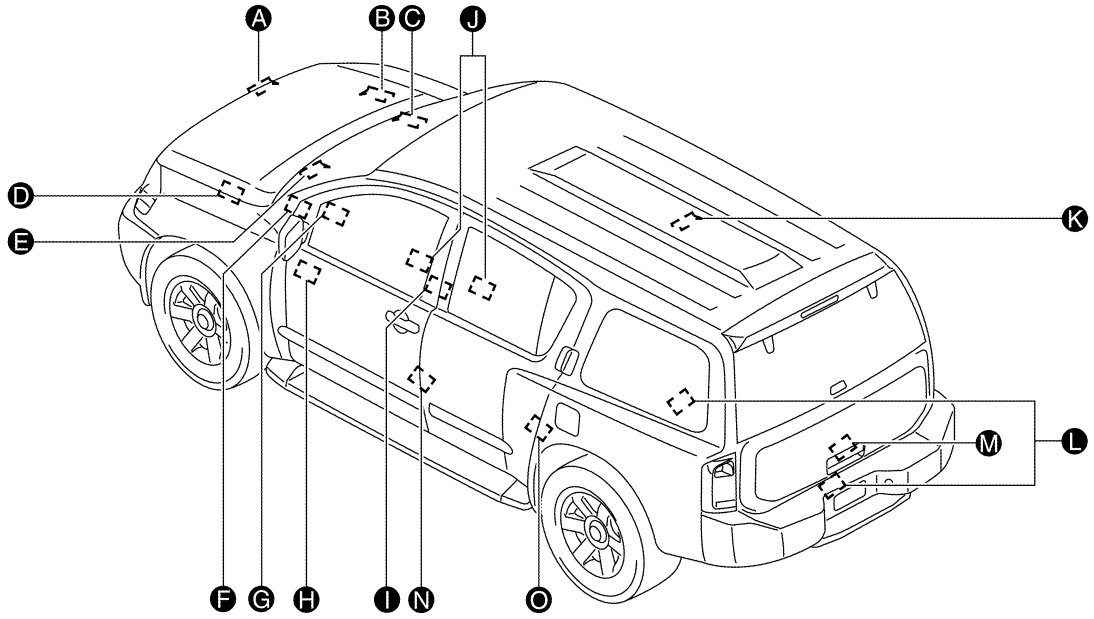
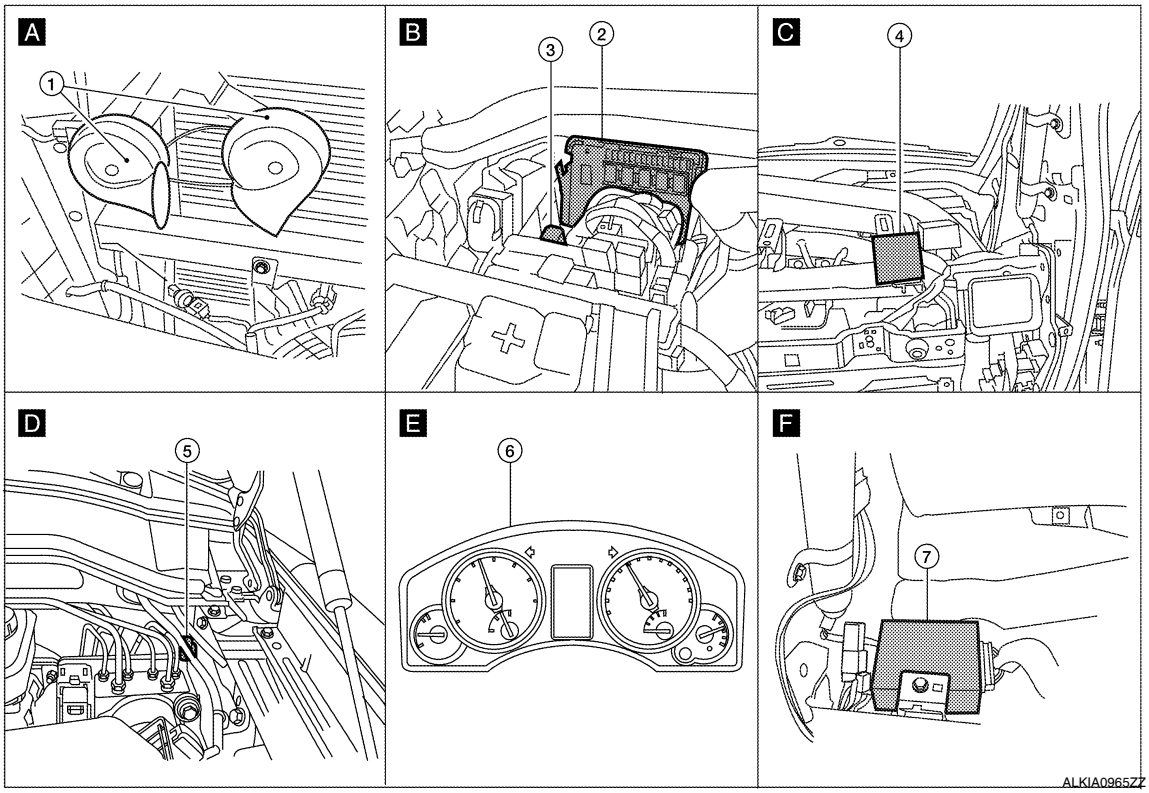
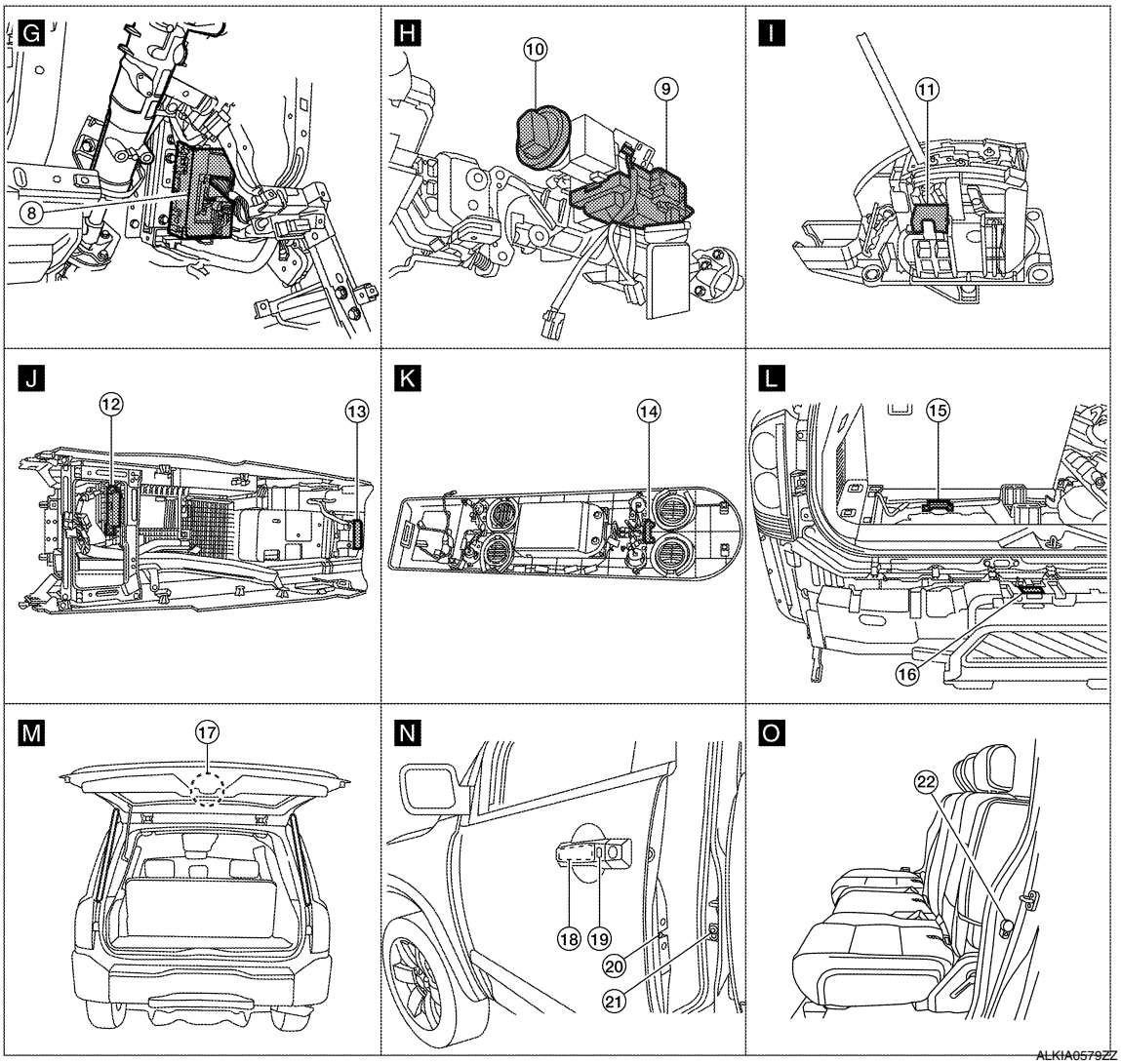






1. Horn E3 (view with hood open)
2. IPDM E/R E122, E124 (view with cover removed)
3. Horn relay H-1
4. Remote keyless entry receiver M25 (view with instrument panel RH removed)
5. Intelligent key warning buzzer E25
6. Combination meter M23, M24
7. Intelligent Key unit M70 (view with instrument panel 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) M203 (view with center console removed)
12. Inside key antenna 3 (front of center console) M210 (view with center console removed)
13. Inside key antenna 1 (rear of center console) M209
14. Inside key antenna 4 (overhead console area) R210 (view with overhead console removed)
15. Inside key antenna 2 (luggage compartment) B76 (view with rear carpet removed)
16. Rear bumper antenna C7 (view with rear bumper removed)
17. Back door latch 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

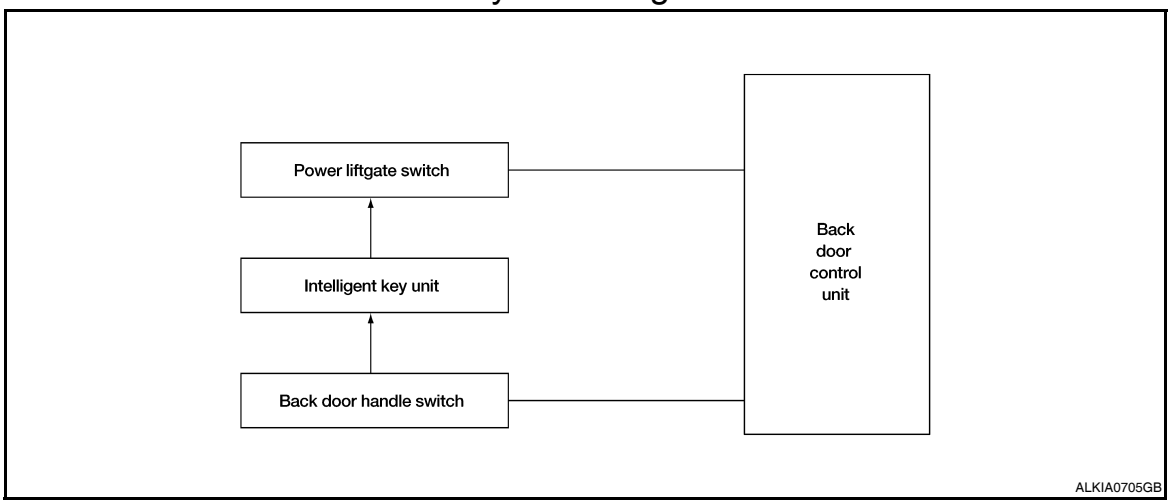
INFOID:0000000003775686

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
BACK DOOR OPENER SWITCH

BACK DOOR OPENER SWITCH : System Diagram

INFOID:0000000003775687



BACK DOOR OPENER SWITCH : System Description

INFOID:0000000003775688

BACK DOOR OPENER OPERATION

NOTE:

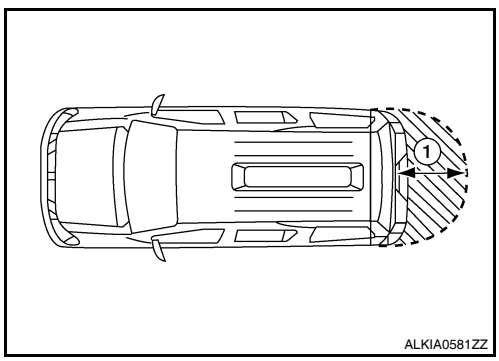
The automatic back door system must be initialized by fully closing the back door anytime the battery power is lost to the back door control unit. Refer to DLK-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description".

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

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

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

- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22.
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed.

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

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

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

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

Reversal

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

Anti-Pinch Function

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

Gas Stay Check

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

Warning Functions

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

Auto Back Door Operation Enable Conditions

Operation	Power liftgate switch		Remote keyless entry		Back door handle switch		Back door close switch
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 shift selector in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T shift selector in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T shift selector 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 shift selector 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 shift selector 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)	• Motor stopped • Clutch may slip • Control not possible because microcomputer being reset	Control not possible because microcomputer being reset

Warning Chime Active Conditions

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

Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Power liftgate switch operation	Friendly chime 2 seconds, 3 dings
	Remote keyless entry operation	
	Back door handle switch operation	
	Back door close switch operation	
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 shift selector 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	• 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 SWITCH : Component Parts Location

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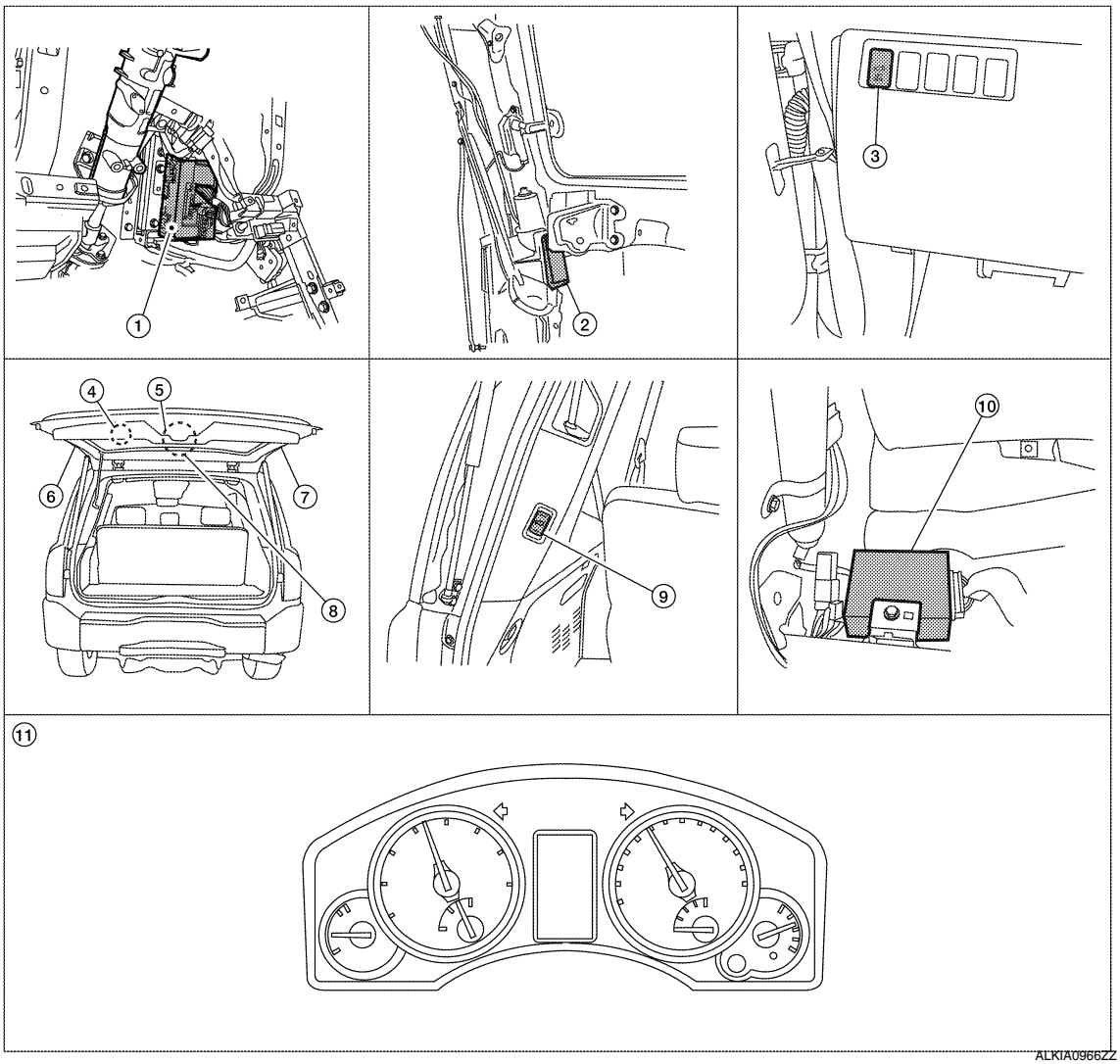

1. BCM M18, M19, M20 (view with instrument panel LH removed)
2. Back door control unit B55 (view with right rear panel removed)
3. Power liftgate switch M92
4. Back door warning chime D514
5. Back door latch D503 Back door and glass hatch switch assembly (back door switch) D706
6. Pinch strip LH D517
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:0000000003775690

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.

INTELLIGENT KEY

INTELLIGENT KEY : System Diagram

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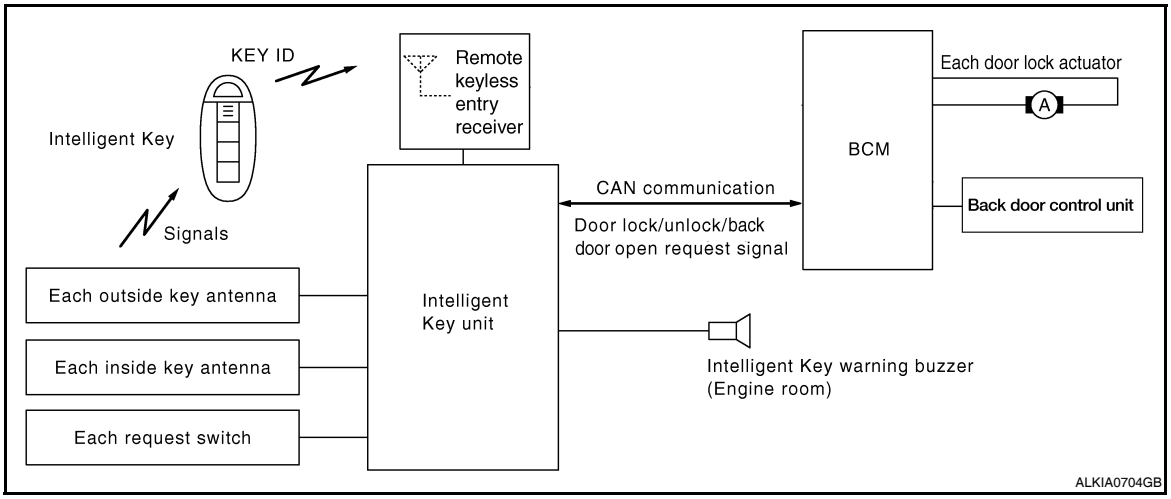

INTELLIGENT KEY : System Description

INFOID:0000000003775692

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		
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

With CONSULT-III

Refer to DLK-55, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Without CONSULT-III

Refer to Owner's Manual for instructions.

LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

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	×	×	×	×		×	×				
Hazard and horn reminder function	×				×	×	×	×	×	×	×

INTELLIGENT KEY : Component Parts Location

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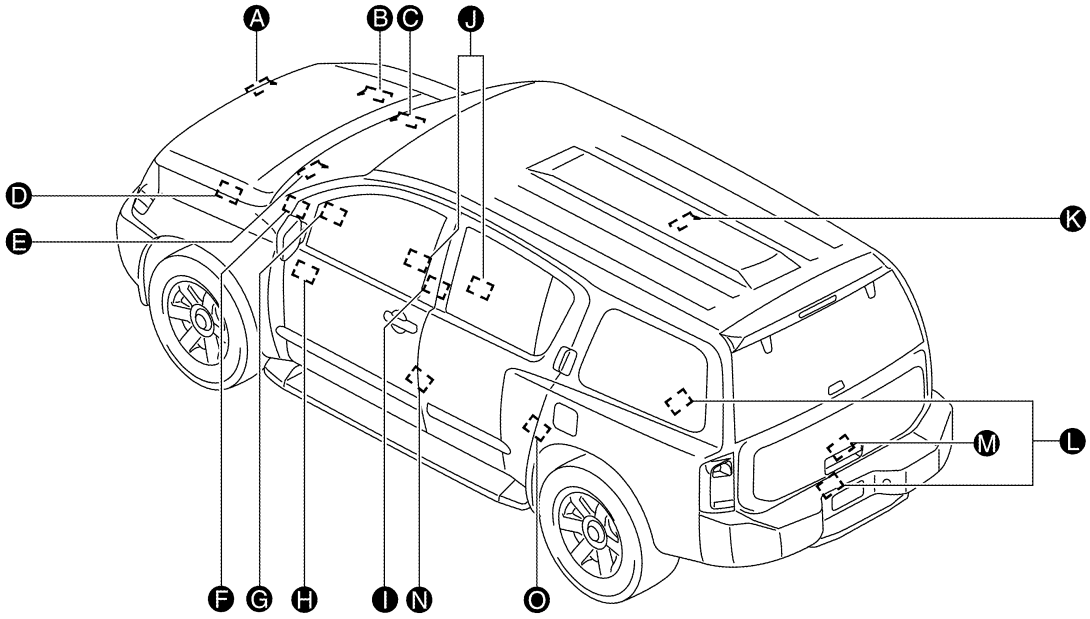
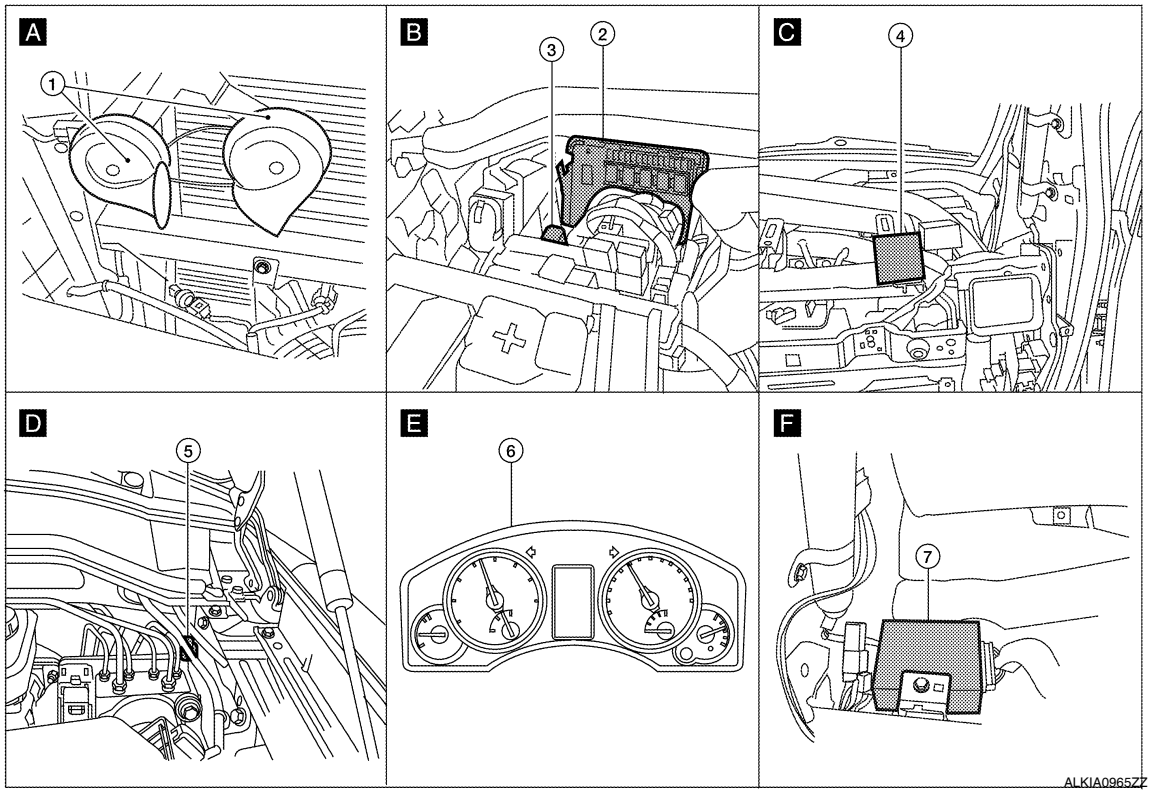
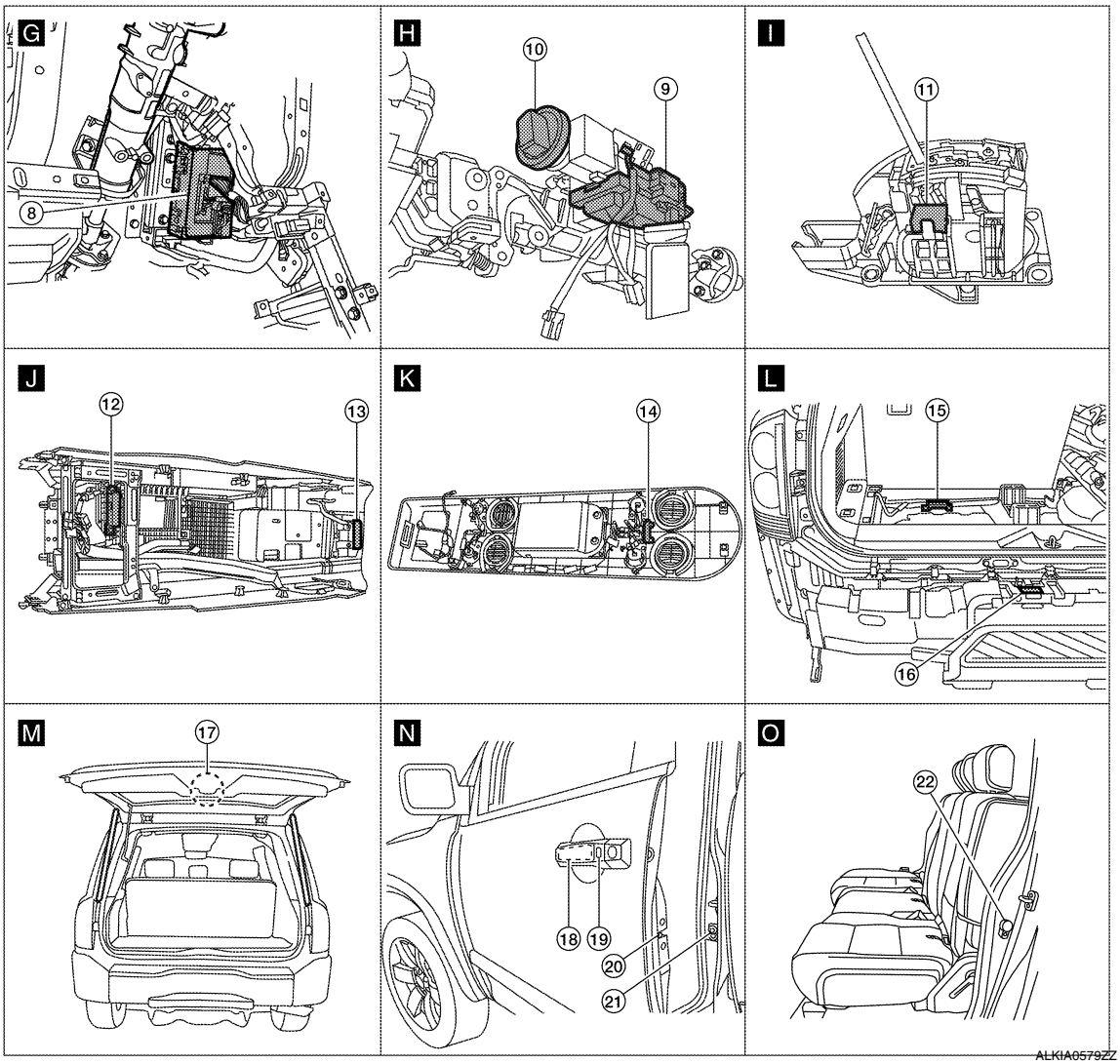






1. Horn E3 (view with hood open)
2. IPDM E/R E122, E124 (view with cover removed)
3. Horn relay H-1
4. Remote keyless entry receiver M25 (view with instrument panel RH removed)
5. Intelligent key warning buzzer E25
6. Combination meter M23, M24
7. Intelligent Key unit M70 (view with instrument panel 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) M203 (view with center console removed)
12. Inside key antenna 3 (front of center console) M210 (view with center console removed)
13. Inside key antenna 1 (rear of center console) M209
14. Inside key antenna 4 (overhead console area) R210 (view with overhead console removed)
15. Inside key antenna 2 (luggage compartment) B76 (view with rear carpet removed)
16. Rear bumper antenna C7 (view with rear bumper removed)
17. Back door latch 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:0000000003775694

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.

WARNING FUNCTION

System Description

INFOID:0000000003775695

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

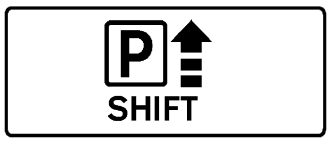
Once the following condition from below is established, alert or warning will be executed.

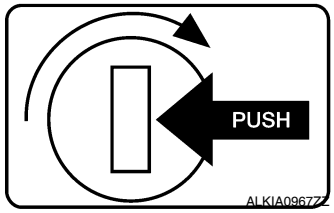
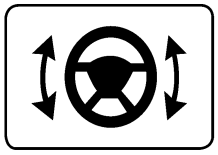
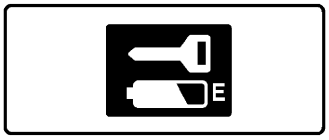
Warning/Information functions		Operation procedure
Intelligent Key system malfunction		When a malfunction is detected on BCM, warning message will display.
OFF position warning	For internal	• Ignition switch: ACC position. • Door switch (driver side): ON (Door is open).
	For external	OFF position warning (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		• Shift position: Except P position • Engine is running to stopped (Ignition switch is ON to OFF)
Take away warning	Door is open to close	• 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	• 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	• 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 detect inside the vehicle.
Door lock operation warning	Request switch operation	When request switch is pushed (lock operation) under the following conditions. • 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. • Door switch: ON (Any door is open). • Intelligent key is inside vehicle.
Key warning		• 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		• 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.

Warning/Information functions		Operation procedure
Engine start information	Ignition switch is ON position	• Ignition switch: ON position. • Shift position: P position • Engine is stopped
	Ignition switch is except ON position	• 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		 JMKIA0037GB	Activate	—
Take away warning	Door is open to close	 JMKIA0036GB	Activate	Activate
	Door is open		—	—
	Take away through window		Activate	—
Door lock operation warning	Request switch operation	—	—	Activate
	Intelligent Key operation	—	—	Activate
Key ID warning		 JMKIA0036GB	—	—

Warning/Information functions	Combination meter display	Warning chime	
		Combination meter buzzer	Intelligent Key warning buzzer
Engine start information	 ALKIA0967ZZ	—	—
Steering lock information	 ALKIA0702ZZ	—	—
Intelligent Key low battery warning	 JMKIA0048GB	—	—

LIST OF OPERATION RELATED PARTS

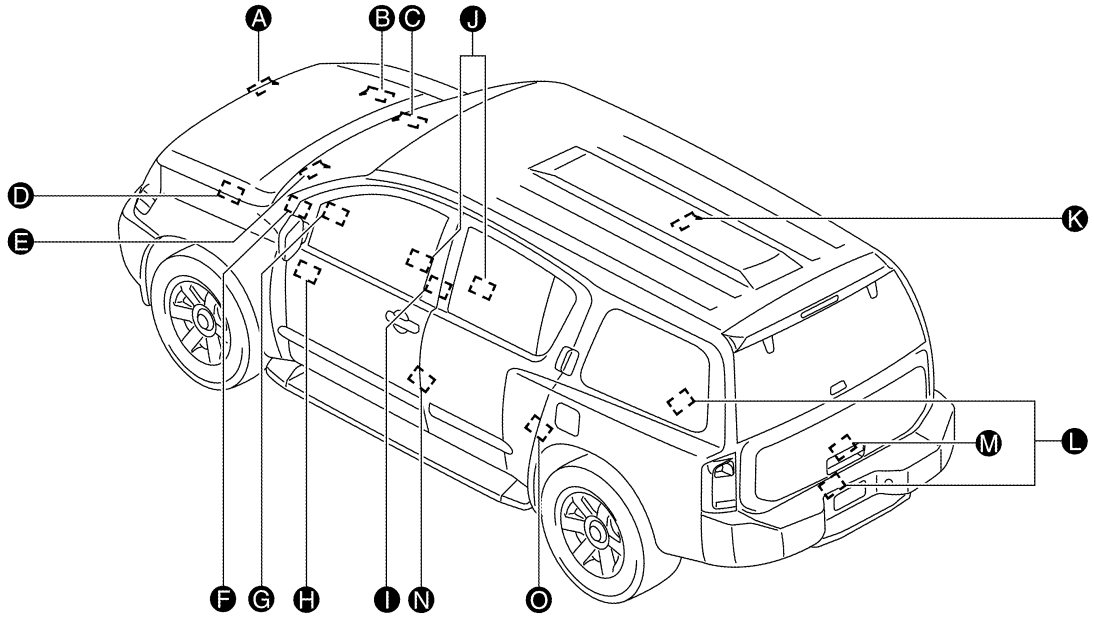
Parts marked with × are the parts related to operation.

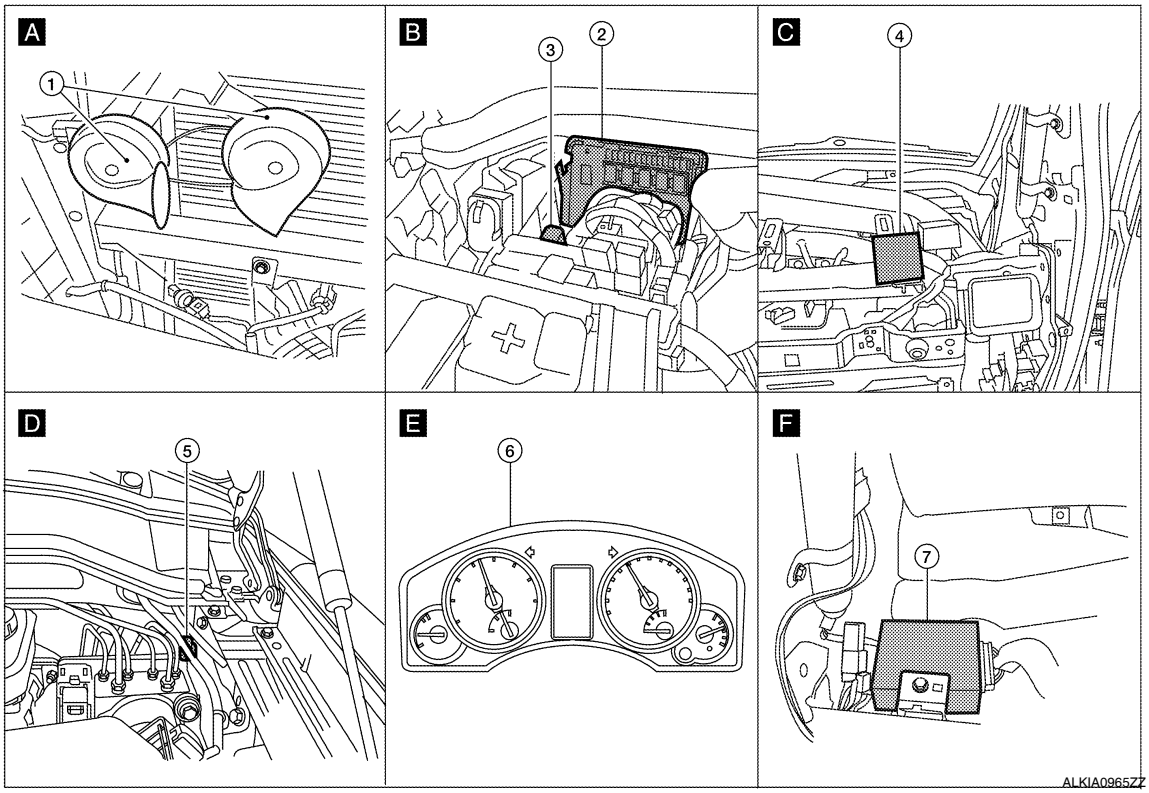
Warning function		Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	"KEY" warning lamp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

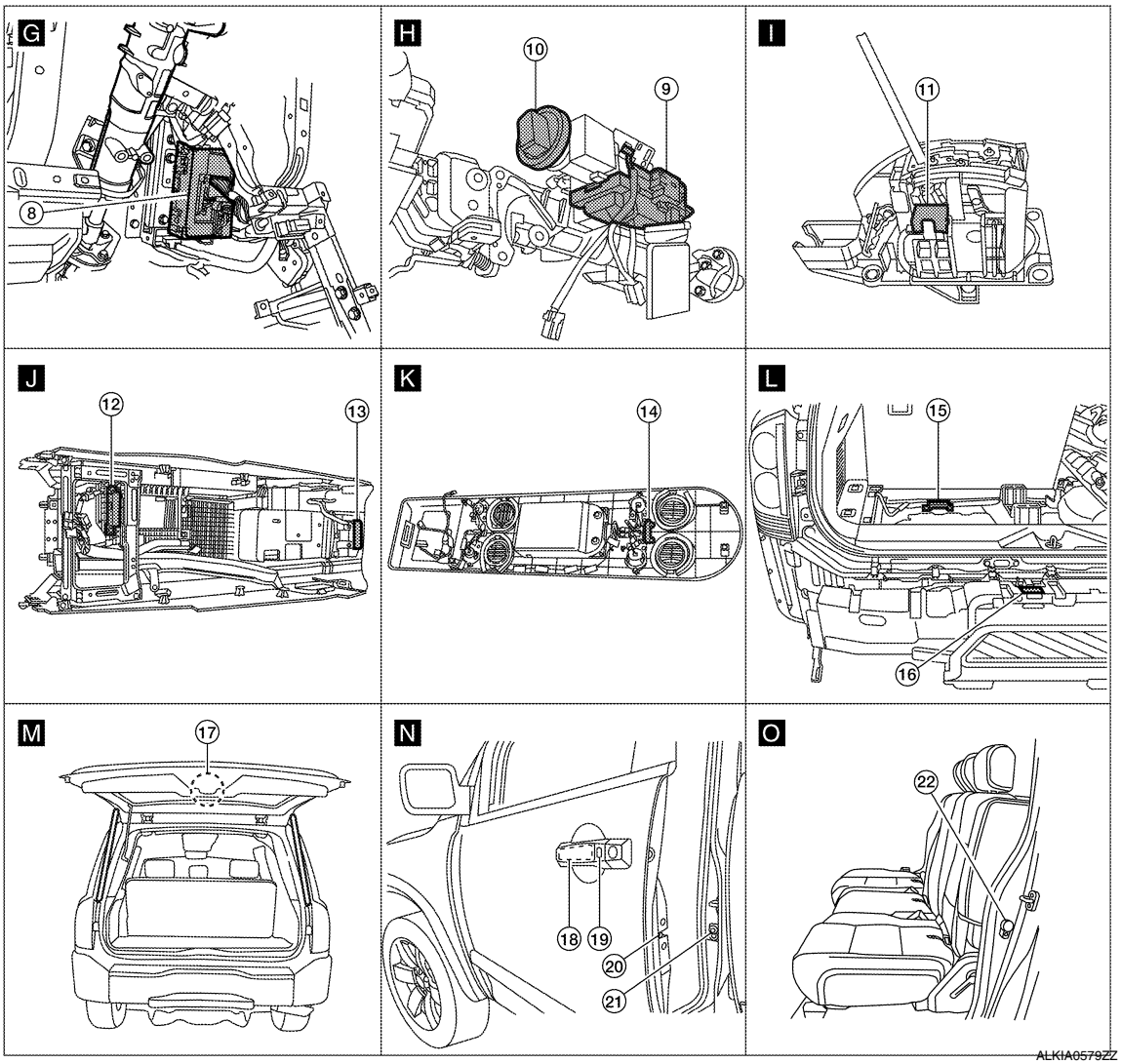
Warning function		Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	"KEY" warning lamp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

Component Parts Location

INFOID:0000000004190652







1. Horn E3 (view with hood open)
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 M23, 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) M203 (view with center console removed)
12. Inside key antenna 3 (front of center console) M210 (view with center console removed)
13. Inside key antenna 1 (rear of center console) M209
14. Inside key antenna 4 (overhead console area) R210 (view with overhead console removed)
15. Inside key antenna 2 (luggage compartment) B76 (view with rear carpet removed)
16. Rear bumper antenna C7 (view with rear bumper removed)
17. Back door latch 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

KEY REMINDER FUNCTION

System Description

INFOID:0000000003775697

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 • 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 • Intelligent Key is inside the vehicle • Any door is opened • All doors are locked by door lock and unlock switch or door lock knob	• All doors unlock • Sounds Intelligent Key warning buzzer
Back door is closed	Right after back door is closed under the following conditions • Intelligent Key is inside luggage compartment • All doors are closed • All doors are locked	• 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 perform in these cases.

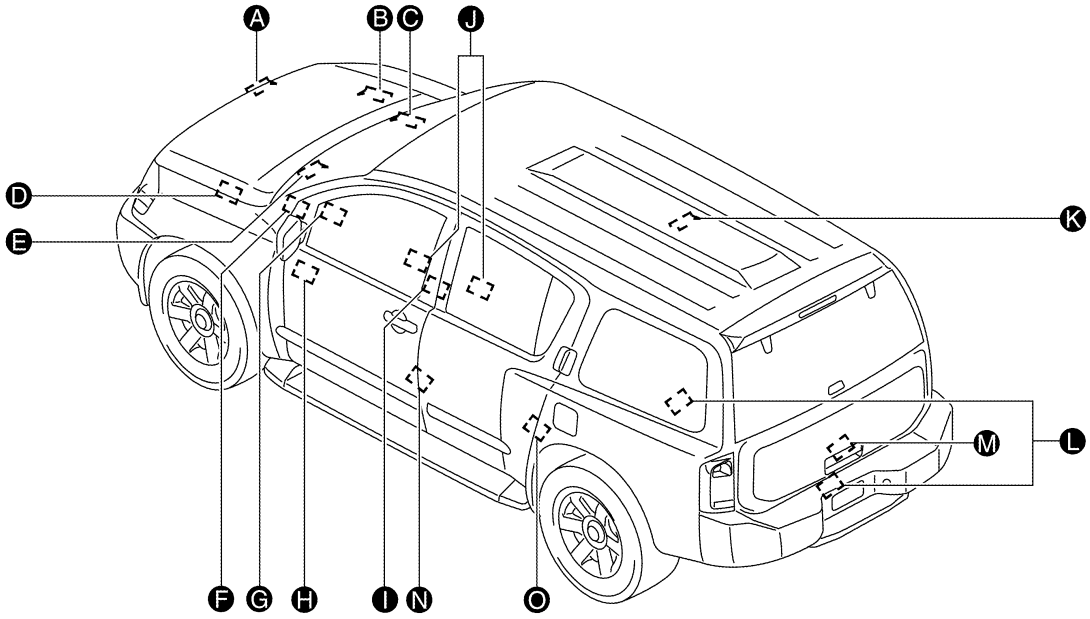
CAUTION:

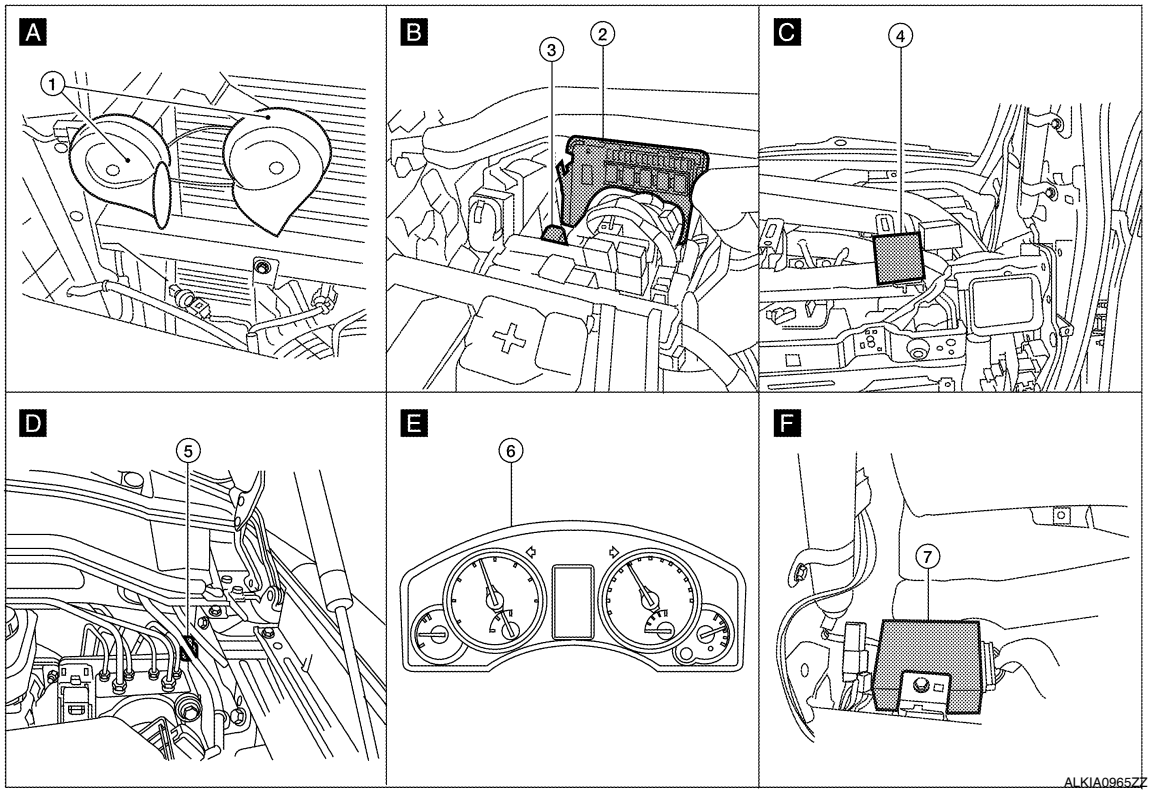
- **The above function operates when the Intelligent Key is inside the vehicle. However, there may be times when the Intelligent Key cannot be detected, and this function will not operate when the Intelligent Key is on the instrument panel, rear of vehicle, or in the glove box. Also, this system sometimes 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.**

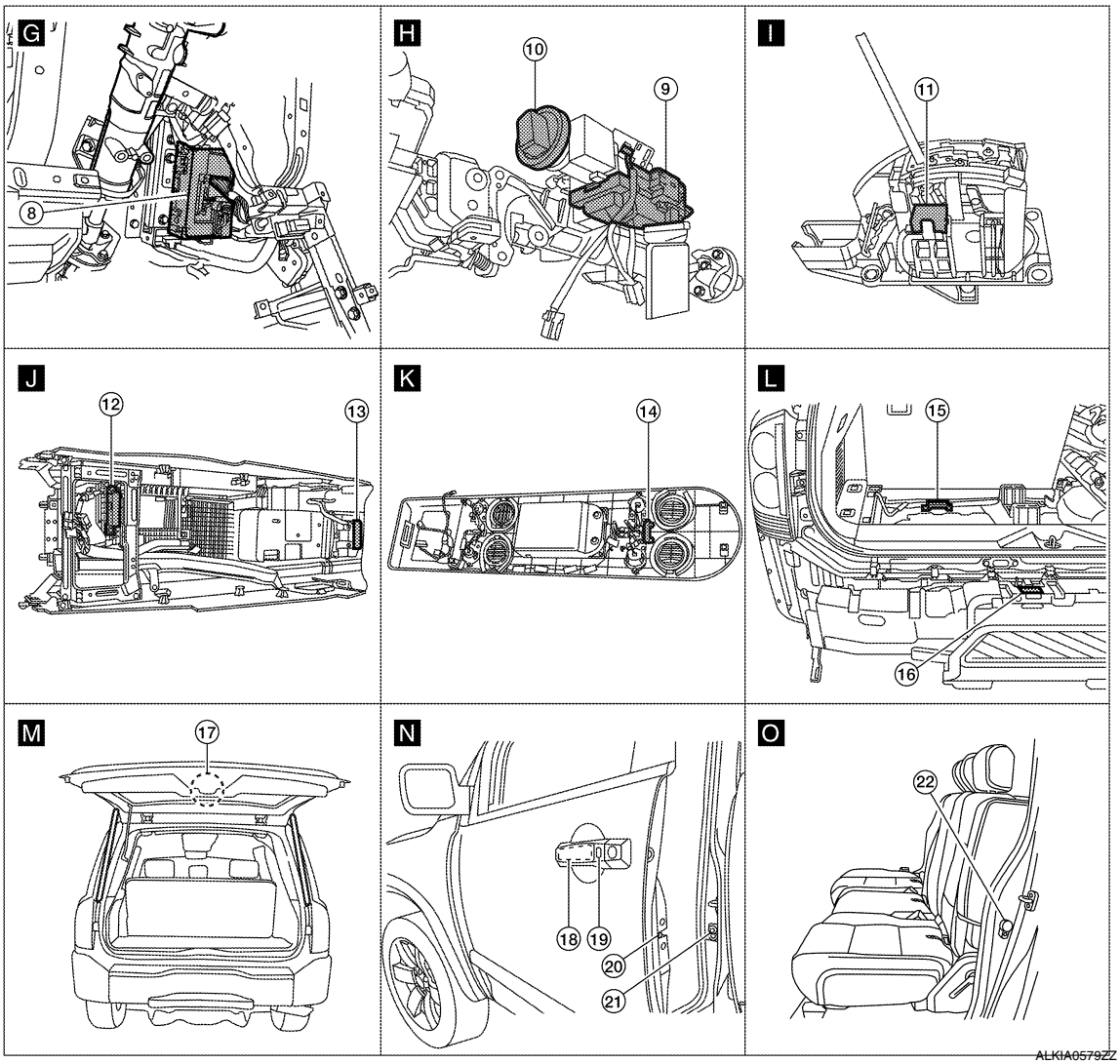
- Remote controller door lock button operation of Intelligent Key
- Remote controller door unlock button operation of Intelligent Key
- When the liftgate is closed, the Intelligent Key is not inside the vehicle
- When any door is open

Component Parts Location

INFOID:0000000004190653







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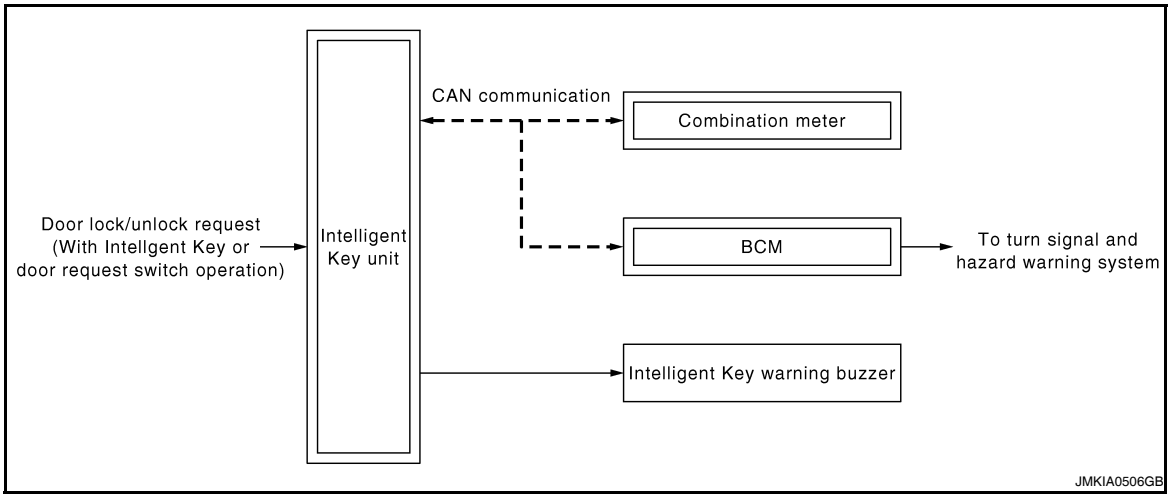
22. Rear door switch LH B18 RH B116

HAZARD AND BUZZER REMINDER FUNCTION

System Diagram

INFOID:0000000003775699

HAZARD & BUZZER REMINDER FUNCTION



System Description

INFOID:0000000003775700

HAZARD AND BUZZER REMINDER FUNCTION

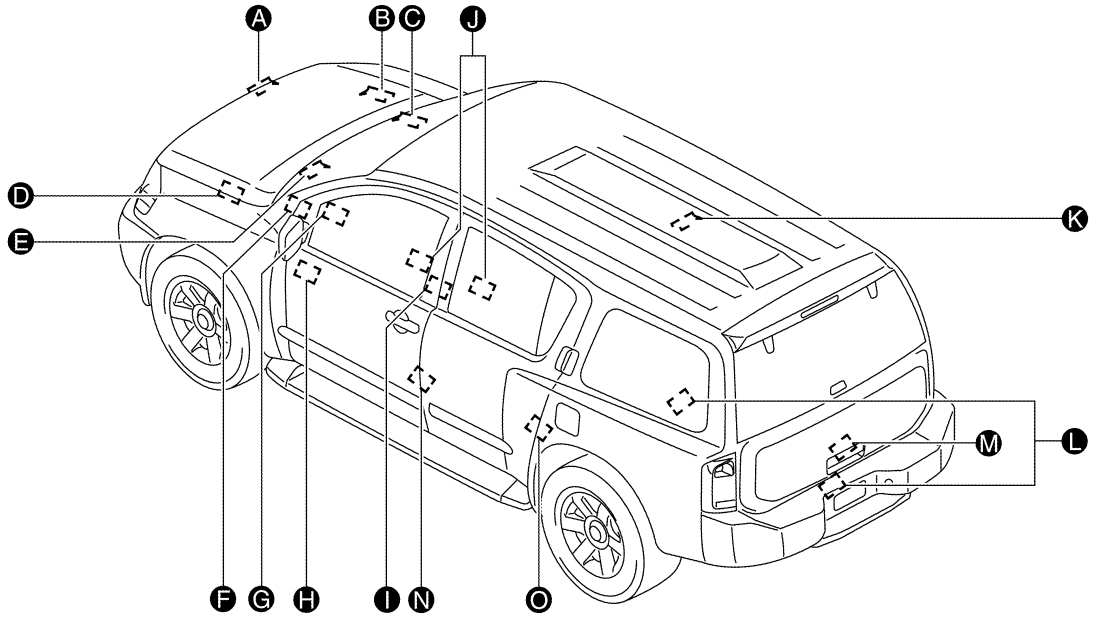
When door is locked or unlocked by Intelligent Key or door request switch, Intelligent Key unit sounds buzzer and sends hazard request signal to BCM via CAN communication. Then BCM flashes hazard warning lamps as a reminder.

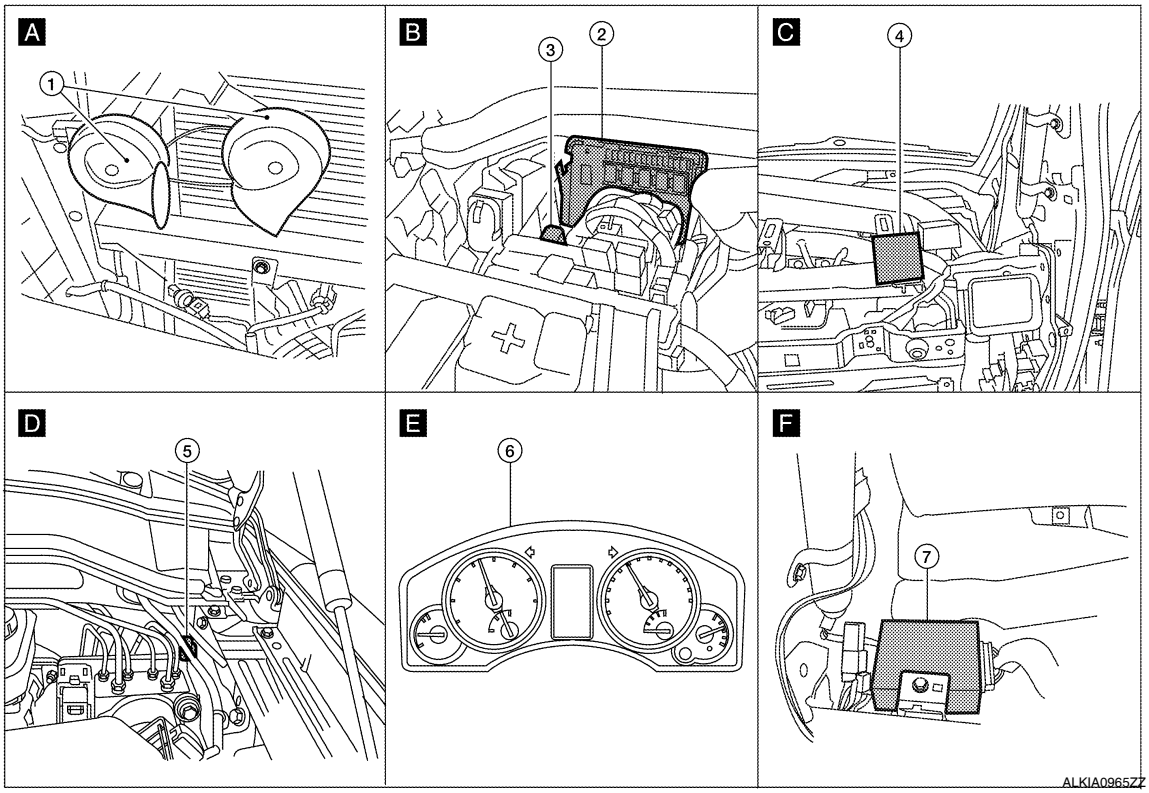
NOTE:

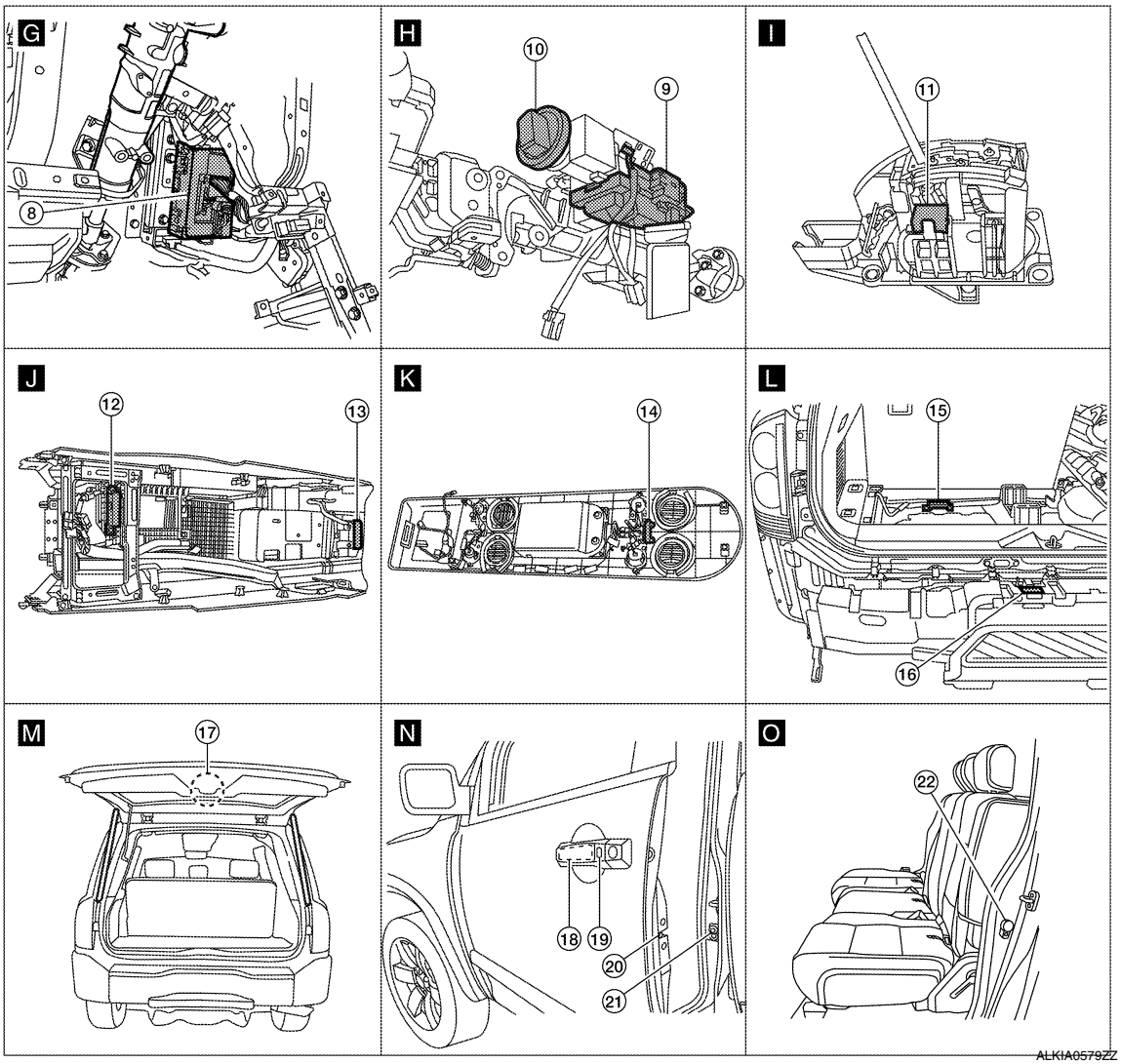
Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to DLK-56, "CONSULT-III Function (INTELLIGENT KEY)".

Component Parts Location

INFOID:0000000004190654







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3. Horn relay H-1
4. Remote keyless entry receiver M25 (view with instrument panel RH removed)
5. Intelligent key warning buzzer E25
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8. BCM M18, M19, M20 (view with instrument panel LH removed)
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17. Back door latch 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

Component Description

INFOID:0000000003775702

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

Component Description

INFOID:0000000003775703

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

INFOID:0000000004190661

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-51, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	• Enables to read and save the vehicle specification. • Enables to write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.
NOTE:
It can perform the diagnosis modes except the following for all sub system selection items.

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

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

INFOID:0000000004190662

WORK SUPPORT

Work Item	Description
DOOR LOCK-UNLOCK SET	• ON • OFF
ANTI-LOCK OUT SET	• ON • OFF
AUTOMATIC DOOR LOCK SELECT	• SHIFT OUT OF P • VH SPD
AUTOMATIC DOOR UNLOCK SELECT	• MODE1 • MODE2 • MODE3 • MODE4 • MODE5 • MODE6
AUTOMATIC LOCK/UNLOCK SELECT	• ON • OFF

DATA MONITOR

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

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/ OTHER UNLOCK].
TRUNK/BACK DOOR	This test is able to check trunk/back door lock operation [LOCK (SET)/UNLOCK (RELEASE)].

MULTIREMOTE ENT

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

INFOID:0000000004190663

WORK SUPPORT

Test Item	Description
REMO CONT ID REGIST	Keyfob ID code can be registered.
REMO CONT ID ERASUR	Keyfob ID code can be erased.
REMO CONT ID CONFIR	It can be checked whether keyfob ID code is registered or not in this mode.

Test Item	Description
HORN CHIRP SET	Horn chirp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
HAZARD LAMP SET	Hazard lamp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when “CHANG SETT” on CONSULT-III screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.

Hazard and horn reminder mode

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

Auto locking function mode

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

Panic alarm operation mode

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

Back door open operation mode

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

Keyless power window down operation mode

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

DATA MONITOR

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

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

ACTIVE TEST

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

INTELLIGENT KEY

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

INFOID:0000000004190664

DATA MONITOR

Monitor Item [Unit]	Condition
PUSH SW [ON/OFF]	Indicates condition of ignition knob 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
I-KEY PW DWN [ON/OFF]	Indicates condition of all power window signal from Intelligent Key
I-KEY TRUNK [ON/OFF]	Indicates condition of trunk open signal from Intelligent Key
I-KEY PANIC [ON/OFF]	Indicates condition of panic signal from Intelligent Key

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

CONSULT-III Function (INTELLIGENT KEY)

INFOID:0000000004190659

APPLICATION ITEM

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

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

SELF-DIAG RESULT

Refer to SEC-95, "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).
BD/TR REQ SW	This item is shown but not monitored.
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.
BD OPEN SW	This item is shown but not monitored.
TR CANCEL SW	This item is shown but not monitored.
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 TRUNK SW	This item is shown but not monitored.
KEYLESS PANIC SW	Indicates [ON (pressed)/OFF (released)] condition of Intelligent Key panic button.
KEYLS PSD LH	This item is shown but not monitored.
KEYLS PSD RH	This item is shown but not monitored.
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.

Monitor Item	Condition
TRUNK SW	This item is shown but not monitored.
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

ACTIVE TEST

Test item	Description
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation. • ALL UNLK: All door lock actuators are unlocked. • DR UNLK: Door lock actuator (driver side) is unlocked. • AS UNLK: Door lock actuator (passenger side) is unlocked. • BK UNLK: This item is indicated, but inactive. • LOCK: All door lock actuator is locked.
ANTENNA	This test is able to check Intelligent Key antenna operation. When the following condition are met, hazard warning lamps flash. • ROOM ANT1: Inside key antenna (front of center console) detects Intelligent Key, when “ROOM ANT1” is selected. • ROOM ANT2: Inside key antenna (rear luggage area) detects Intelligent Key, when “ROOM ANT2”is selected. • ROOM ANT3: Inside key antenna (rear of center console) detects Intelligent Key, when “ROOM ANT3” is selected. • ROOM ANT4: Inside key antenna (roof console) detects Intelligent Key, when “ROOM ANT4”is selected. • DRIVER ANT: Outside key antenna (driver side) detects Intelligent Key, when “DRIVER ANT” is selected. • ASSIST ANT: Outside key antenna (passenger side) detects Intelligent Key, when “ASSIST ANT” is selected. • BK DOOR ANT: Outside key antenna (rear bumper) detects Intelligent Key, when “BK DOOR ANT” is selected.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. • ON • OFF
INSIDE BUZZER	This test is able to check warning chime in combination meter operation. • TAKE OUT: Take away warning chime sounds. • KNOB: Ignition knob switch warning chime sounds. • KEY: Key warning chime sounds. • OFF

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000003775708

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-44, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000003775709

DTC DETECTION LOGIC

DTC	CONSULT-III display description	DTC Detection Condition	Possible cause
U1000	CAN COMM CIRCUIT	When BCM cannot communicate CAN communication signal continuously for 2 seconds or more.	In CAN communication system, any item (or items) of the following listed below is malfunctioning. • Transmission • Receiving (ECM) • Receiving (VDC/TCS/ABS) • Receiving (METER/M&A) • Receiving (TCM) • Receiving (MULTI AV) • Receiving (IPDM E/R)

Diagnosis Procedure

INFOID:0000000003775710

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-14, "Trouble Diagnosis Flow Chart".
NO >> Refer to GI-38, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000003775711

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000003775712

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM. Refer to BCS-56, "Removal and Installation".

Special Repair Requirement

INFOID:0000000003775713

1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to BCS-3, "CONFIGURATION : Description" for BCM configuration.
Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual.

>> Work end.

INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

Description

INFOID:0000000003775714

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000003775715

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

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

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Inside key antenna 1 (rear of center console) • Between Intelligent Key unit and inside key antenna 1 (rear of center console)

Is the inspection result normal?

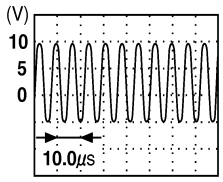
YES >> Inside key antenna 1 (rear of center console) is OK.
NO >> Refer to DLK-60, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775716

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

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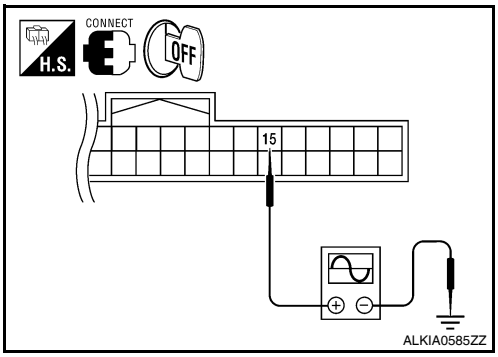


ALKIA0585ZZ

Is the inspection result normal?

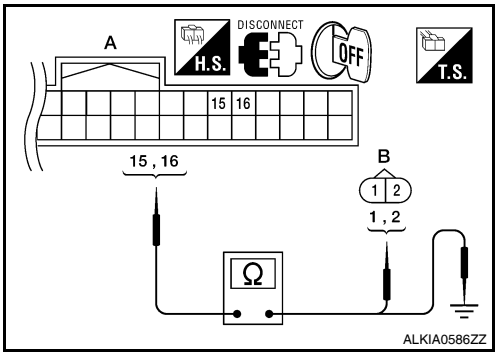
YES >> Inside key antenna 1 (rear of center console) is OK.
NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

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

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

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



ALKIA0586ZZ

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

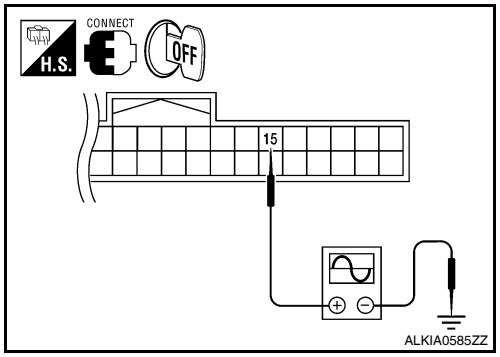
Is the inspection result normal?

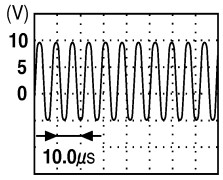
YES >> GO TO 3

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

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SINGAL

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

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Is the inspection result normal?

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

NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

Description

INFOID:0000000003775717

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000003775718

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

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

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Inside key antenna 2 (luggage compartment) • Between Intelligent Key unit and inside key antenna 2 (luggage compartment)

Is the inspection result normal?

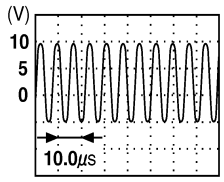
YES >> Inside key antenna 2 (luggage compartment) is OK.
NO >> Refer to DLK-62, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775719

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	

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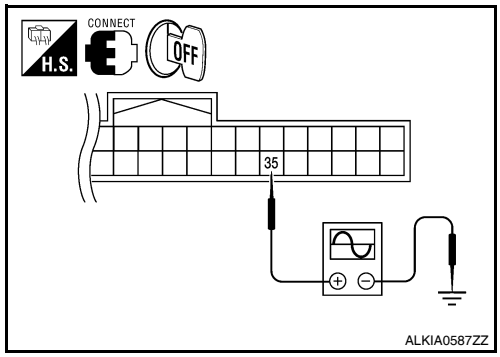


ALKIA0587ZZ

Is the inspection result normal?

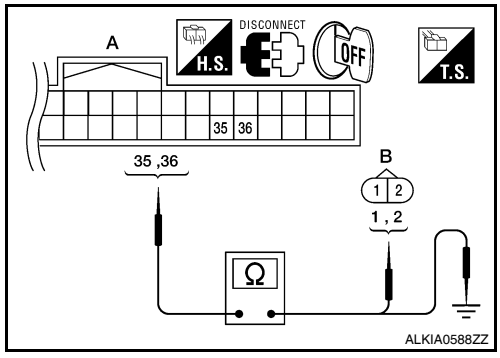
YES >> Inside key antenna 2 (luggage compartment) is OK.
NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

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

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

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



ALKIA0588ZZ

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

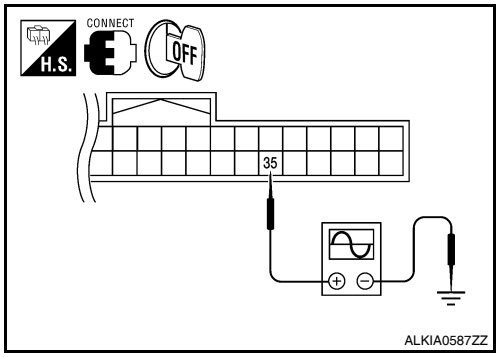
Is the inspection result normal?

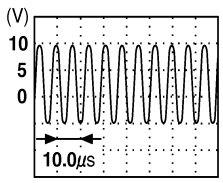
YES >> GO TO 3

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

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SINGAL

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	

Is the inspection result normal?

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

NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

Description

INFOID:0000000003775720

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000003775721

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

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

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 3	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Inside key antenna 3 (front of center console) • Between Intelligent Key unit and inside key antenna 3 (front of center console)

Is the inspection result normal?

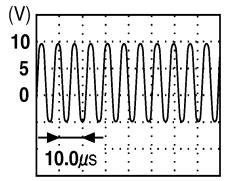
YES >> Inside key antenna 3 (front of center console) is OK.
NO >> Refer to DLK-64, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775722

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	

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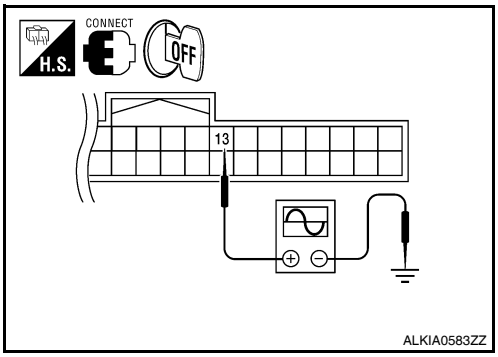


ALKIA0583ZZ

Is the inspection result normal?

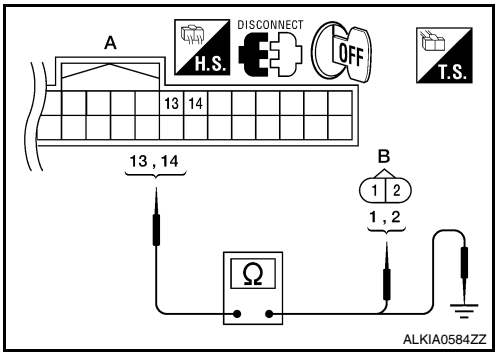
YES >> Inside key antenna 3 (front of center console) is OK.
NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

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

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

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



ALKIA0584ZZ

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

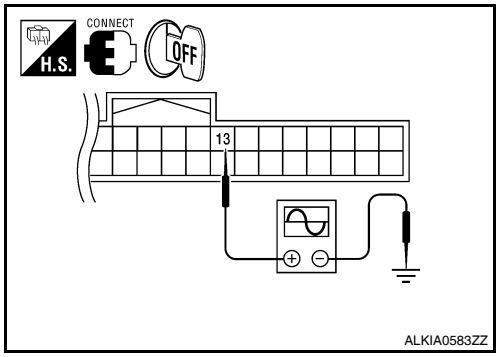
Is the inspection result normal?

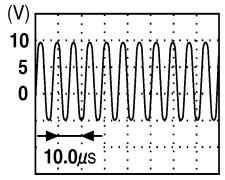
YES >> GO TO 3

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

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SINGAL

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	

Is the inspection result normal?

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

NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

Description

INFOID:0000000003775723

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000003775724

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

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

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 4	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Inside key antenna 4 (overhead console area) • Between Intelligent Key unit and inside key antenna 4 (overhead console area)

Is the inspection result normal?

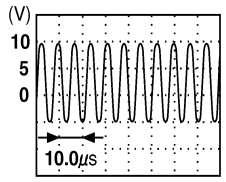
YES >> Inside key antenna 4 (overhead console area) is OK.
NO >> Refer to DLK-66, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775725

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	

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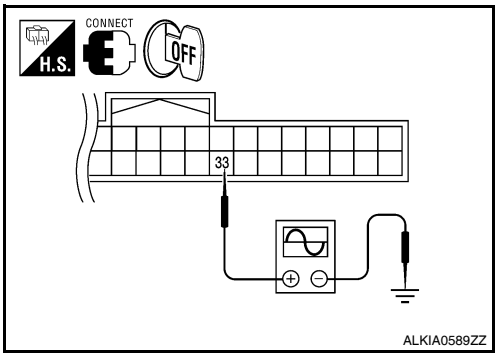


ALKIA0589ZZ

Is the inspection result normal?

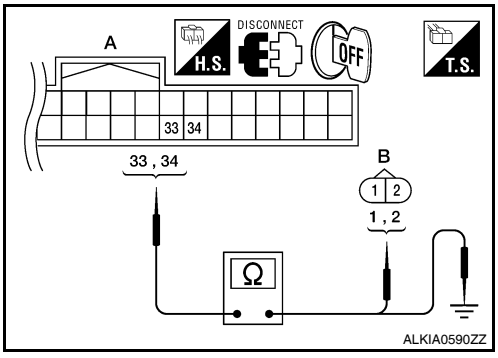
YES >> Inside key antenna 4 (overhead console area) is OK.
NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

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

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

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



ALKIA0590ZZ

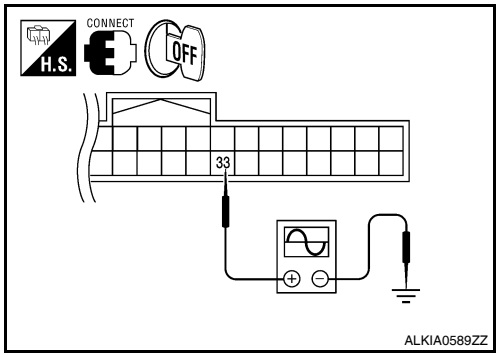
Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	33	Ground	No
		34		

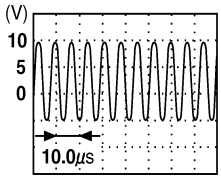
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 4 (overhead console area).

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SINGAL

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 (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	

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Is the inspection result normal?

YES >> Replace inside key antenna 4 (overhead console area).
NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

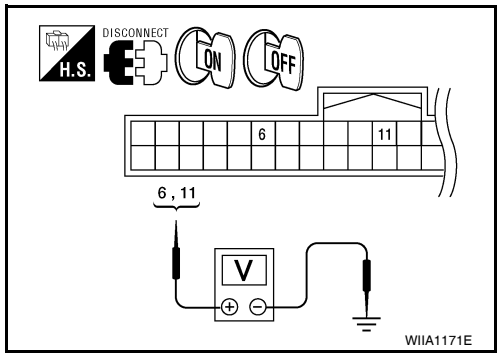
POWER SUPPLY AND GROUND CIRCUIT
INTELLIGENT KEY UNIT

INTELLIGENT KEY UNIT : Diagnosis Procedure

INFOID:0000000003775726

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

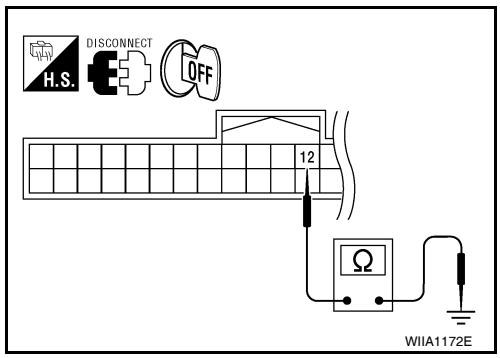
Is the inspection result normal?

YES >> GO TO 2
NO >> Repair or replace Intelligent Key unit 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:0000000004190660

1. CHECK FUSES AND FUSIBLE LINK

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

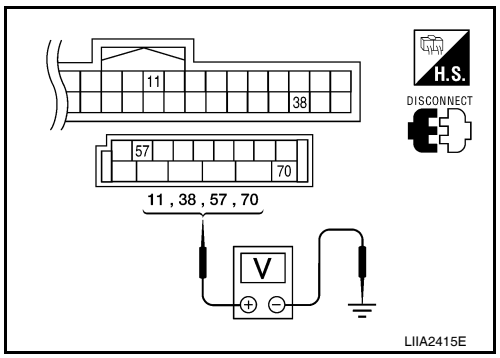
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (10A)

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.



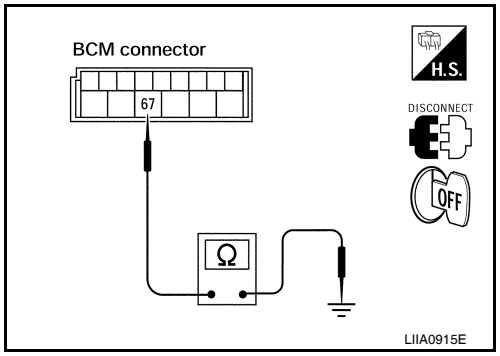
Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	70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

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.

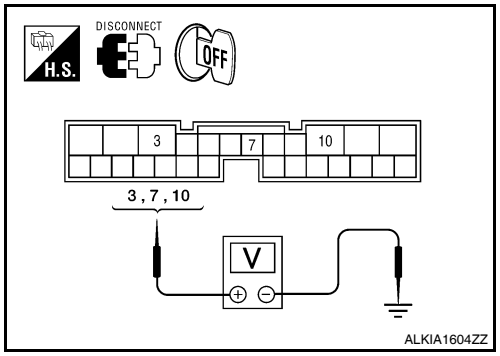
BACK DOOR

BACK DOOR : Diagnosis Procedure

INFOID:0000000003775728

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, 7, 10 and ground.



Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
B55	3	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	7	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
	10	Ground	Battery power supply	Ignition switch OFF	Battery voltage

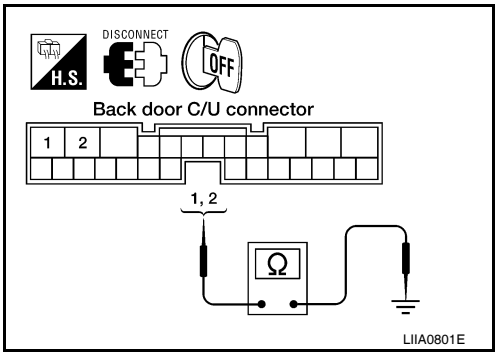
Is the inspection result normal?

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.

BCM		Ground	Continuity
Connector	Terminal		
B55	1		Yes
	2		Yes



Is the inspection result normal?

YES >> Circuit is OK.
NO >> Repair the harness between the back door control unit and ground.

DOOR SWITCH

Description

INFOID:0000000003775729

Detects door open/close condition.

Component Function Check

INFOID:0000000003775730

1.CHECK FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to DLK-71, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775731

1.CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-III

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

- When doors are open:

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

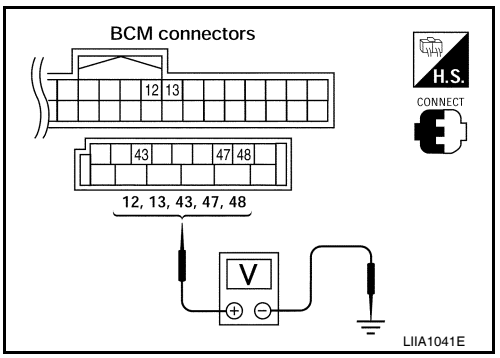
- When doors are closed:

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

Without CONSULT-III

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

Connector	Item	Terminals (+)	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

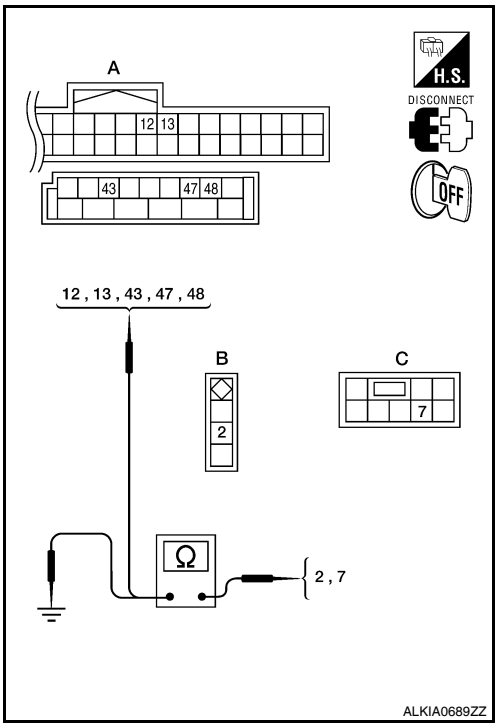
2.CHECK DOOR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect door switch and BCM.
3. 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

4. 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



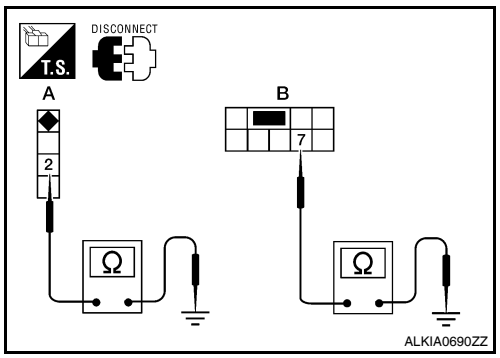
Is the inspection result normal?

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

3.CHECK DOOR SWITCHES

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

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



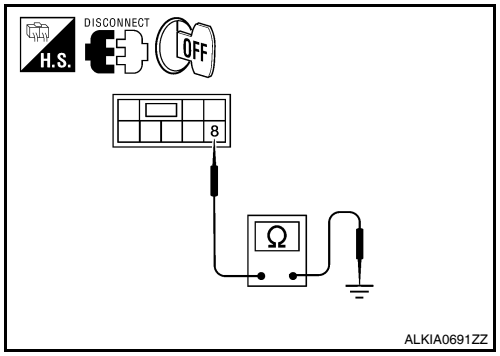
Is the inspection result normal?

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
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000003775732

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000003775733

1.CHECK FUNCTION

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.
NO >> Refer to DLK-74, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000004190667

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

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

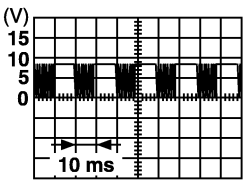
- When main power window and door lock/unlock switch is turned to LOCK:

CDL LOCK SW :ON

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

CDL UNLOCK SW :ON

Without CONSULT-III
1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.
3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the door lock/unlock switch is turned to LOCK or UNLOCK.

Connector	Terminal (+)	Terminal (–)	Voltage (V)
M18	22	Ground	

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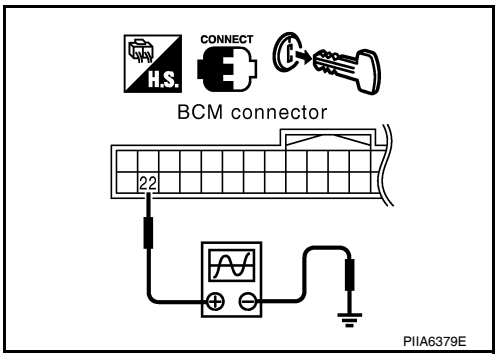


PIIA6379E

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.

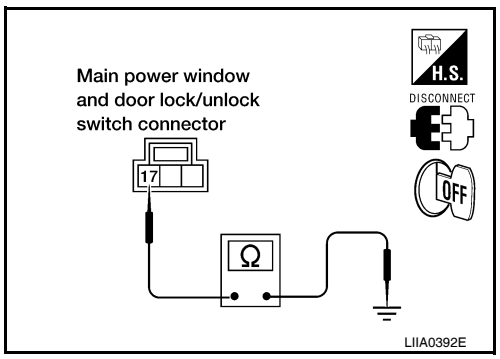
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-56, "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.



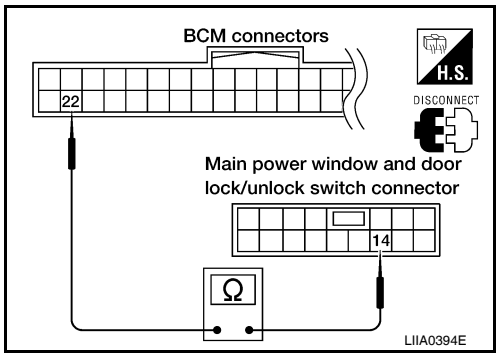
Is the inspection result normal?

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

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

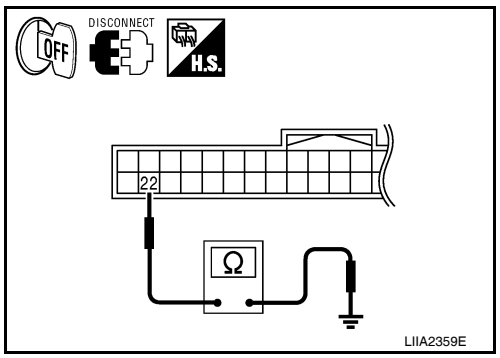
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

22 - 14 : Continuity should exist.



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:0000000003775735

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000003775736

1.CHECK FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.
NO >> Refer to DLK-76, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000004190668

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-III

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

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

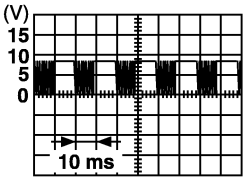
CDL LOCK SW :ON

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

CDL UNLOCK SW :ON

Without CONSULT-III

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

Connector	Terminal (+)	Terminal (–)	Voltage (V)
M18	22	Ground	

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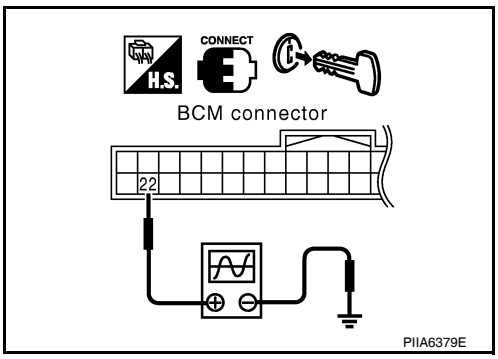


PIIA6379E

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.

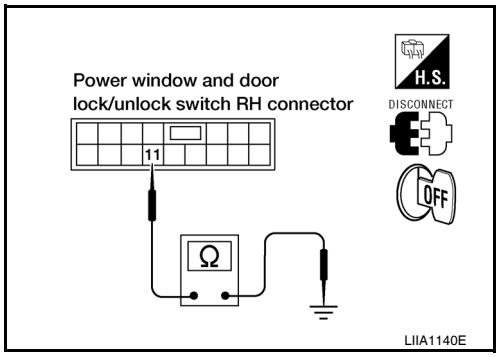
Is the inspection normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-56, "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.



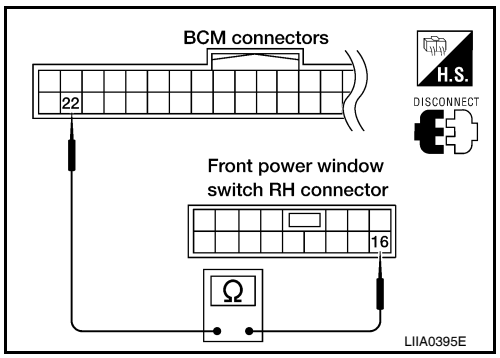
Is the inspection normal?

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

4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

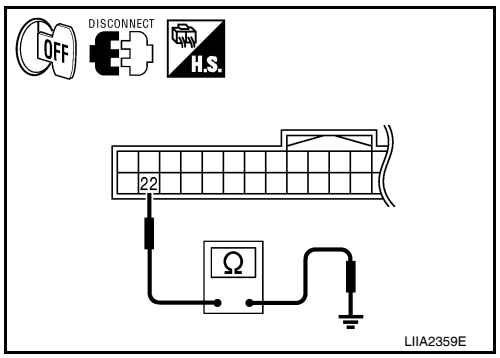
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

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

Description

INFOID:0000000003775738

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:0000000003775739

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.
NO >> Refer to DLK-79, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775740

1.CHECK DOOR KEY CYLINDER SWITCH LH

With CONSULT-III
Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode with CONSULT–III.
- When key inserted in left front key cylinder is turned to LOCK:

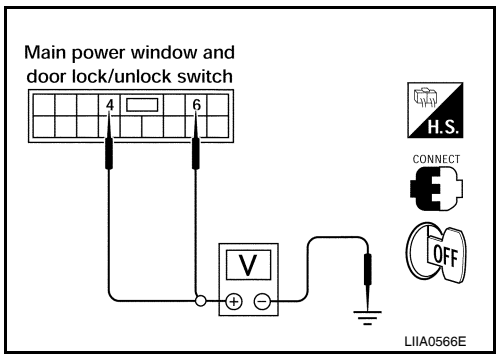
KEY CYL LK-SW : ON

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

KEY CYL UN-SW : ON

Without CONSULT-III
Check voltage between main power window and door lock/unlock switch connector D7 terminals 4, 6 and ground.

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



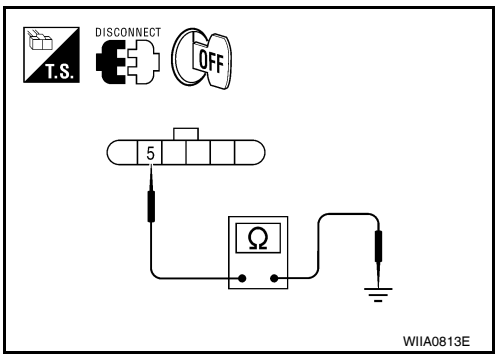
Is the inspection result normal?

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

2.CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

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.



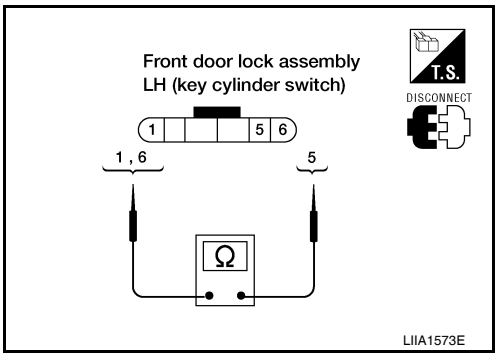
Connector	Terminals	Continuity
D14	5 – Ground	Yes

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.



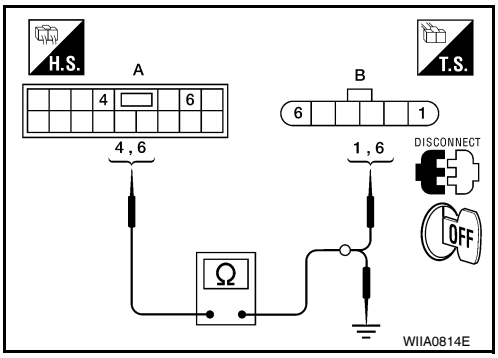
Terminals	Condition	Continuity
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes

Is the inspection result normal?

YES >> GO TO 4
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-238, "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.

FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

Description

INFOID:0000000003775741

Detects door lock condition of driver door.

Component Function Check

INFOID:0000000003775742

1.CHECK FUNCTION

With CONSULT-III

Check door unlock sensor in DATA MONITOR mode.

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

Is the inspection result normal?

YES >> Door unlock sensor is OK.
NO >> Refer to DLK-81, "Diagnosis Procedure".

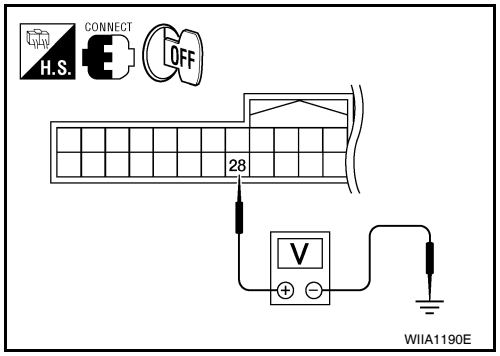
Diagnosis Procedure

INFOID:0000000003775743

1.CHECK UNLOCK SENSOR POWER SUPPLY

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

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



Is the inspection result normal?

YES >> Front door lock assembly LH (door unlock sensor) is OK.
NO >> GO TO 2

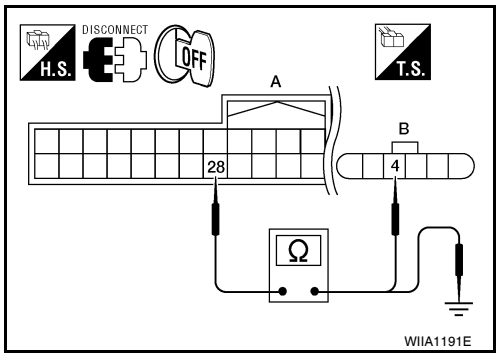
2.CHECK UNLOCK SENSOR CIRCUIT

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.



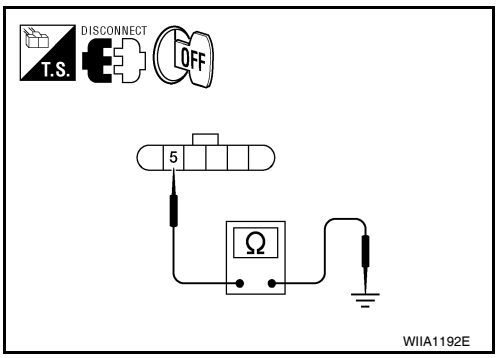
Is the inspection result normal?

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.

5 – Ground : Continuity should exist.



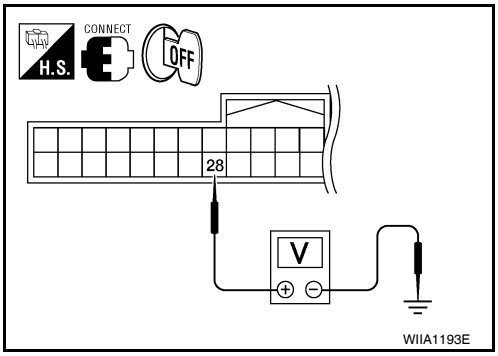
Is the inspection result normal?

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-82, "Component Inspection".
NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

Component Inspection

INFOID:0000000003775744

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-238, "Removal and Installation".

DOOR REQUEST SWITCH

Description

INFOID:0000000003775745

Transmits lock/unlock operation to Intelligent Key unit.

Component Function Check

INFOID:0000000003775746

1.CHECK FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door request switch is OK.
NO >> Refer to DLK-83, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775747

1.CHECK FRONT DOOR REQUEST SWITCH

With CONSULT-III

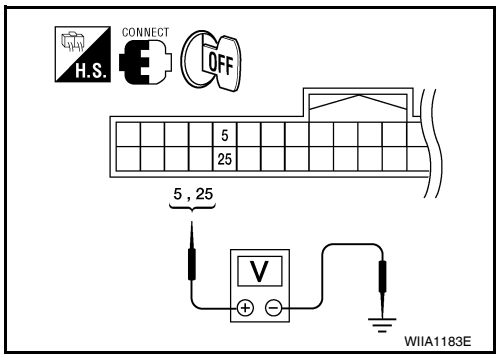
Check front door request switch (“DR REQ SW” or “AS REQ SW”) in “DATA MONITOR” mode.

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

Without CONSULT-III

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

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



Is the inspection result normal?

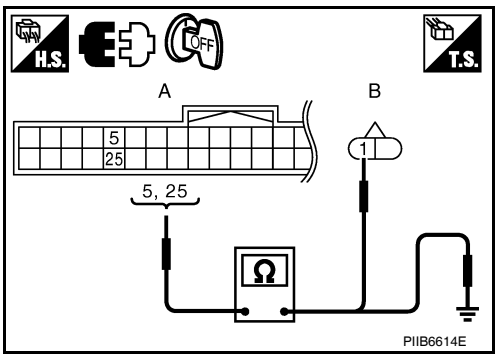
YES >> Front door request switch is OK.
NO >> GO TO 2

2.CHECK FRONT DOOR REQUEST SWITCH CIRCUIT

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

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

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



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

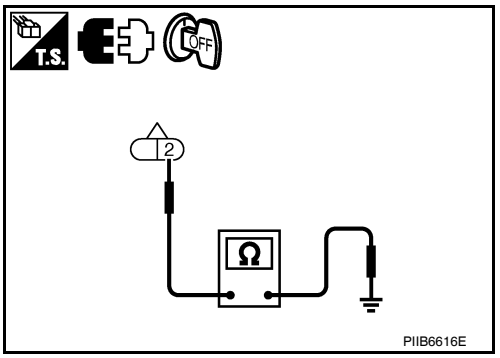
Is the inspection result normal?

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

3.CHECK FRONT DOOR REQUEST SWITCH GROUND CIRCUIT

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

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



Is the inspection result normal?

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

4.CHECK FRONT DOOR REQUEST SWITCH OPERATION

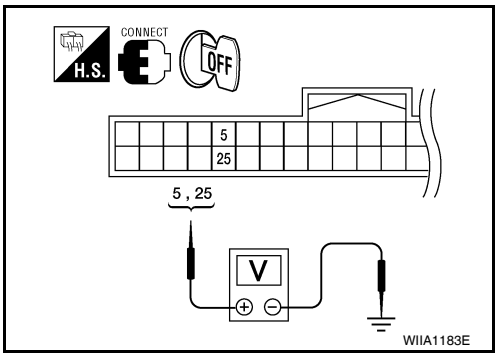
Refer to DLK-84, "Component Inspection".

Is the inspection result normal?

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

5.CHECK FRONT DOOR REQUEST SWITCH SIGNAL

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



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

Is the inspection result normal?

YES >> Refer to GI-38, "Intermittent Incident".
NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

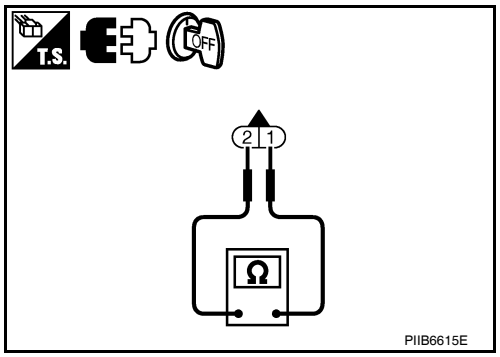
Component Inspection

INFOID:0000000003775748

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
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000003775749

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000003775750

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.
NO >> Refer to DLK-86, "DRIVER SIDE : Diagnosis Procedure".

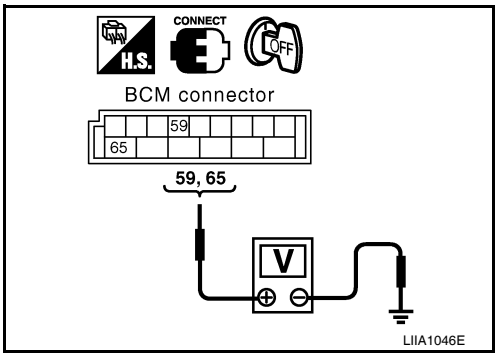
DRIVER SIDE : Diagnosis Procedure

INFOID:0000000003775751

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



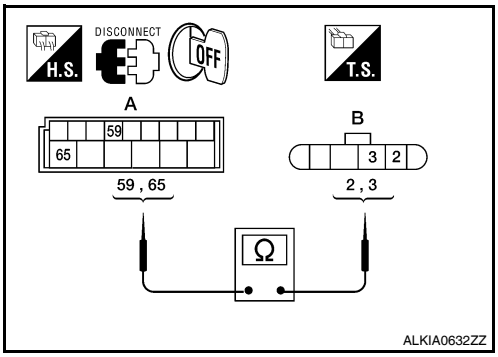
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

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

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



Is the inspection result normal?

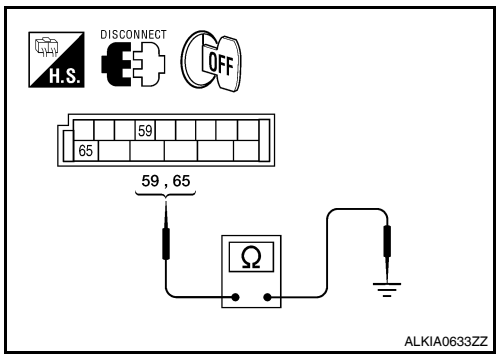
YES >> Replace front door lock assembly LH (actuator).
NO >> Repair or replace harness.

3.CHECK DOOR LOCK ACTUATOR HARNESS

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

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

Connector	Terminals		Continuity
M20	59	Ground	No
	65		No



Is the inspection result normal?

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

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000003775752

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000003775753

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.
NO >> Refer to DLK-87, "PASSENGER SIDE : Diagnosis Procedure".

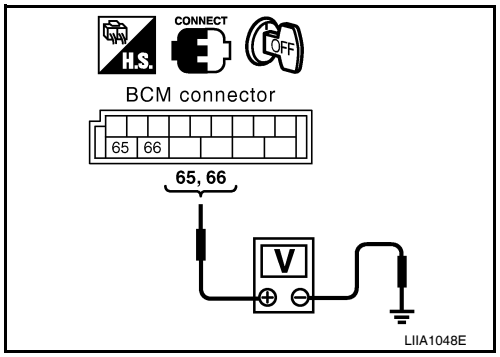
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000003775754

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 (+)	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?

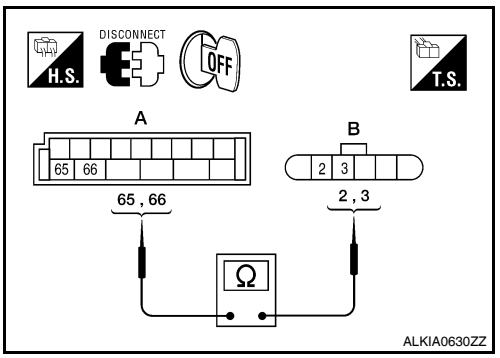
YES >> GO TO 2
NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and 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



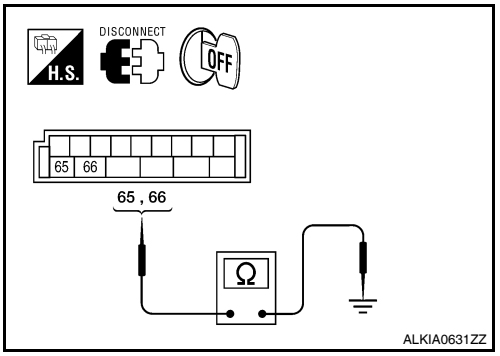
Is the inspection result normal?

YES >> Replace front door lock actuator RH. Refer to DLK-238, "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-56, "Removal and Installation".
NO >> Repair or replace harness.

REAR LH

REAR LH : Description

INFOID:0000000003775755

Locks/unlocks the door with the signal from BCM.

REAR LH : Component Function Check

INFOID:0000000003775756

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.
NO >> Refer to DLK-88, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

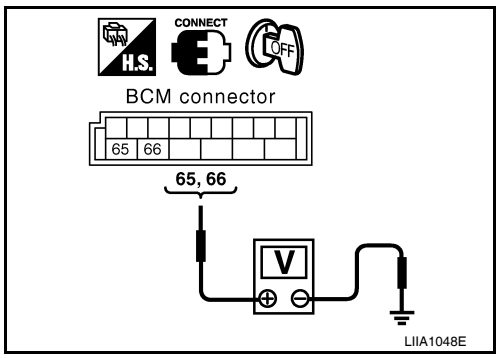
INFOID:0000000003775757

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 (+)	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



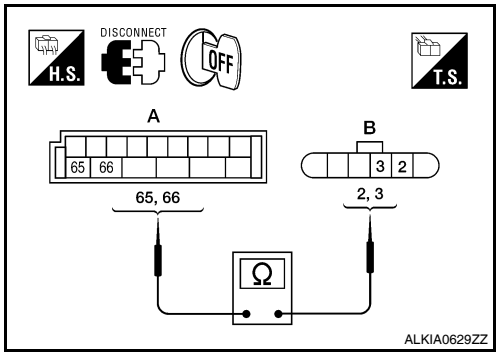
Is the inspection result normal?

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



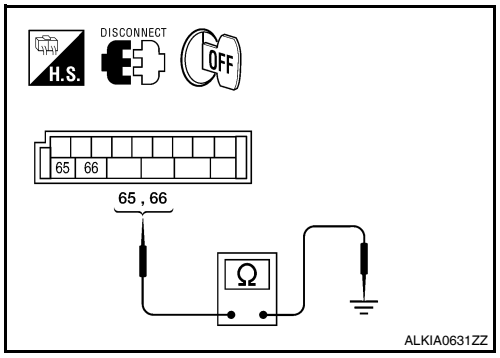
Is the inspection result normal?

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-56, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

REAR RH

REAR RH : Description

INFOID:0000000003775758

Locks/unlocks the door with the signal from BCM.

REAR RH : Component Function Check

INFOID:0000000003775759

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.
NO >> Refer to DLK-90, "REAR RH : Diagnosis Procedure".

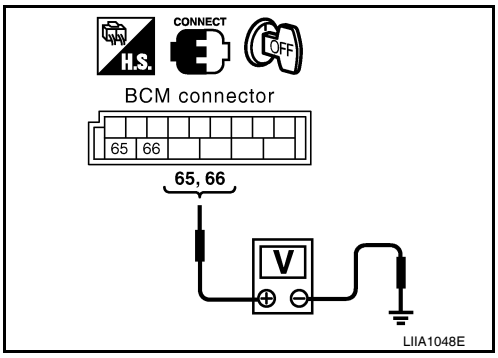
REAR RH : Diagnosis Procedure

INFOID:0000000003775760

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



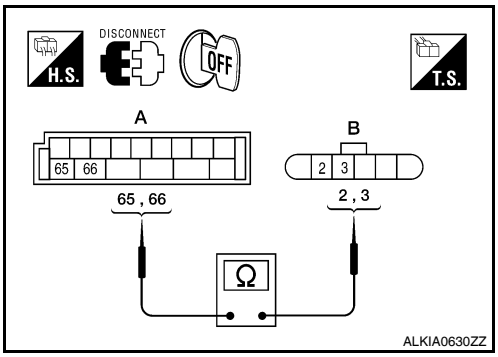
Is the inspection result normal?

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?

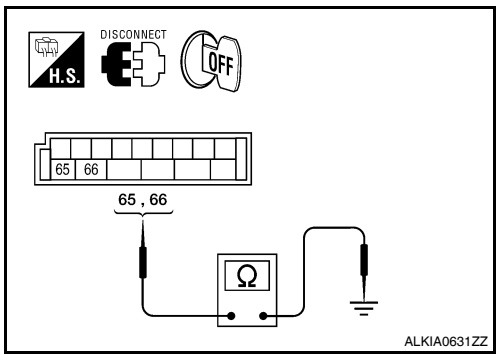
YES >> Replace rear door lock actuator RH.
NO >> Repair or replace harness or passenger select unlock relay.

3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

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-56, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

BACK DOOR

BACK DOOR : Description

INFOID:0000000003775761

All vehicles equipped with an automatic back door system are not equipped with a back door actuator. Opening and closing the back door is accomplished through the back door control unit assembly. Refer to DLK-123, "Self-Diagnosis Procedure".

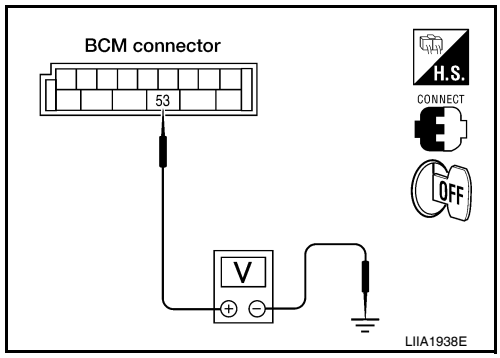
GLASS HATCH LOCK ACTUATOR

Diagnosis Procedure

INFOID:0000000004190669

1.CHECK GLASS HATCH LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.
2. Check voltage between BCM connector M19 terminal 53 and ground.



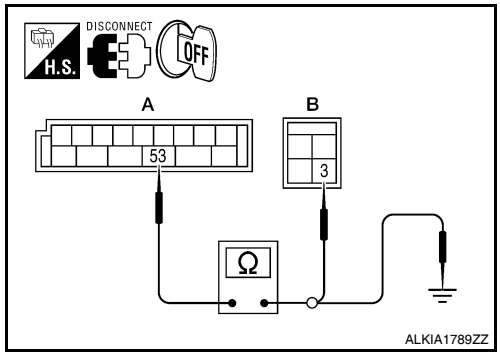
Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	53	Ground	Glass hatch switch is turned to depressed	0 → Battery voltage for 300 ms

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace BCM. Refer to BCS-56, "Removal and Installation".

2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

1. Disconnect BCM and glass hatch lock actuator.
2. Check continuity between BCM connector (A) M19 terminal 53 and glass hatch lock actuator connector (B) D711 terminal 3.



Terminals		Continuity
53	3	Yes

3. Check continuity between BCM connector M19 terminals 53 and ground.

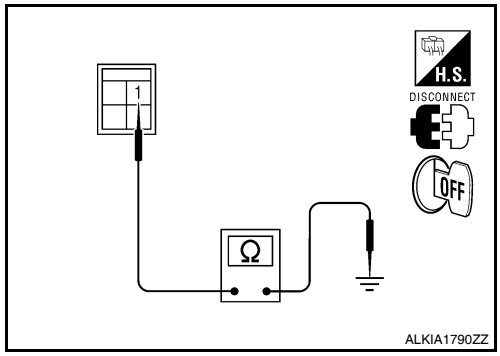
Terminals		Continuity
53	Ground	No

Is the inspection result normal?

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

3.CHECK GLASS HATCH LOCK ACTUATOR GROUND CIRCUIT

Check continuity between glass hatch lock actuator connector D711 terminal 1 and ground.



Terminals		Continuity
1	Ground	Yes

Is the inspection result normal?

YES >> Replace glass hatch lock actuator. Refer to DLK-244, "Door Lock Assembly".
NO >> Repair or replace harness.

PASSENGER SELECT UNLOCK RELAY

Description

INFOID:0000000003775762

Controls the operation of both rear door lock actuators.

Component Function Check

INFOID:0000000003775763

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Passenger select unlock relay is OK.
NO >> Refer to DLK-93, "Component Function Check".

Diagnosis Procedure

INFOID:0000000003775764

1.CHECK PASSENGER SELECT UNLOCK RELAY CIRCUIT

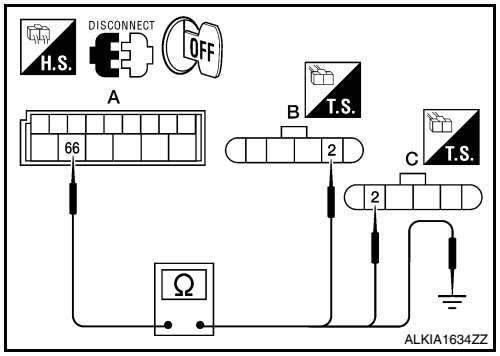
NOTE:
Passenger select unlock relay must remain connected during this step.

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

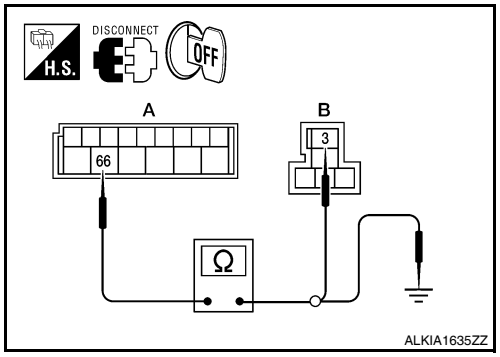
2.CHECK PASSENGER SELECT UNLOCK RELAY INPUT

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.

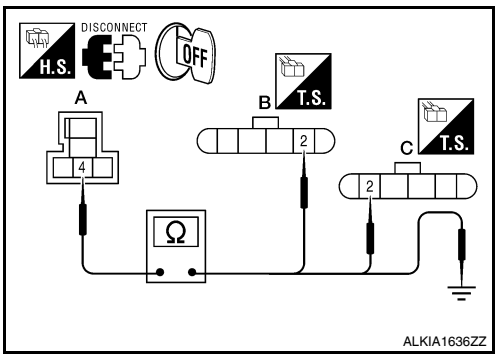
3.CHECK PASSENGER SELECT UNLOCK RELAY OUTPUT

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.



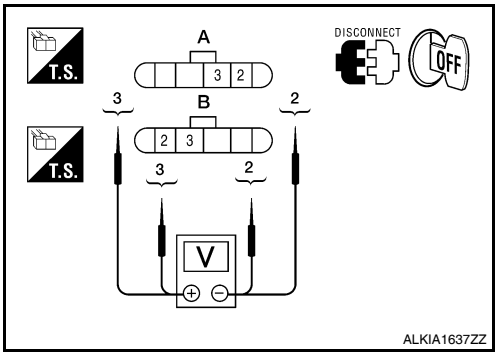
Is the inspection result normal?

YES >> Replace passenger select unlock relay.
NO >> Repair or replace harness between relay and actuator.

4. CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

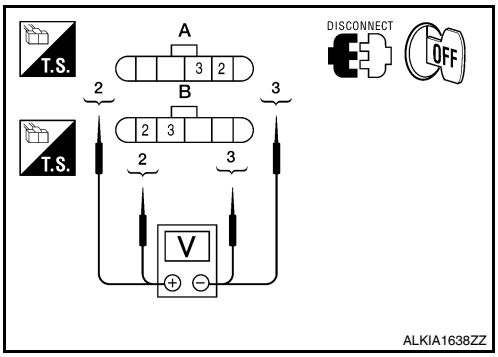
1. Reconnect BCM.
2. Check voltage between rear door lock actuator connector LH (A) D205 terminals 2 and 3 or rear door lock actuator connector RH (B) D305 terminals 2 and 3.

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

Description

INFOID:0000000003775765

Answers back and warns for an inappropriate operation.

Component Function Check

INFOID:0000000003775766

1.CHECK FUNCTION

With CONSULT-III

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

Is the inspection result normal?

YES >> Intelligent Key warning buzzer (engine room) is OK.
NO >> Refer to DLK-95, "Diagnosis Procedure".

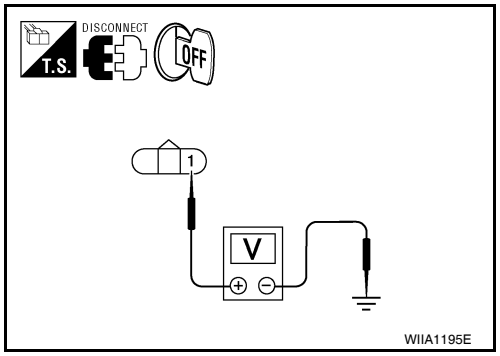
Diagnosis Procedure

INFOID:0000000003775767

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.

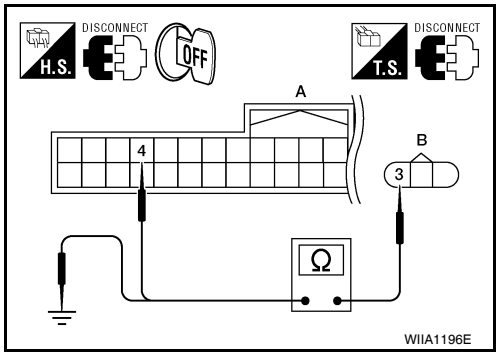
2.CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) CIRCUIT

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-96, "Component Inspection".

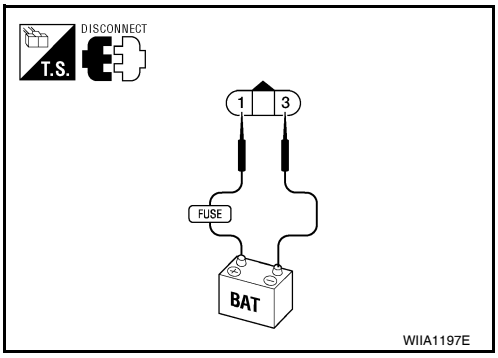
>> Inspection End.

Component Inspection

INFOID:0000000003775768

1. CHECK INTELLIGENT KEY WARNING BUZZER

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



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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace Intelligent Key warning buzzer.

OUTSIDE KEY ANTENNA

Description

INFOID:0000000003775769

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 and glass hatch switch assembly opening of the back door when the Intelligent Key is present.

Component Function Check

INFOID:0000000003775770

1.CHECK DOOR REQUEST SWITCHES

Check that door request switches operate normally.

Is the inspection result normal?

YES >> GO TO 2
NO >> Inspect door request switches. Refer to DLK-83, "Component Function Check".

2.CHECK OUTSIDE KEY 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-97, "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 switch is operated?

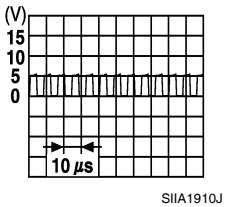
YES >> Outside key antennas are OK.
NO >> Refer to DLK-136, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775771

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 (+)	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			

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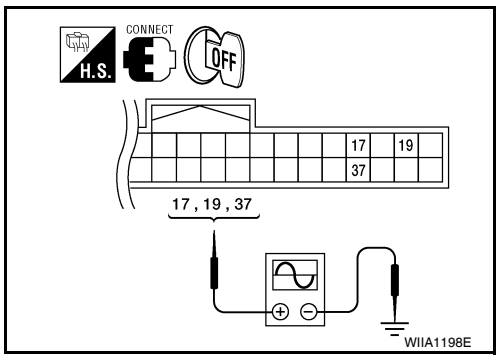

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Is the inspection result normal?

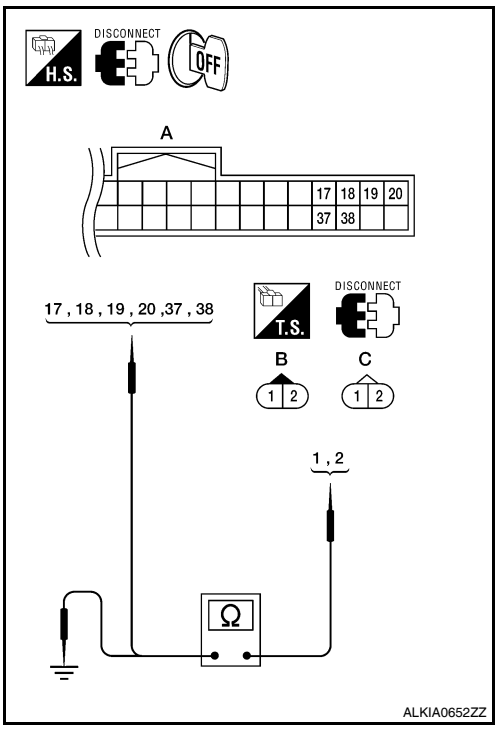
YES >> Outside key antenna is OK.
NO >> GO TO 2

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.

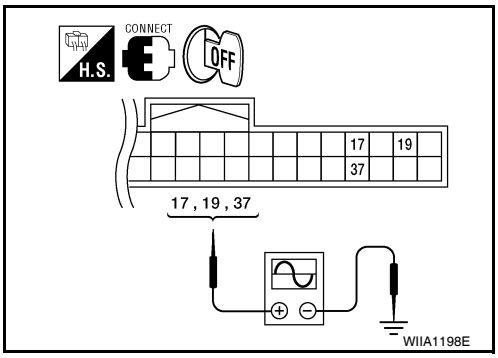
Item	Connector		Terminal	Continuity
Rear bumper antenna	C: C7	1	Ground	No
		2		
Front outside antenna LH	B: D15	1		
		2		
Front outside antenna RH	B: D115	1		
		2		

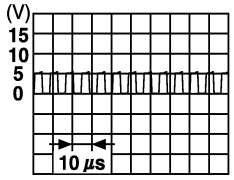
Is the inspection result normal?

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

Is the inspection result normal?

YES >> Replace outside key antenna.
NO >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

STEERING LOCK UNIT

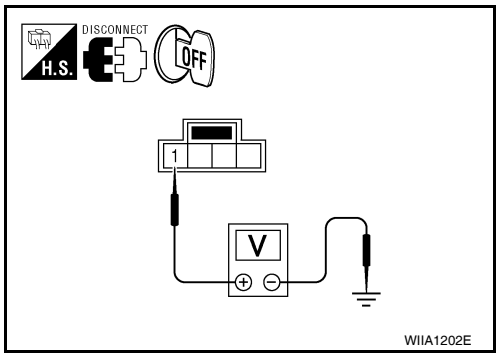
Diagnosis Procedure

INFOID:0000000003775772

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



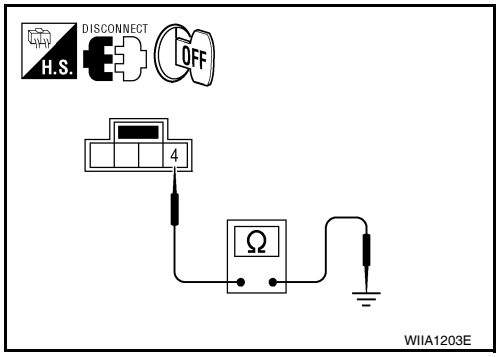
Is the inspection result normal?

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.



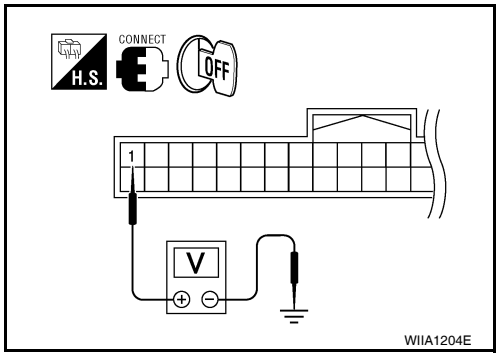
Is the inspection result normal?

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

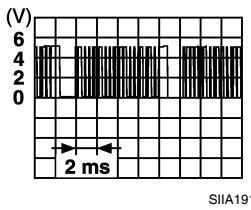


Is the inspection result normal?

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.

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

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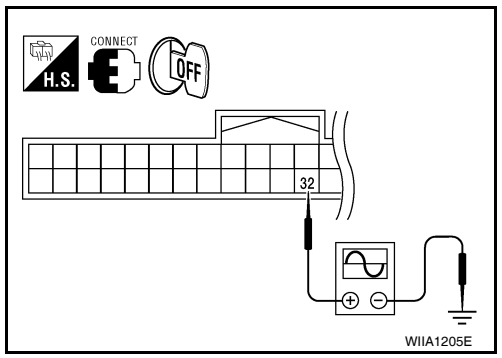

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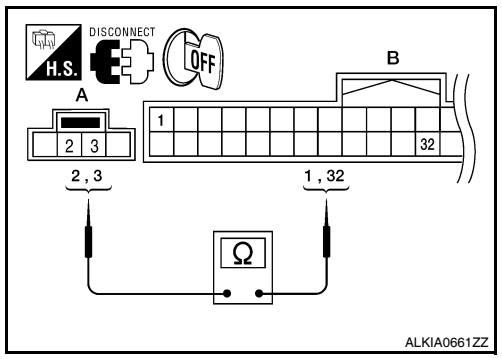
Is the inspection result normal?

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.



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Is the inspection result normal?

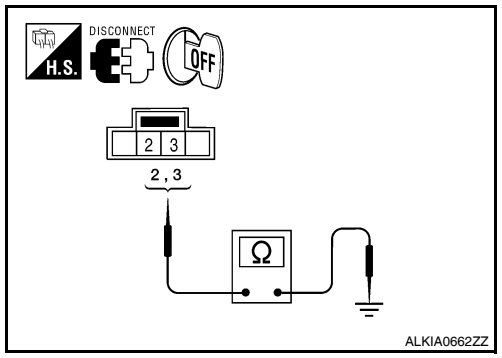
YES >> Replace steering lock solenoid.
- After replacing steering lock solenoid, perform registration procedure. Refer to SEC-11, "System Description".

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.



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Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to SEC-111, "Removal and Installation".

NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.

A/T SHIFT SELECTOR (PARK POSITION SWITCH)

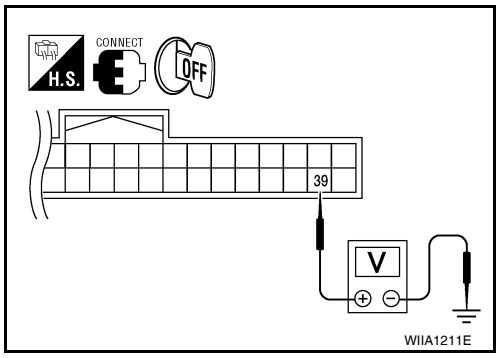
Diagnosis Procedure

INFOID:0000000003775773

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 (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M70	39	Ground	A/T shift selector is in "P" position	Battery voltage
			Other than above	0



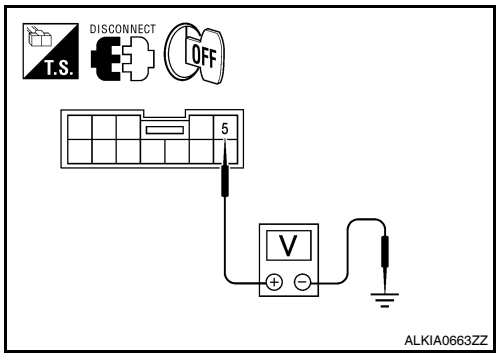
Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to SEC-111, "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.



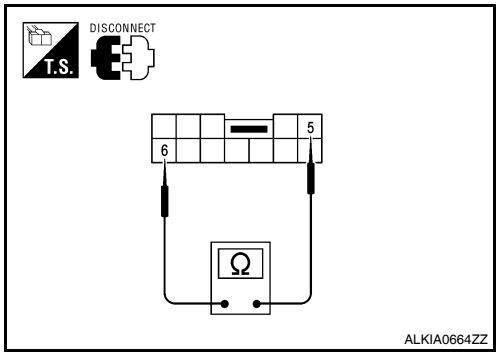
Is the inspection result normal?

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	A/T shift selector 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

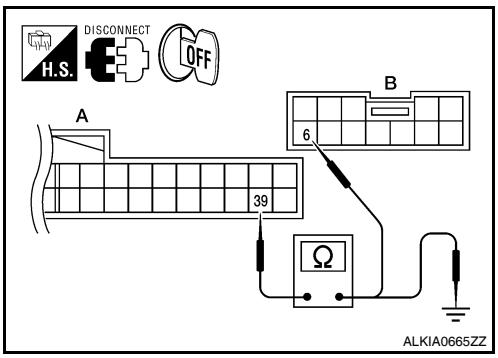
1. Disconnect Intelligent Key unit connector.

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

Description

INFOID:0000000003775774

Receives Intelligent Key operation and transmits to Intelligent Key unit.

Component Function Check

INFOID:0000000003775775

1.CHECK FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

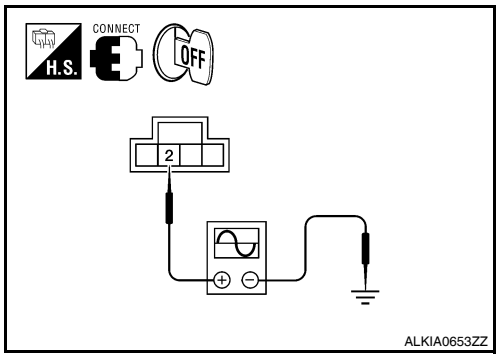
YES >> Remote keyless entry receiver is OK.
NO >> Refer to DLK-103, "Diagnosis Procedure".

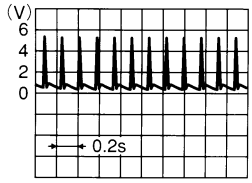
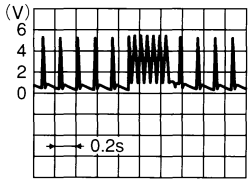
Diagnosis Procedure

INFOID:0000000003775776

1.CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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



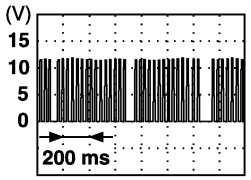
Terminals			Keyfob condition	Signal (Reference value)
(+)		(–)		
Remote keyless entry receiver connector	Terminal			
M25	2	Ground	No function	 OCC3879D
			Any button is pressed	 OCC3880D

Is the inspection result normal?

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

2.REMOTE KEYLESS ENTRY RECEIVER VOLTAGE CIRCUIT INSPECTION

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

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

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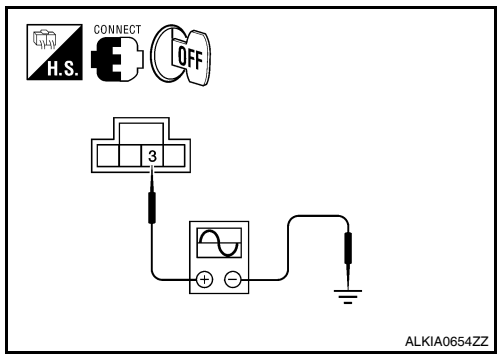

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Is the inspection result normal?

YES >> GO TO 3
NO >> GO TO 5

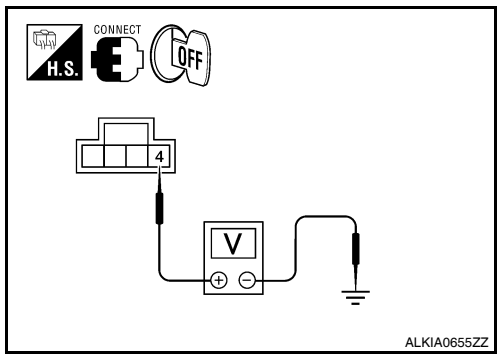
3. REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

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



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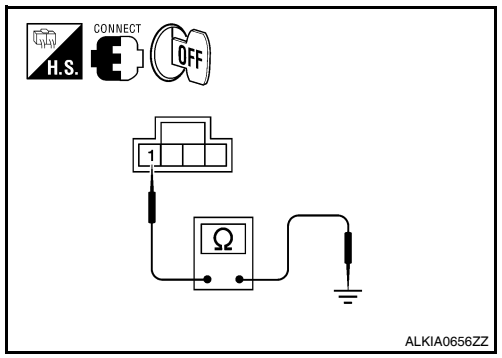
4. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

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 SEC-111, "Removal and Installation".
NO >> GO TO 5



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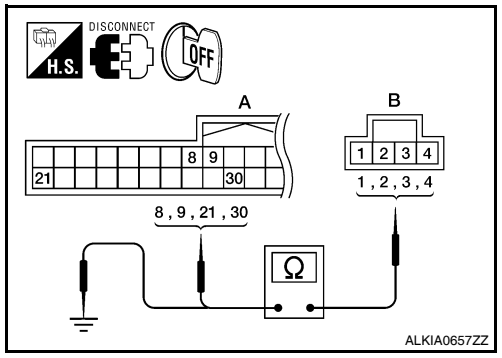
5. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

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



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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.

INTELLIGENT KEY BATTERY AND FUNCTION

Description

INFOID:0000000003775777

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:0000000003775778

1.CHECK FUNCTION

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

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

Is the inspection result normal?

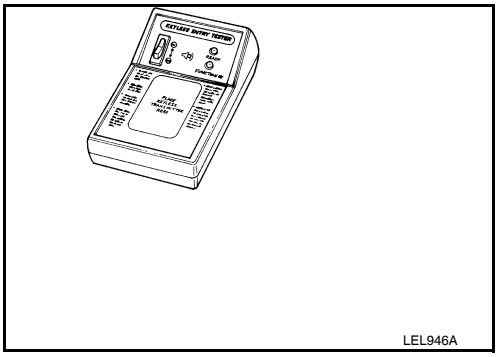
YES >> Intelligent Key is OK.
NO >> Refer to DLK-106, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775779

1.CHECK INTELLIGENT KEY FUNCTION

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

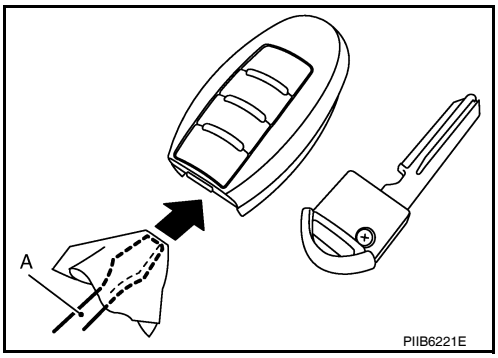


Does the test pass?

YES >> Intelligent Key is OK.
NO >> GO TO 2

2. CHECK INTELLIGENT KEY COMPONENTS

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. Remove the Intelligent Key battery.
   CAUTION:
   - **Keep dirt, grease, and other foreign materials off the electrode contact area.**
4. Visually inspect keyfob internal components.

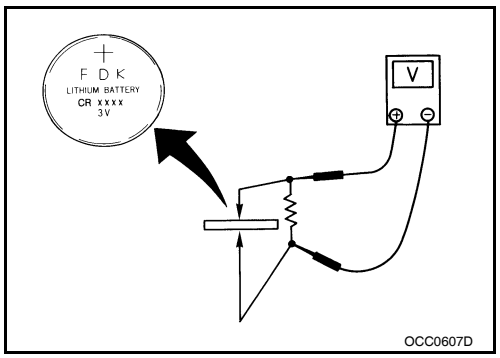


Is the inspection result normal?

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

3.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 >> Intelligent Key battery is OK. Check remote keyless entry receiver. Refer to DLK-103, "Component Function Check".

NO >> GO TO 4

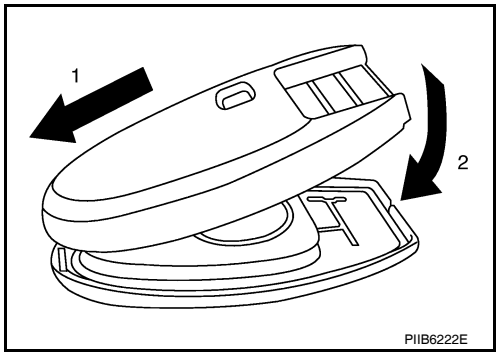
4. REPLACE INTELLIGENT KEY BATTERY

1. Replace the Intelligent Key battery.
2. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

CAUTION:

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

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



Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Check remote keyless entry receiver. Refer to DLK-103, "Component Function Check".

HORN FUNCTION

Description

INFOID:0000000003775782

Perform answer-back for each operation with horn.

Component Function Check

INFOID:0000000003775783

1.CHECK FUNCTION

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

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

Is the operation normal?

YES >> Inspection End.
NO >> Go to DLK-108, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775784

1.CHECK HORN FUNCTION

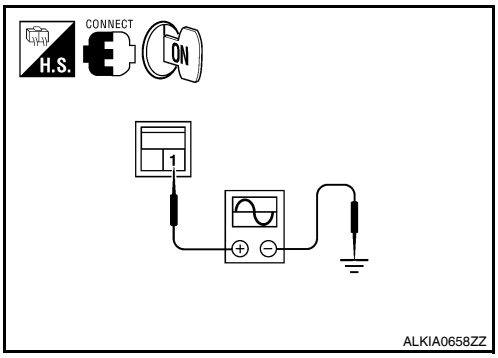
Check horn function with horn switch

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-III.
3. Using an oscilloscope or analog voltmeter, check voltage between horn relay harness connector and ground.



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

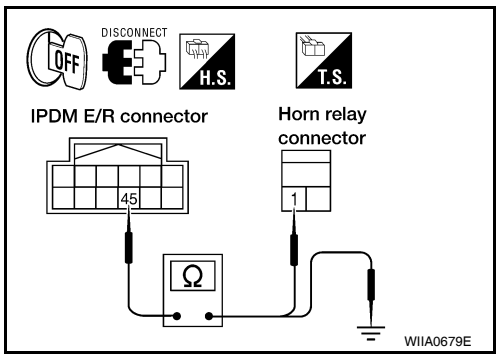
Is the inspection result normal?

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

3.CHECK HORN RELAY CIRCUIT

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

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



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

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

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

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".
NO >> Repair or replace the malfunctioning part.

COMBINATION METER DISPLAY FUNCTION

Description

INFOID:0000000003775785

Displays each operation method guide and warning for system malfunction.

Component Function Check

INFOID:0000000003775786

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-110, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775787

1.CHECK COMBINATION METER

Refer to MWI-62, "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-38, "Intermittent Incident".

>> Inspection End.

WARNING CHIME FUNCTION

Description

INFOID:0000000003775788

Performs operation method guide and warning with buzzer.

Component Function Check

INFOID:0000000003775789

1.CHECK FUNCTION

With CONSULT-III

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

Is the inspection result normal?

Yes >> Warning buzzer into combination meter is OK.
No >> Refer to DLK-111, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775790

1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to MWI-102, "Removal and Installation".

>> Inspection End.

HAZARD FUNCTION

Description

INFOID:0000000003775791

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

Component Function Check

INFOID:0000000003775792

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-112, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000003775793

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-78, "Wiring Diagram".

KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

Diagnosis Procedure

INFOID:0000000003775794

1.CHECK KEY SWITCH

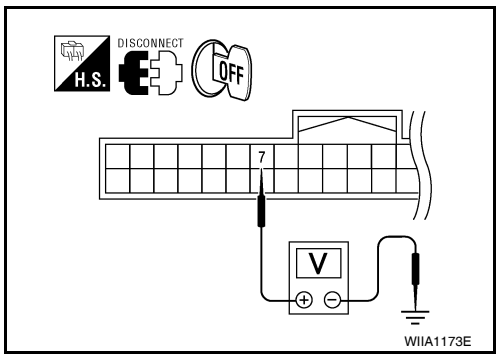
With CONSULT-III

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

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

Without CONSULT-III

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

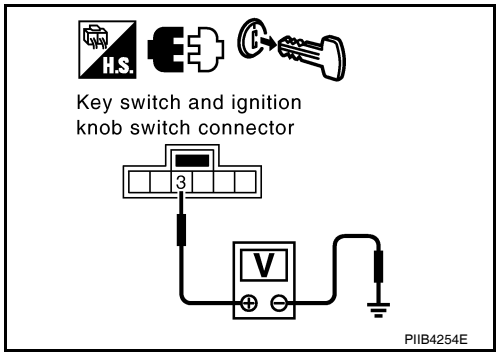
Is the inspection result normal?

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



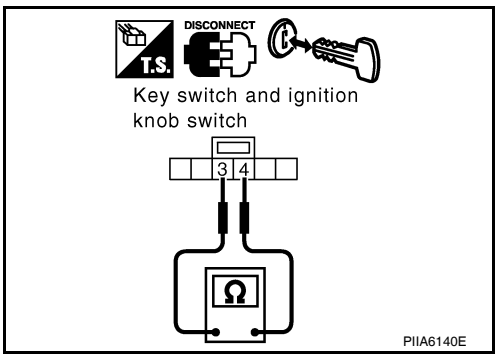
Is the inspection result normal?

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

3.CHECK KEY SWITCH OPERATION

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

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



Is the inspection result normal?

YES >> GO TO 4
NO >> Replace key cylinder assembly (built-in key switch).

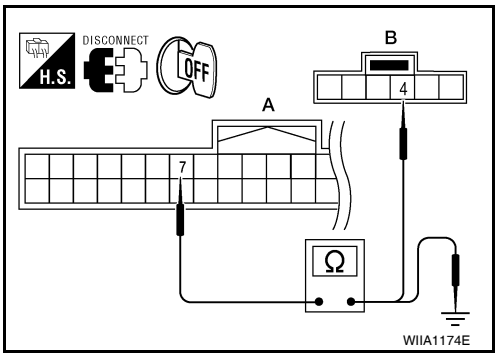
4. CHECK KEY SWITCH CIRCUIT

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

7 - 4 : Continuity should exist.

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

7 - Ground : Continuity should not exist.



Is the inspection result normal?

YES >> Check the condition of harness and harness connector.
NO >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

KEY SWITCH (BCM INPUT)

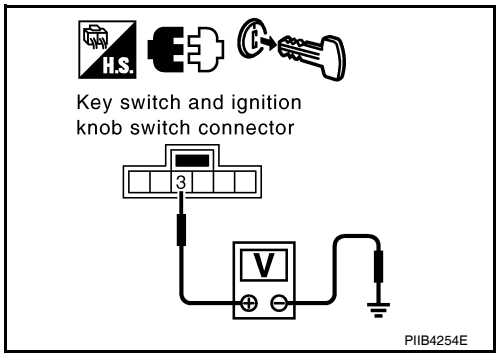
Diagnosis Procedure

INFOID:0000000003775795

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.



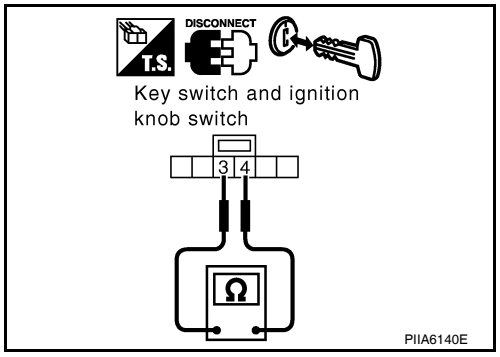
Is the inspection result normal?

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).

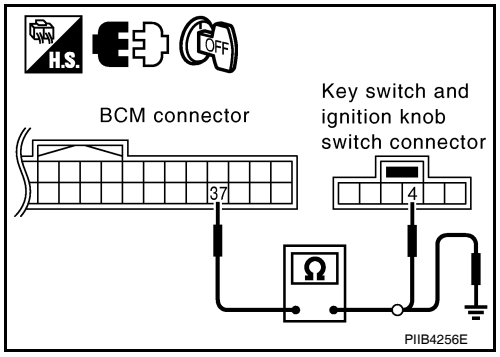
3.CHECK KEY SWITCH SIGNAL CIRCUIT

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.

IGNITION KNOB SWITCH

Ignition Knob Switch Check

INFOID:0000000003775796

1.CHECK IGNITION KNOB SWITCH

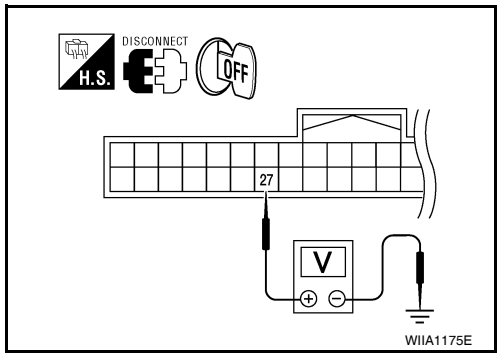
With CONSULT-III

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

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

Without CONSULT-III

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

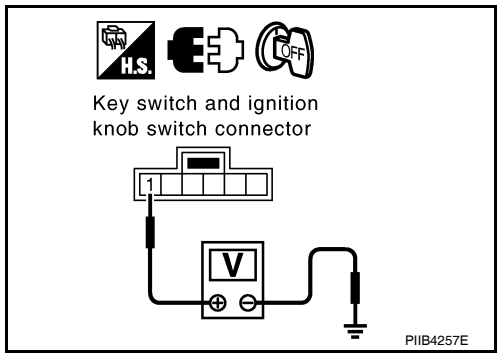
Is the inspection result normal?

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



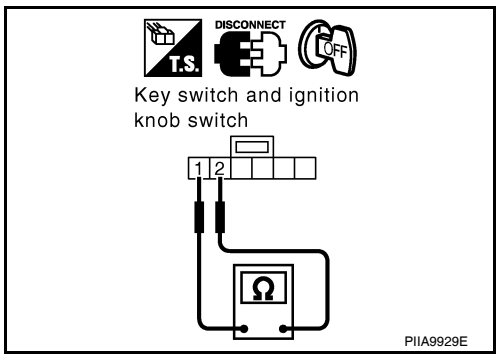
Is the inspection result normal?

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.

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



Is the inspection result normal?

YES >> GO TO 4
NO >> Replace key switch and ignition knob switch.

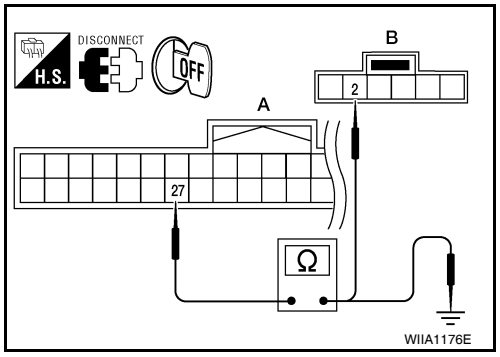
4. CHECK IGNITION KNOB SWITCH CIRCUIT

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

27 - 2 : Continuity should exist.

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

27 - Ground : Continuity should not exist.



Is the inspection result normal?

YES >> Check the condition of harness and harness connector.
NO >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:0000000003775797

1.CHECK HEADLAMP OPERATION

Do headlamps operate with headlamp switch?

YES or NO

YES >> Headlamp circuit is OK.
NO >> Check headlamp circuit. Refer to EXL-4, "Work Flow".

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

Diagnosis Procedure

INFOID:0000000003775798

1.CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.
NO >> Check map lamp circuit. Refer to INL-3, "Work Flow".

KEYFOB ID SET UP WITH CONSULT-III

ID Code Entry Procedure

INFOID:0000000003775799

KEYFOB ID SET UP WITH CONSULT-III

NOTE:

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

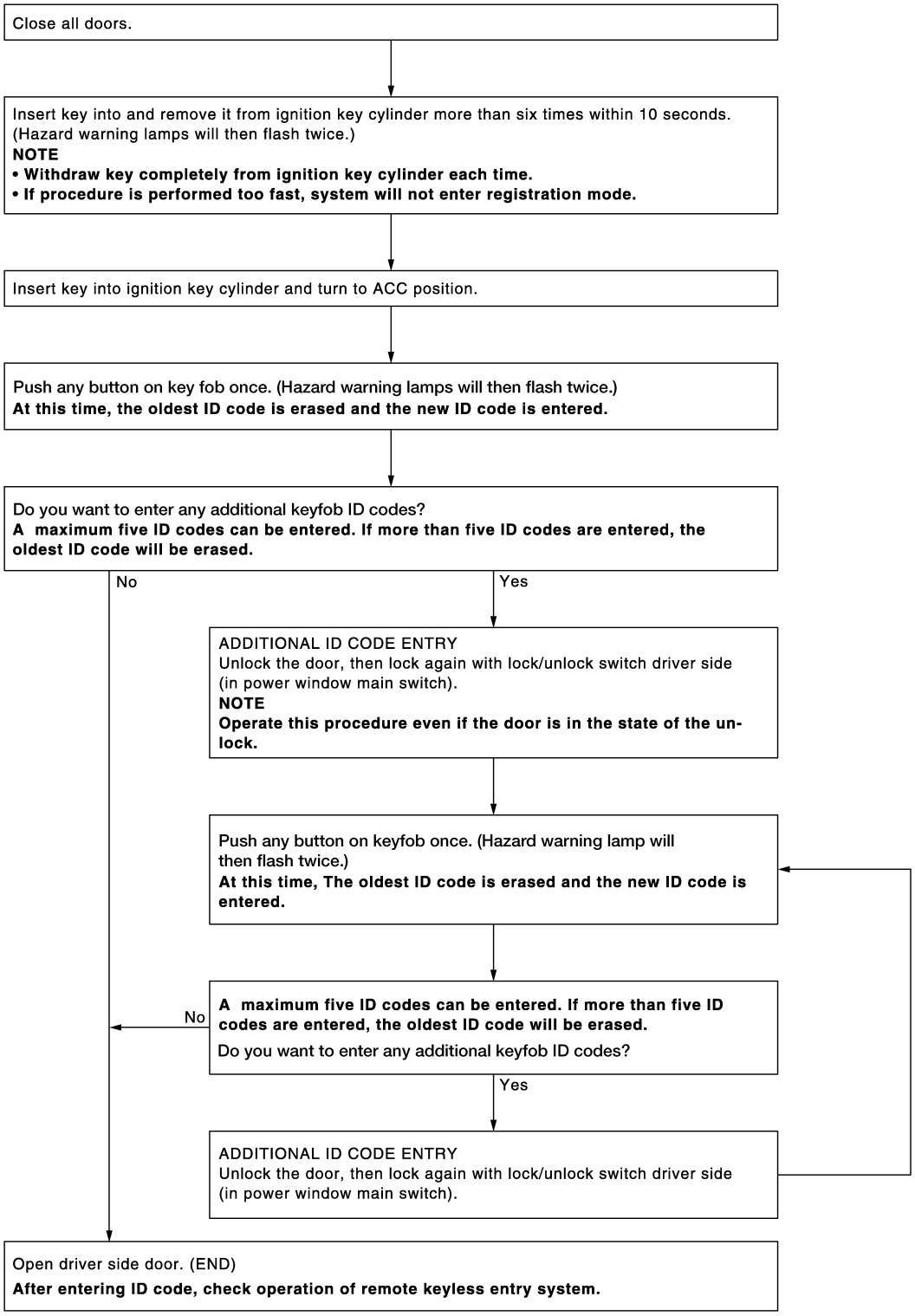
1. Turn ignition switch ON.
2. Select “BCM”.
3. Select “MULTI REMOTE ENT”.
4. Select “WORK SUPPORT”.
5. You can register, erase or confirm a keyfob ID code. To register a new code, select the following option and follow CONSULT-III instructions:
   - “REMO CONT ID REGIST”
     Use this mode to register a keyfob ID code.
     NOTE:
     Register the ID code when keyfob or BCM is replaced, or when additional keyfob is required.
   - “REMO CONT ID ERASUR”
     Use this mode to erase a keyfob ID code.
   - “REMO CONT ID CONFIR”
     Use this mode to confirm if a keyfob ID code is registered or not.

KEYFOB ID SET UP WITHOUT CONSULT-III

ID Code Entry Procedure

INFOID:0000000003775800

KEYFOB ID SET UP WITHOUT CONSULT-III



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NOTE:

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

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

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

AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

Self-Diagnosis Procedure

INFOID:0000000003775801

INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the back door control unit.
To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T shift selector 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-129
Back door close switch (CLOSE)	OFF → ON	DLK-131
Back door close switch (CANCEL)	OFF → ON	DLK-132
Back door handle switch	OFF → ON	DLK-138
A/T shift selector (park position switch)	P position → other than P position	DLK-101
Vehicle speed*	Vehicle speed	TM-49
Remote keyless entry signal	Keyfob switch OFF → ON	DLK-103
Door lock/unlock signal	LOCK → UNLOCK	DLK-74
Pinch strip LH signal	OFF → ON	DLK-133
Pinch strip RH signal	OFF → ON	DLK-133

*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 shift selector 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.

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 shift selector in P position	—
2. Back door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	DLK-243
3. Back door clutch diagnosis result	Back door clutch does not operate	DLK-243
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	DLK-243
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	DLK-243

Turn ignition switch OFF to end input signal check mode.

POWER LIFTGATE SWITCH FUNCTION

Diagnosis Procedure

INFOID:0000000003775802

1.POWER LIFTGATE SWITCH FUNCTION INSPECTION

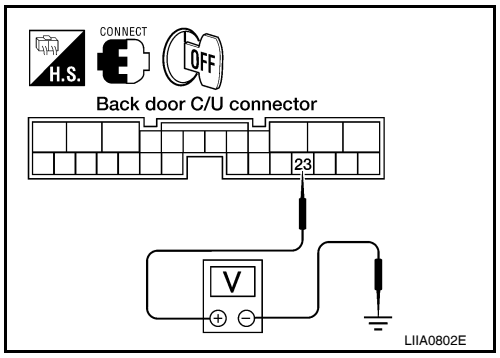
Check power liftgate switch using switch operation.

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
			OFF	Battery voltage

Is the inspection result normal?

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

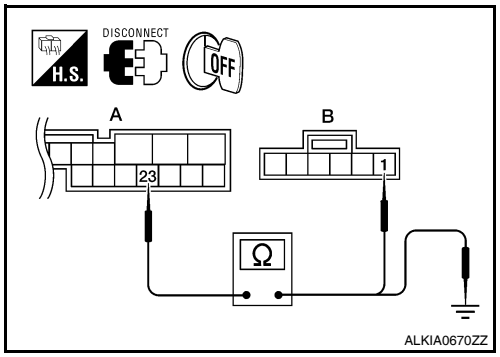
3.POWER LIFTGATE SWITCH CIRCUIT INSPECTION

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

23 - 1 : Continuity should exist.

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

23 - Ground : Continuity should not exist.



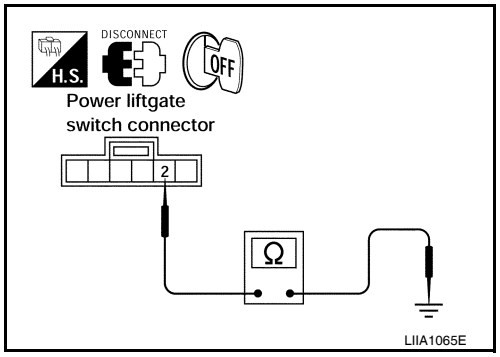
Is the inspection result normal?

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

4.POWER LIFTGATE SWITCH GROUND INSPECTION

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

2 - Ground : Continuity should exist.



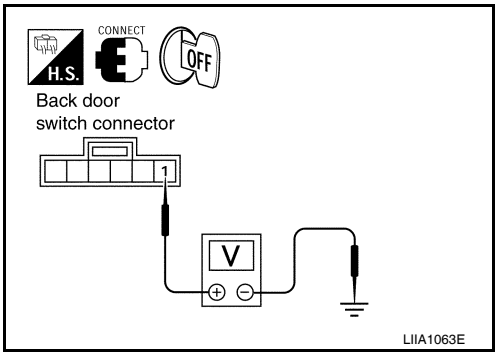
Is the inspection result normal?

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

5.POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

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

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



1 - Ground :Approx. battery voltage

Is the inspection result normal?

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

GLASS HATCH SWITCH

Diagnosis Procedure

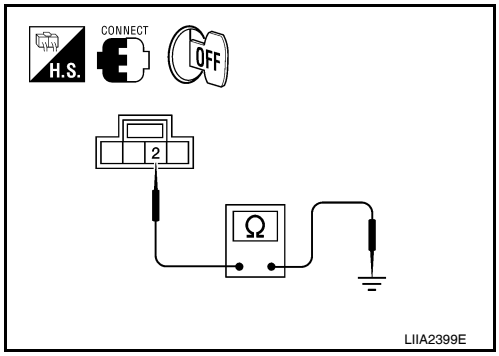
INFOID:0000000004190670

NOTE:
Repair any front door lock actuator RH malfunction before proceeding with this diagnosis.

1.CHECK GLASS HATCH SWITCH

1. Turn ignition switch OFF.
2. Insure front door lock actuator RH is in the unlock position.
3. Check continuity between glass hatch switch terminal 2 and ground.

Connector	Terminals		Condition	Continuity
	(+)	(–)		
D706	2	Ground	With the glass hatch switch pressed	Yes
			With the glass hatch switch released	No



Is the inspection result normal?

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

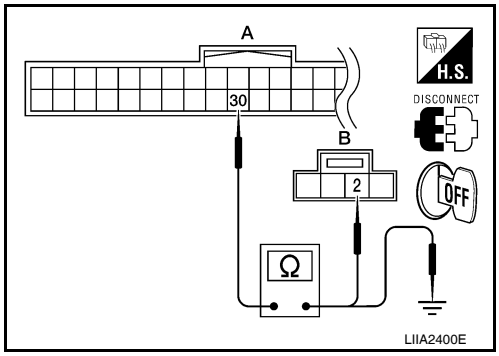
2.CHECK HARNESS CONTINUITY

1. Disconnect glass hatch switch.
2. Disconnect BCM.
3. Check continuity between BCM connector M18 (A) terminal 30 and glass hatch switch connector D706 (B) terminal 2.

30 - 2 : Continuity should exist.

4. Check continuity between BCM connector M18 (A) terminal 30 and ground.

30 - Ground : Continuity should not exist.



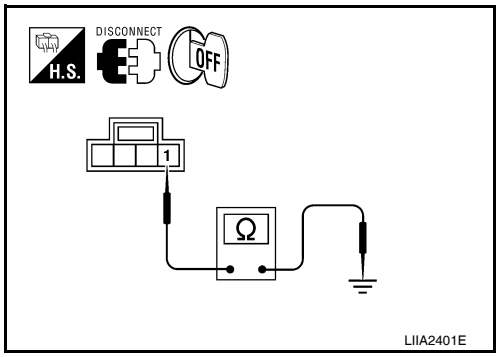
Is the inspection result normal?

YES >> Glass hatch switch circuit is OK.
NO >> Repair or replace harness.

3.CHECK GLASS HATCH SWITCH

1. Disconnect glass hatch switch.
2. Check continuity between glass hatch switch harness connector D706 terminal 1 and ground.

1 - Ground : Continuity should exist.



Is the inspection result normal?

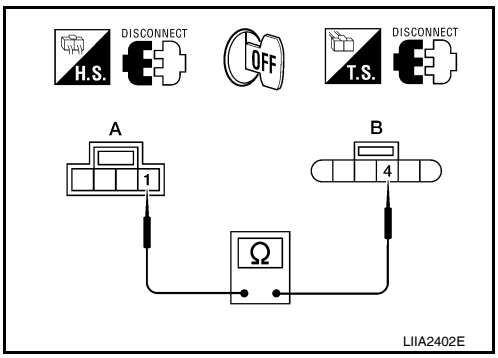
YES >> Replace glass hatch switch.
NO >> GO TO 4.

4.CHECK HARNESS CONTINUITY

1. Disconnect front door lock actuator RH.

2. Check continuity between glass hatch switch connector D706 (A) terminal 1 and front door lock actuator RH connector D114 (B) terminal 4

1 - 4 : Continuity should exist.



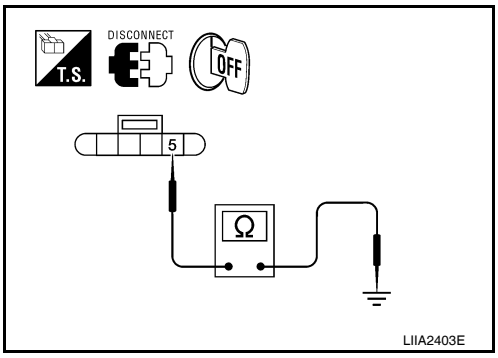
Is the inspection result normal?

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

5. CHECK FRONT DOOR LOCK ACTUATOR RH GROUND CIRCUIT

Check continuity between front door lock actuator RH connector D114 terminal 5 and ground

5 - Ground : Continuity should exist.



Is the inspection result normal?

YES >> Replace front door lock actuator RH. Refer to DLK-238, "Removal and Installation".
NO >> Repair or replace harness.

GLASS HATCH AJAR SWITCH

Diagnosis Procedure

INFOID:0000000003775803

1.CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

With CONSULT-III
Check glass hatch ajar switch ("TRNK OPN MNTR") in DATA MONITOR mode with CONSULT–III.
- When glass hatch is open:

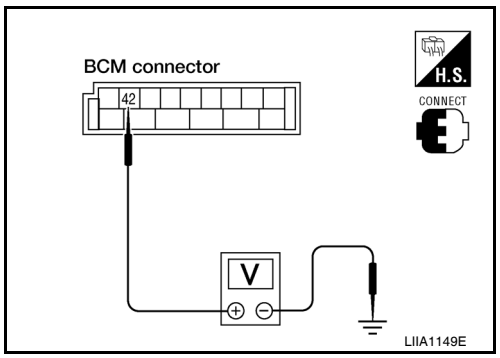
TRNK OPN MNTR : ON

- When glass hatch is closed:

TRNK OPN MNTR : OFF

Without CONSULT-III
Check voltage between BCM connector M19 terminal 42 and ground.

Connector	Item	Terminals (+)	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.

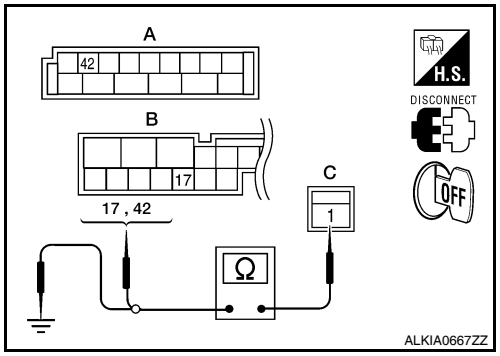
42 - 1 : Continuity should exist.

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.



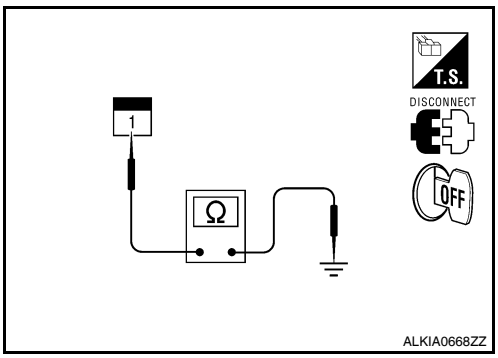
Is the inspection result normal?

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.

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



Is the inspection result normal?

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

BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

Diagnosis Procedure

INFOID:0000000003775804

1.BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

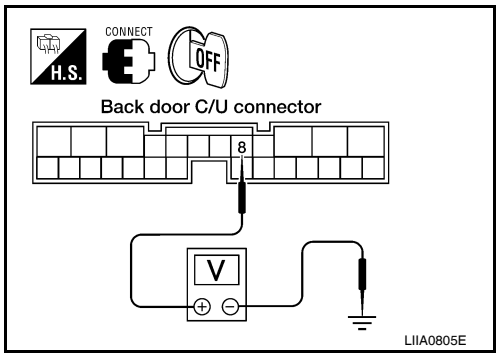
Check back door close (close) switch using switch operation.

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

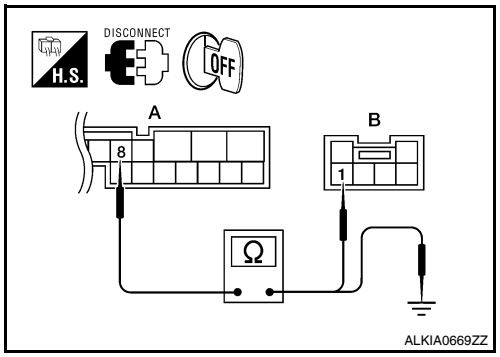
3.BACK DOOR CLOSE SWITCH CIRCUIT INSPECTION

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.

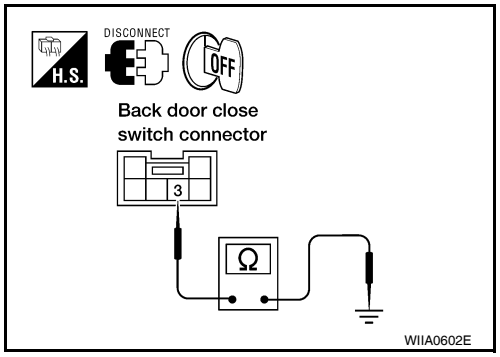
4.BACK DOOR CLOSE SWITCH GROUND INSPECTION

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

Diagnosis Procedure

INFOID:0000000003775805

1.BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

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

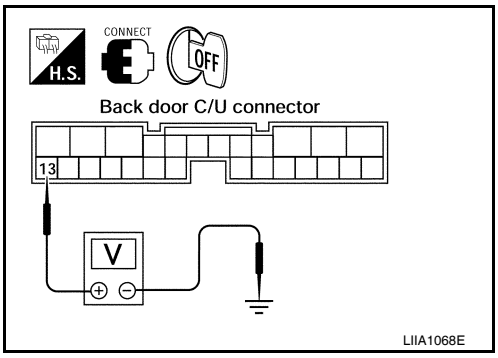
Is the inspection result normal?

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

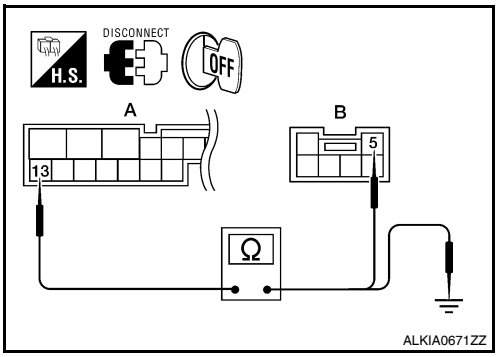
3.BACK DOOR CLOSE (CANCEL) SWITCH CIRCUIT INSPECTION

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.

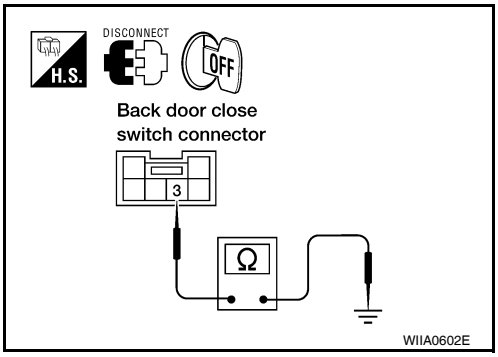
4.BACK DOOR CLOSE SWITCH GROUND INSPECTION

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.



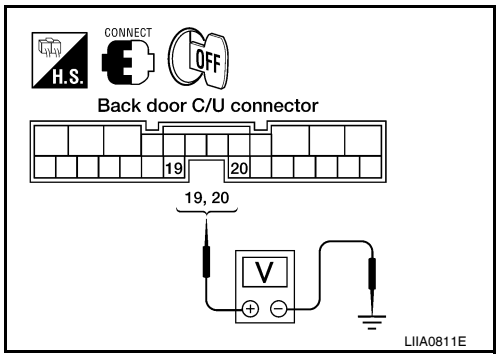
PINCH STRIP SYSTEM

Diagnosis Procedure

INFOID:0000000003775806

1.PINCH STRIP SIGNAL INSPECTION

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



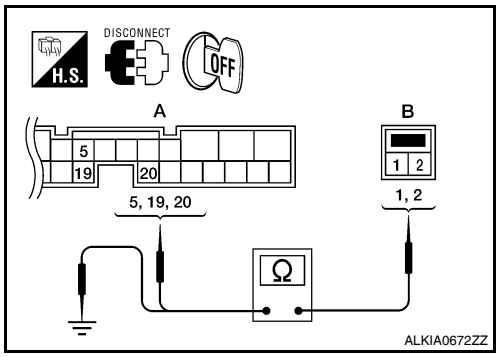
Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19	Ground	Pinch strip RH operation	0
		Other	4
20	Ground	Pinch strip LH operation	0
		Other	4

Is the inspection result normal?

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

2.PINCH STRIP CIRCUIT INSPECTION

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



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

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

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

Is the inspection result normal?

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

BACK DOOR WARNING CHIME SYSTEM

Diagnosis Procedure

INFOID:0000000003775807

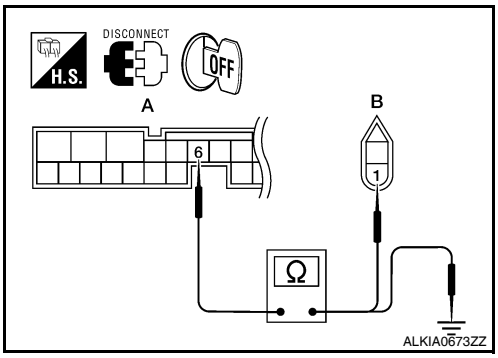
1.BACK DOOR WARNING CHIME CIRCUIT INSPECTION

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.

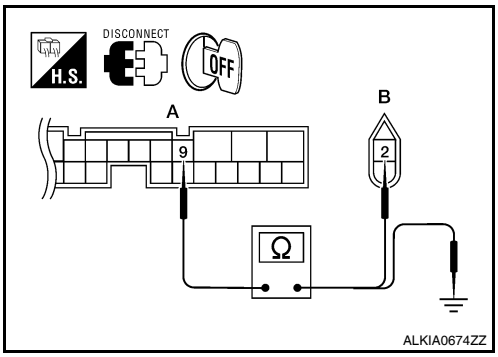
2.WARNING CHIME CIRCUIT INSPECTION

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.

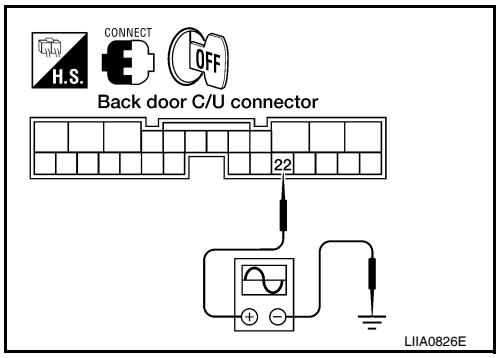
HALF-LATCH SWITCH SYSTEM

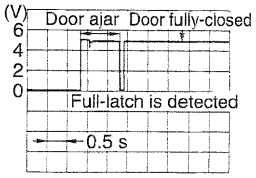
Diagnosis Procedure

INFOID:0000000003775808

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.



22 - Ground	

Is the inspection result normal?

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

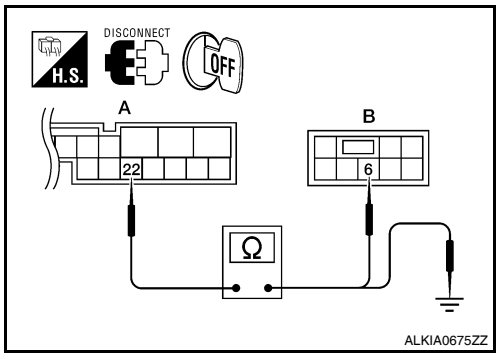
2.HALF-LATCH SWITCH CIRCUIT INSPECTION

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.

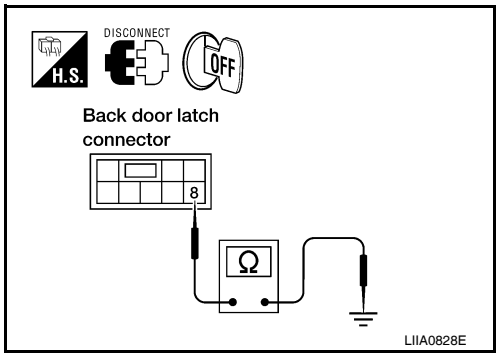
3.HALF-LATCH SWITCH GROUND INSPECTION

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.



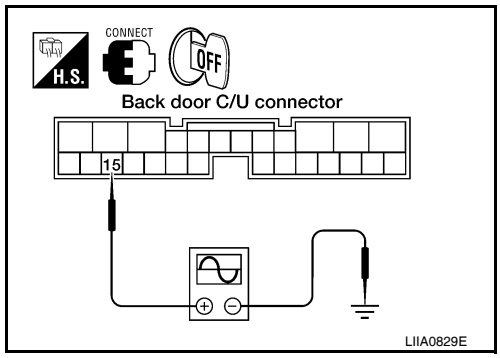
BACK DOOR OPEN SWITCH SYSTEM

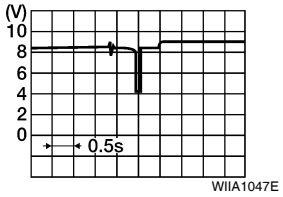
Diagnosis Procedure

INFOID:0000000003775809

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.



15 - Ground	

Is the inspection result normal?

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

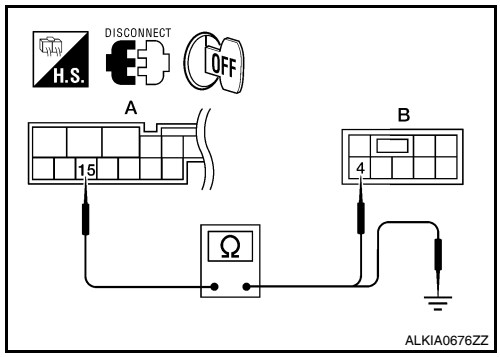
2.OPEN SWITCH CIRCUIT INSPECTION

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.



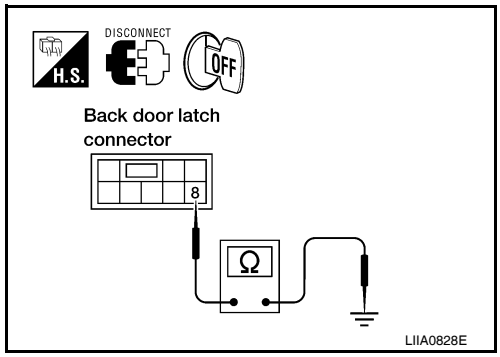
Is the inspection result normal?

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.

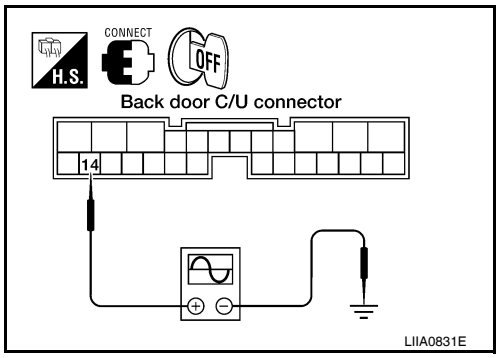
BACK DOOR CLOSE SWITCH SYSTEM

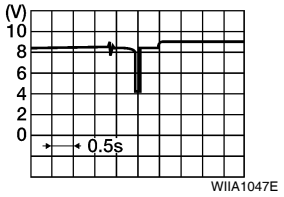
Diagnosis Procedure

INFOID:0000000003775810

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.



14 - Ground	

Is the inspection result normal?

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

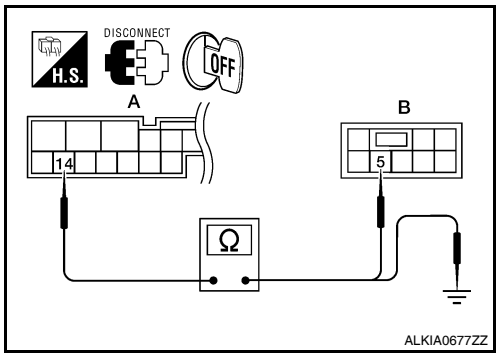
2.CLOSE SWITCH CIRCUIT INSPECTION

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.



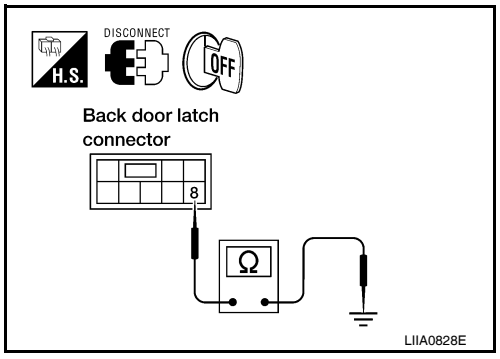
Is the inspection result normal?

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.

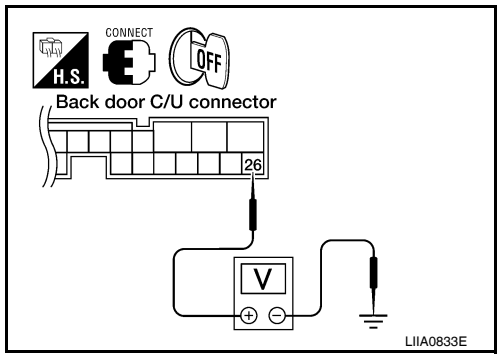
BACK DOOR SWITCH

Diagnosis Procedure

INFOID:0000000003775811

1.BACK DOOR AND GLASS HATCH SWITCH SIGNAL INSPECTION

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



Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26	Ground	Push the back door and glass hatch switch assembly (back door switch) (ON)	0
		Other (OFF)	Battery voltage

Is the inspection result normal?

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

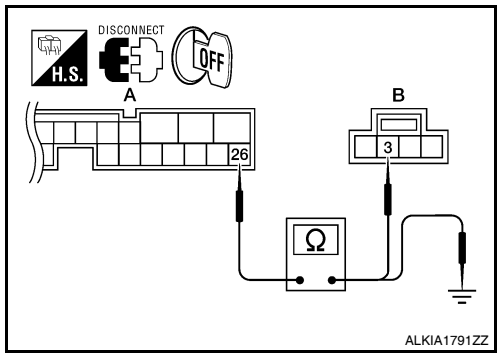
2.BACK DOOR AND GLASS HATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door and glass hatch switch assembly (back door switch) and back door control unit.
2. Check continuity between back door control unit connector (A) B55 terminal 26 and back door and glass hatch switch assembly (back door switch) connector (B) D706 terminal 3.

26 - 3 : 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 and glass hatch switch assembly (back door switch) and the back door control unit.

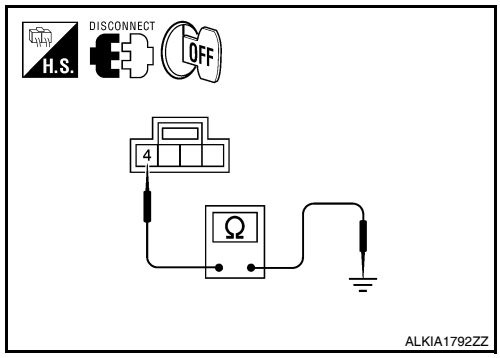
3.BACK DOOR AND GLASS HATCH SWITCH GROUND INSPECTION

Check continuity between back door and glass hatch switch assembly (back door switch) connector D706 terminal 4 and ground.

4 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Replace the back door and glass hatch switch assembly (back door switch).
NO >> Repair the harness between the back door and glass hatch switch assembly (back door switch) and ground.



CINCH LATCH MOTOR SYSTEM

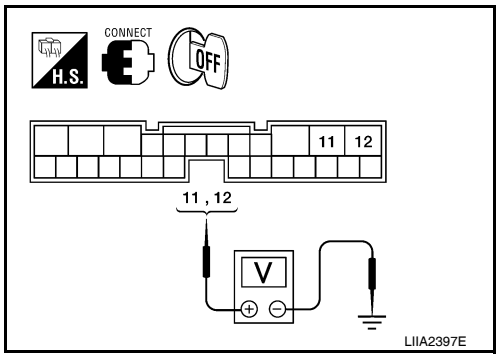
Diagnosis Procedure

INFOID:0000000003775812

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 12 - Ground	Battery voltage



Is the inspection result normal?

YES >> GO TO 2
NO >> Replace the back door control unit.

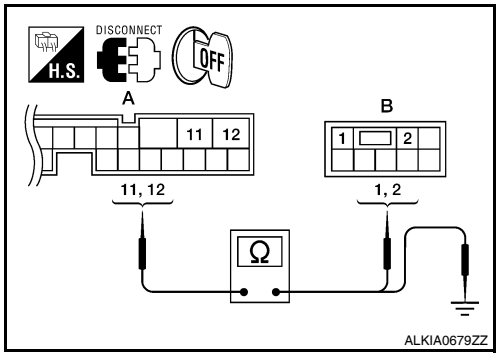
2.CINCH LATCH MOTOR CIRCUIT INSPECTION

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.



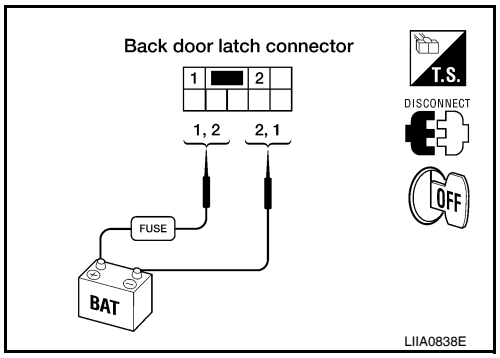
Is the inspection result normal?

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

Description

INFOID:0000000003775813

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:0000000003775814

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-138, "Diagnosis Procedure".

2.KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob respond correctly?

YES >> GO TO 3
NO >> Refer to DLK-106, "Diagnosis Procedure".

3.INTELLIGENT KEY UNIT SIGNAL INSPECTION

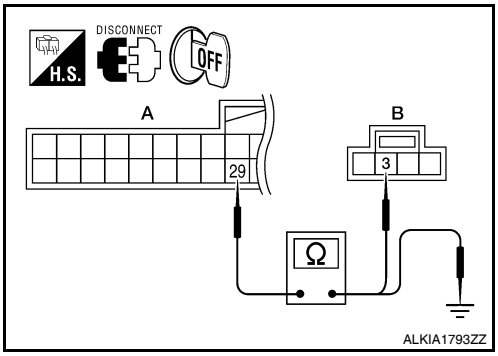
NOTE:
Since the diode is a uni-directional component, pay close attention to the polarity of the ohmmeter being used as the presence of a diode in the circuit will affect the result.

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 3.

29 (+) - 3 (-) : 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

Description

INFOID:0000000003775815

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:0000000003775816

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-125, "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-106, "Diagnosis Procedure".

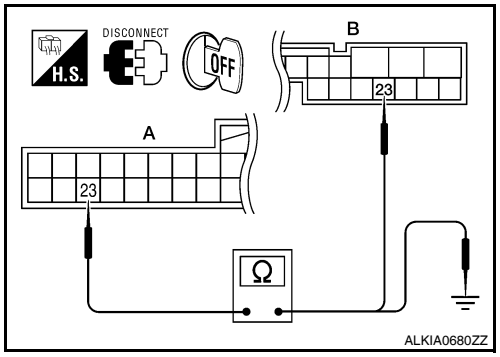
3.INTELLIGENT KEY UNIT SIGNAL INSPECTION

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?

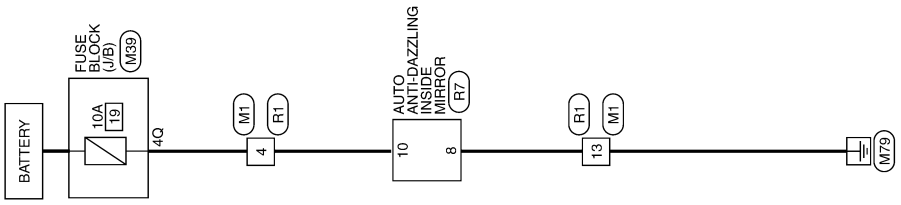
YES >> Replace Intelligent Key unit.
NO >> Repair or replace the harness as necessary.

HOMELINK UNIVERSAL TRANSCEIVER

Wiring Diagram

INFOID:0000000003775817

INTEGRATED HOMELINK TRANSMITTER



ABKWA0018GE

INTEGRATED HOMELINK TRANSMITTER CONNECTORS

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

H.S.

7	6	5	4	3	2	1
16	15	14	13	12	11	10	9	8

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

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

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

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

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

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

H.S.

5	4	3	2	1
10	9	8	7	6

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

ABKIA0056GB

Description

INFOID:0000000003775818

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:0000000003775819

1.CHECK FUNCTION

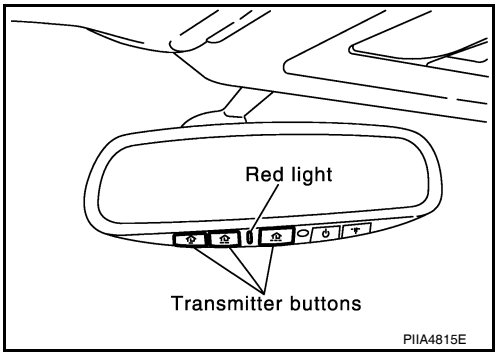
Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

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-144, "Diagnosis Procedure".

3.CHECK TRANSMITTER

Check transmitter with Tool*.
*:For details, refer to Technical Service Bulletin.

Is the inspection result normal?

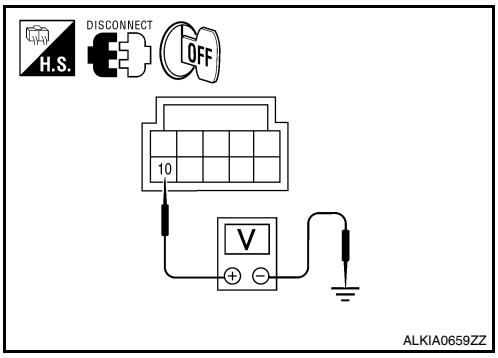
YES >> Receiver or hand-held transmitter malfunction, not vehicle related.
NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

Diagnosis Procedure

INFOID:0000000003775820

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.



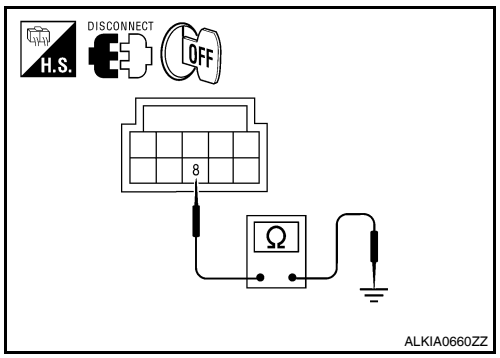
Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R7	10	Ground	Ignition switch position: LOCK	Battery voltage

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-38, "Intermittent Incident".

>> INSPECTION END.

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000004193508

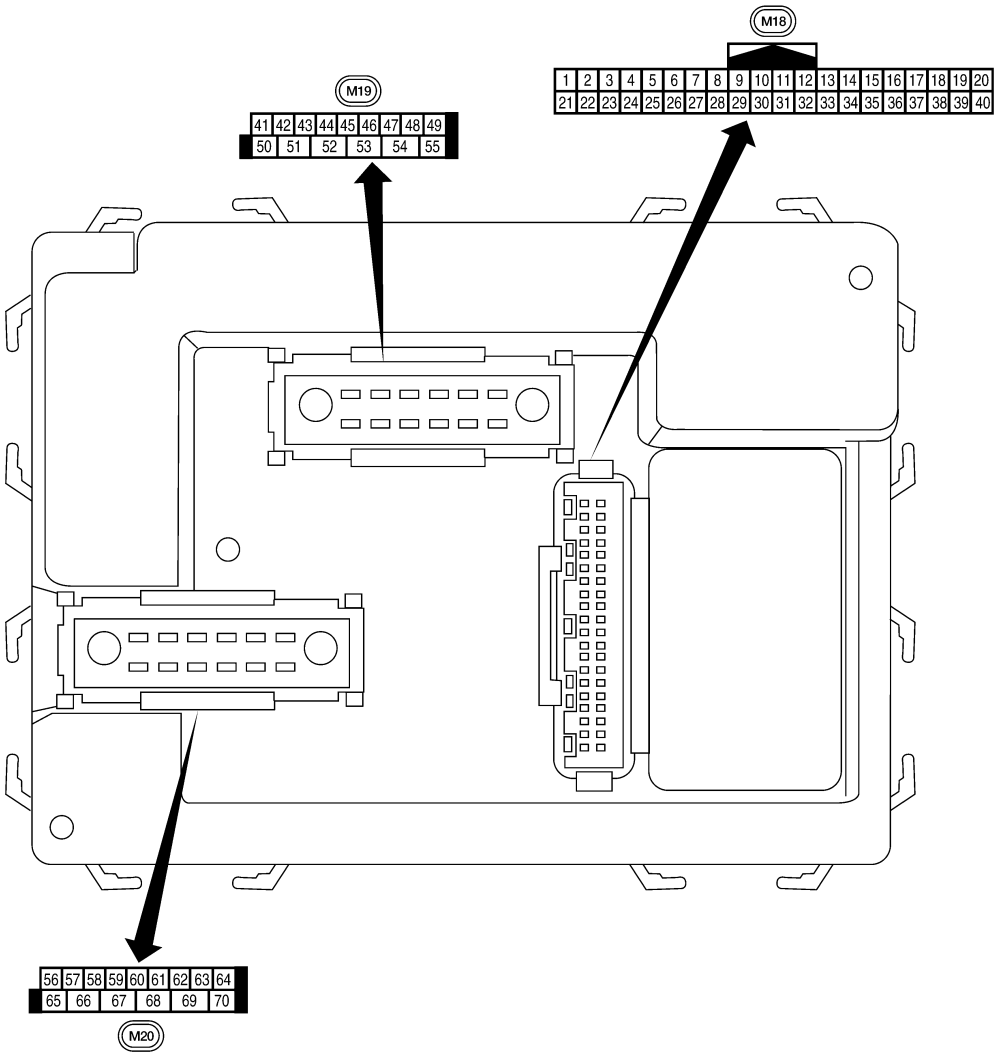
VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	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
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	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
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1st	ON

Monitor Item	Condition	Value/Status
HEADLAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEADLAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON
H/L WASH SW	**NOTE:** The item is indicated, but not monitored	OFF
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	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
OIL PRESS SW	• Ignition switch OFF or ACC • Engine running	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UN-LOCK	**NOTE:** The item is indicated, but not monitored	OFF
		ON
RR WASHER SW	Rear washer switch OFF	OFF
	Rear washer switch ON	ON
RR WIPER INT	Rear wiper switch OFF	OFF
	Rear wiper switch INT	ON
RR WIPER ON	Rear wiper switch OFF	OFF
	Rear wiper switch ON	ON
RR WIPER STOP	Rear wiper stop position	OFF
	Other than rear wiper stop position	ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	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

Terminal Layout

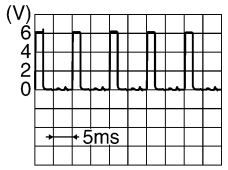
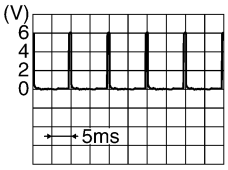
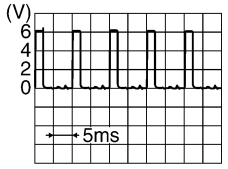
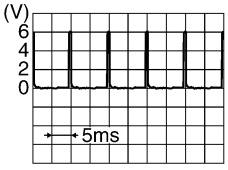
INFOID:0000000004193509

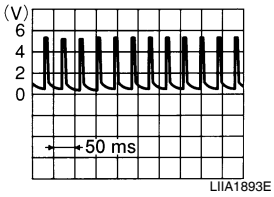
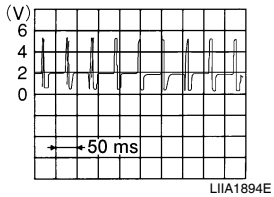
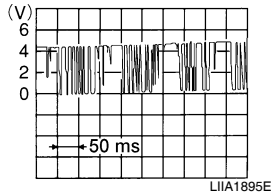
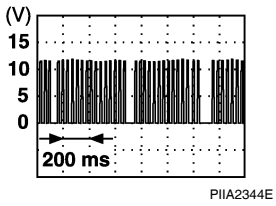


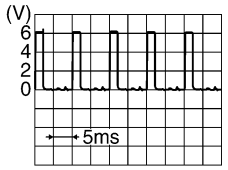
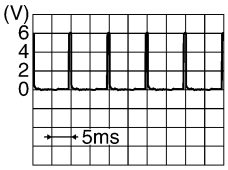
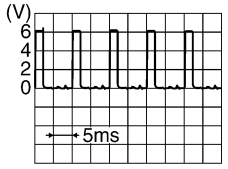
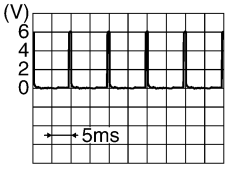
LIIA2443E

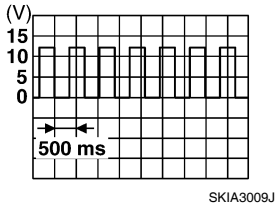
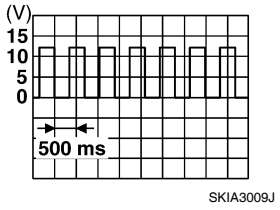
Physical Values

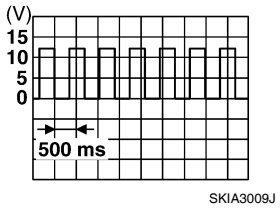
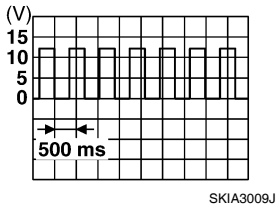
INFOID:0000000004193510

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	 SKIA5291E
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	V	Combination switch input 1				
9	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
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

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	 LIIA1893E
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 LIIA1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LIIA1895E
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	 PIIA2344E
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

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
30	Y/BR	Glass hatch switch	Input	OFF	Glass hatch switch released	0
					Glass hatch switch pressed	Battery
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	R/W	Combination switch output 1				
37	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery
43	R/B	Back door latch (door ajar switch)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
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	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
53	L/W	Glass hatch lock actuator	Output	OFF	Glass hatch switch released	0
					Glass hatch switch pressed	Battery
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
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
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	 SKIA3009J
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
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
					Any door switch: 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

Wiring Diagram — POWER DOOR LOCK SYSTEM —

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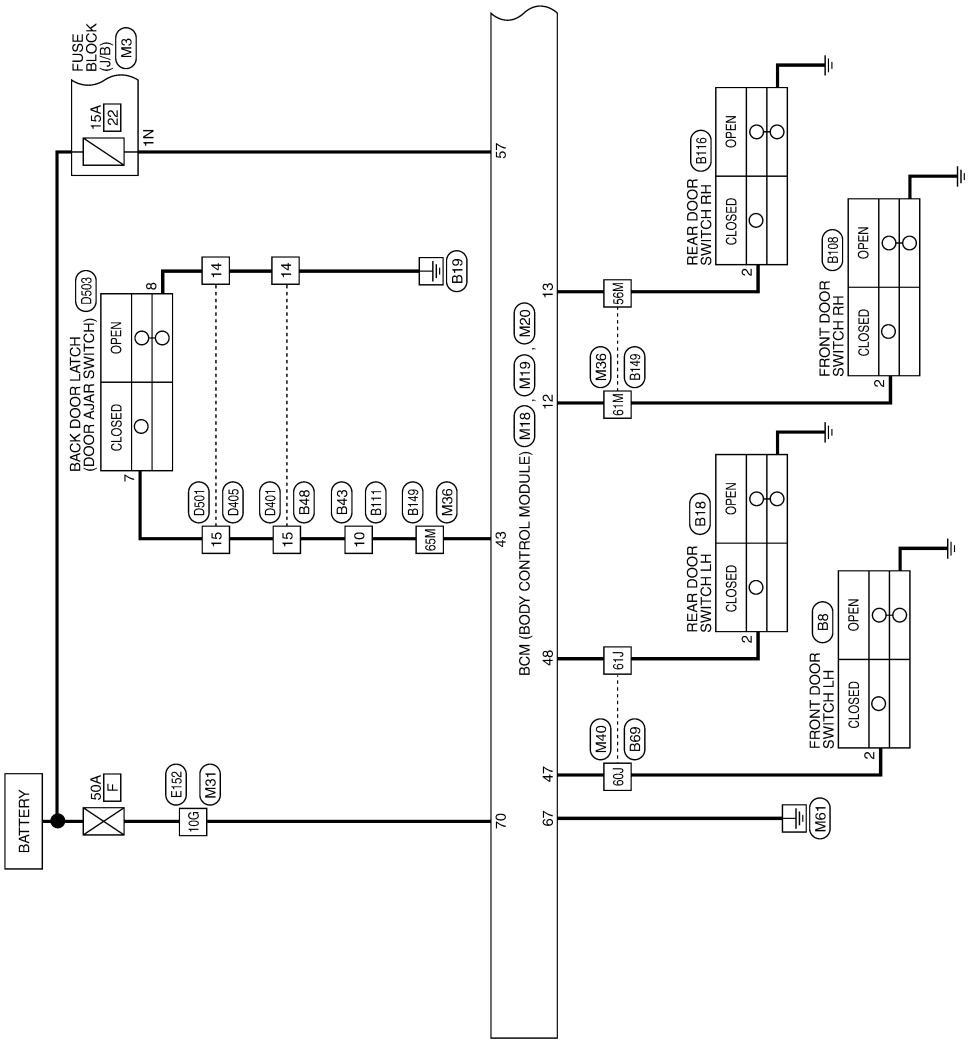
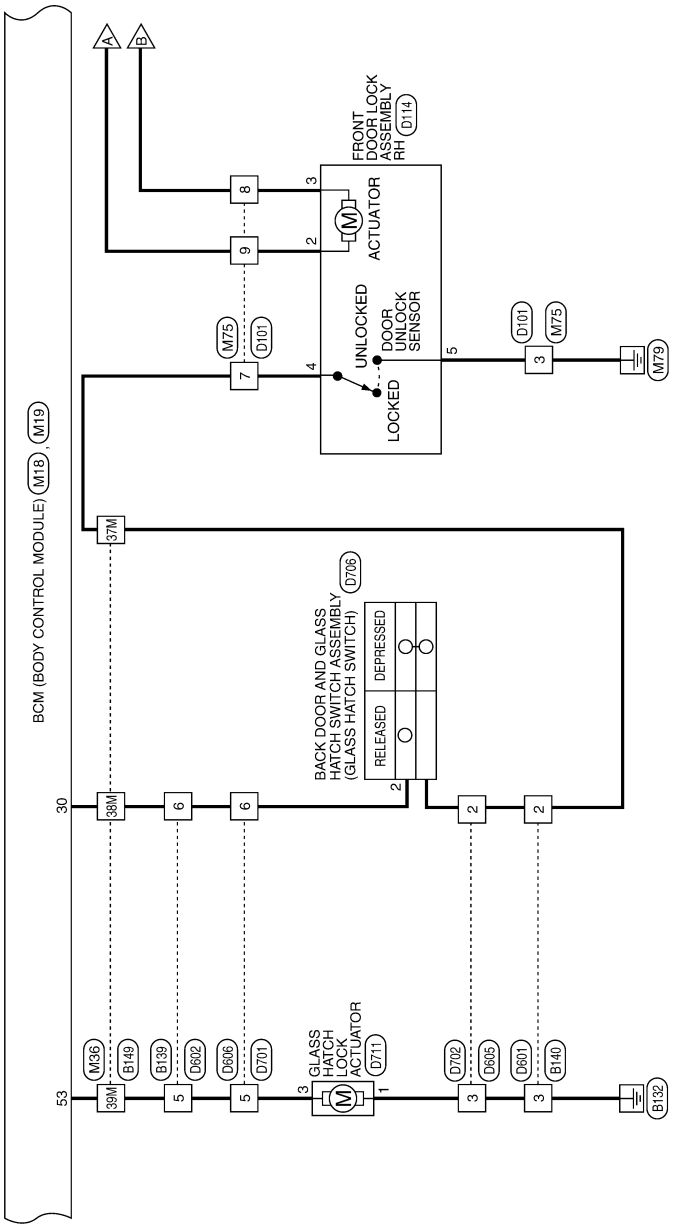
POWER DOOR LOCK SYSTEM





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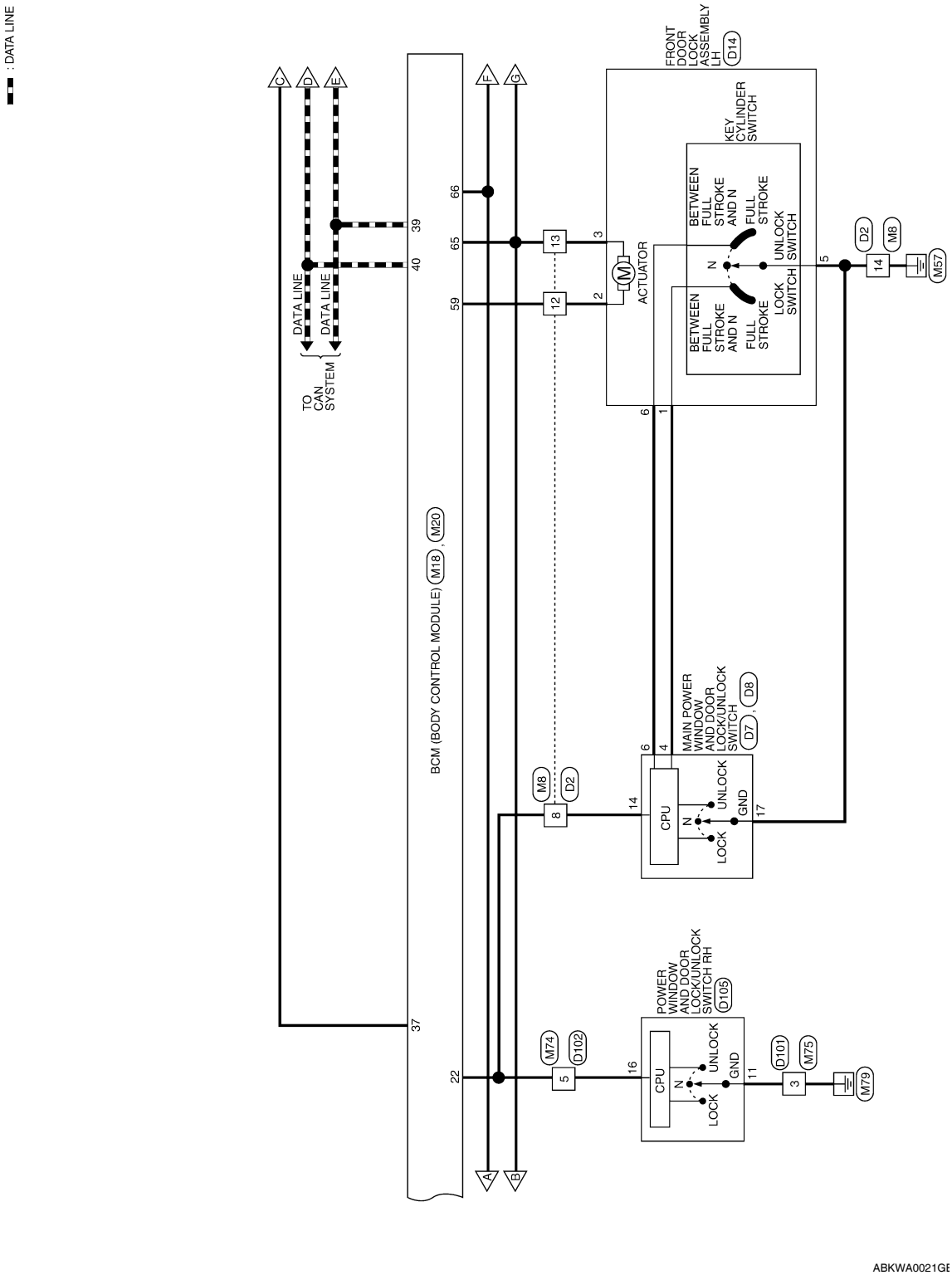
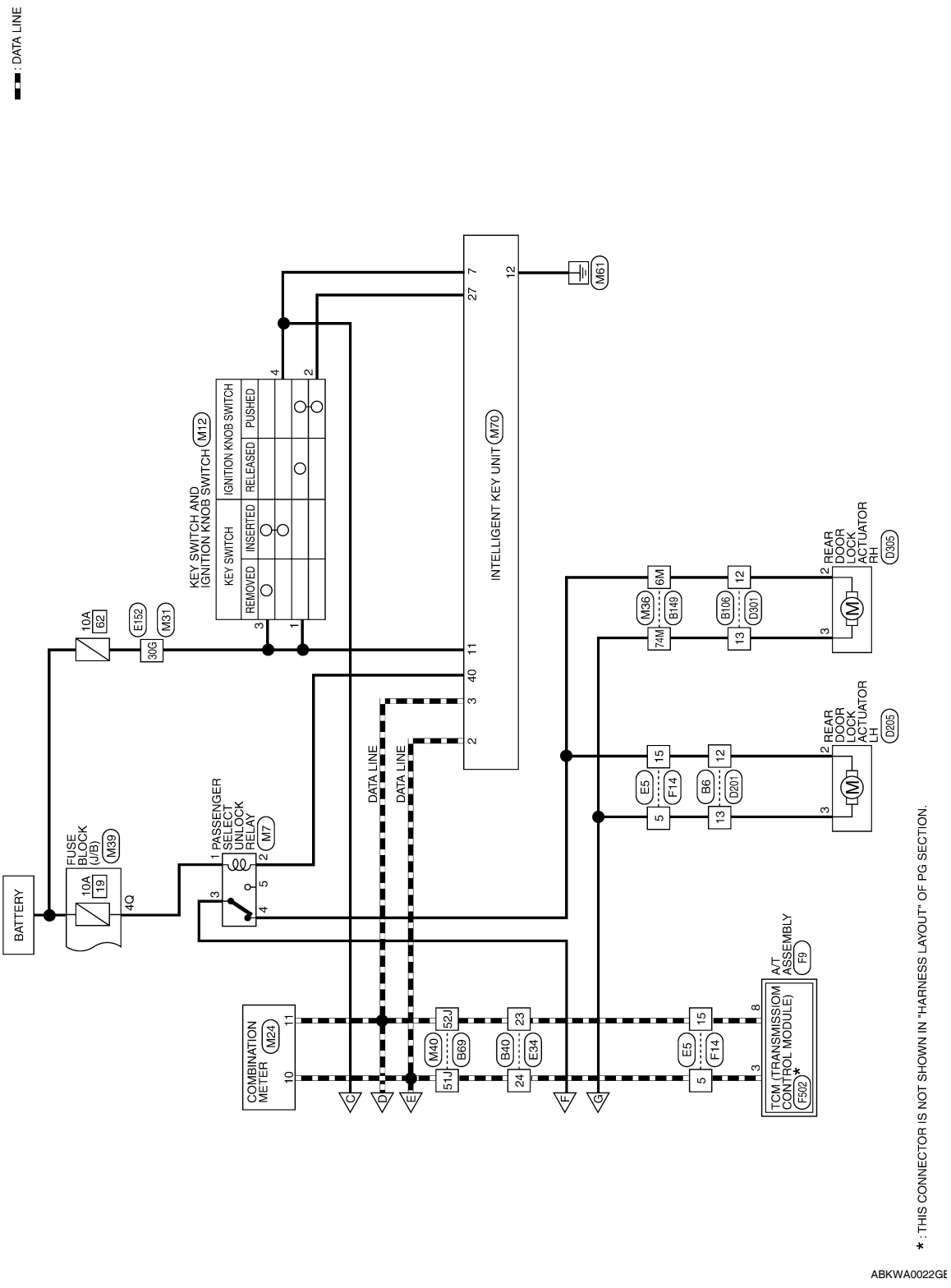
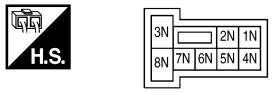

: DATA LINE
FRONT DOOR LOCK ASSEMBLY LH D14
KEY CYLINDER SWITCH
BETWEEN FULL STROKE AND N
FULL STROKE
UNLOCK SWITCH
LOCK SWITCH
ACTUATOR
DATA LINE
DATA LINE
TO CAN SYSTEM
BCM (BODY CONTROL MODULE) M18, M20
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D7, D8
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D105
CPU
UNLOCK
LOCK
GND
M8
D2
M74
D102
D101
M75
M79
M57
ABKWA0021GE


: DATA LINE
KEY SWITCH AND IGNITION KNOB SWITCH (M12)
KEY SWITCH
REMOVED
INSERTED
IGNITION KNOB SWITCH
RELEASED
PUSHED
INTELLIGENT KEY UNIT (M70)
M61
10A 62
E152
M31
30G
BATTERY
FUSE BLOCK (J/B) (M39)
10A 19
4Q
1 PASSENGER SELECT UNLOCK RELAY (M7)
DATA LINE
DATA LINE
REAR DOOR LOCK ACTUATOR RH (D305)
REAR DOOR LOCK ACTUATOR LH (D205)
M36
74M
6M
B149
B106
D301
E5
F14
B6
D201
15
12
13
5
COMBINATION METER (M24)
M40
B69
52J
51J
B40
E34
23
24
A/T ASSEMBLY (F9)
TCM (TRANSMISSION CONTROL MODULE)* (F502)
C
D
E
F
G
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABKWA0022GE

POWER DOOR LOCK SYSTEM CONNECTORS

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

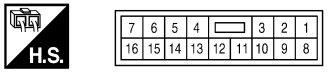


Terminal No.	Color of Wire	Signal Name
1N	Y/R	–

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

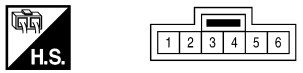
Terminal No.	Color of Wire	Signal Name
1	Y	–
2	V	–
3	G/Y	–
4	G/Y	–

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



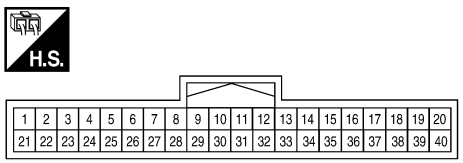
Terminal No.	Color of Wire	Signal Name
8	W/V	–
12	G	–
13	V	–
14	B	–

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	Y	–
2	R/B	–
3	Y	–
4	B/R	–

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



Terminal No.	Color of Wire	Signal Name
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)

Terminal No.	Color of Wire	Signal Name
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
30	Y/BR	GLASS HATCH OPENER
37	B/R	KEY SW
39	L	CAN-H
40	P	CAN-L

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

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

H.S.

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

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

Terminal No.	Color of Wire	Signal Name
10G	W/B	–
30G	Y	–

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

H.S.

			5G	4G	3G	2G	1G					
				10G	9G	8G	7G	6G				
21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G		
	30G	29G	28G	27G	26G	25G	24G	23G	22G			
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G		
	50G	49G	48G	47G	46G	45G	44G	43G	42G			
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G		
	70G	69G	68G	67G	66G	65G	64G	63G	62G			
				75G	74G	73G	72G	71G				
					80G	79G	78G	77G	76G			

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

H.S.

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)
53	L/W	GLASS ACTUATOR OUTPUT

Connector No.	M24
Connector Name	COMBINATON METER
Connector Color	WHITE

H.S.

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

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

ABKIA0186GB

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

H.S.

3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

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

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

H.S.

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
2	L	CAN-H
3	P	CAN-L
7	B/R	KEY SW INPUT
11	Y	BAT
12	B	GND
27	R/B	PUSH SW INPUT
40	V	AS SELECTIVE UNLOCK OUTPUT

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

H.S.

5M	4M	3M	2M	1M
	9M	8M	7M	6M
	10M			

21M	20M	19M	18M	17M	16M	15M	14M	13M	12M	11M
	30M	29M	28M	27M	26M	25M	24M	23M	22M	

41M	40M	39M	38M	37M	36M	35M	34M	33M	32M	31M
	50M	49M	48M	47M	46M	45M	44M	43M	42M	

61M	60M	59M	58M	57M	56M	55M	54M	53M	52M	51M
	70M	69M	68M	67M	66M	65M	64M	63M	62M	

75M	74M	73M	72M	71M
80M	79M	78M	77M	76M

Terminal No.	Color of Wire	Signal Name
6M	G/Y	–
37M	L/O	–
38M	Y/BR	–
39M	L/W	–
56M	GR	–
61M	R/L	–
65M	R/B	–
74M	V	–

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

H.S.

5J	4J	3J	2J	1J
	9J	8J	7J	6J
	10J			

21J	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J
	30J	29J	28J	27J	26J	25J	24J	23J	22J	

41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J
	50J	49J	48J	47J	46J	45J	44J	43J	42J	

61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J
	70J	69J	68J	67J	66J	65J	64J	63J	62J	

75J	74J	73J	72J	71J
	80J	79J	78J	77J	76J

Terminal No.	Color of Wire	Signal Name
51J	L	–
52J	P	–
60J	SB	–
61J	R/Y	–
71J	G/Y	–
73J	V	–

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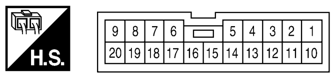
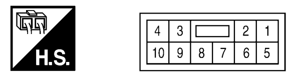
Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	BROWN



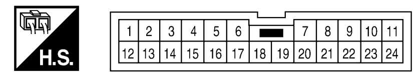
Terminal No.	Color of Wire	Signal Name
5	W/V	–

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



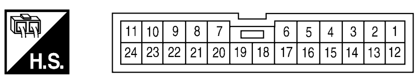
Terminal No.	Color of Wire	Signal Name
3	B	–
7	L/O	–
8	V	–
9	G/Y	–

Connector No.	E5
Connector Name	WIRE TO WIRE
Connector Color	WHITE



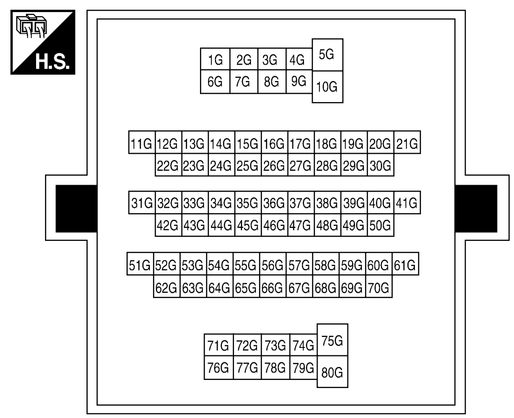
Terminal No.	Color of Wire	Signal Name
5	L	–
15	P	–

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



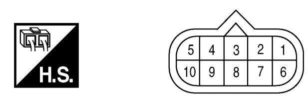
Terminal No.	Color of Wire	Signal Name
23	P	–
24	L	–

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	–
30G	Y	–

Connector No.	F9
Connector Name	A/T ASSEMBLY
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
3	L	–
8	P	–

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Connector No.	F14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

11	10	9	8	7		6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13	12

Terminal No.	Color of Wire	Signal Name
5	L	–
15	P	–

Connector No.	F502
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	GRAY

H.S.

10	9	8	7	6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	BR	CAN-H
2	L/Y	CAN-L

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

H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14	13	12	11			

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

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

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	SB	–

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

H.S.

1
2
3

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

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

H.S.

1	2	3	4	5	6		7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
23	P	–
24	L	

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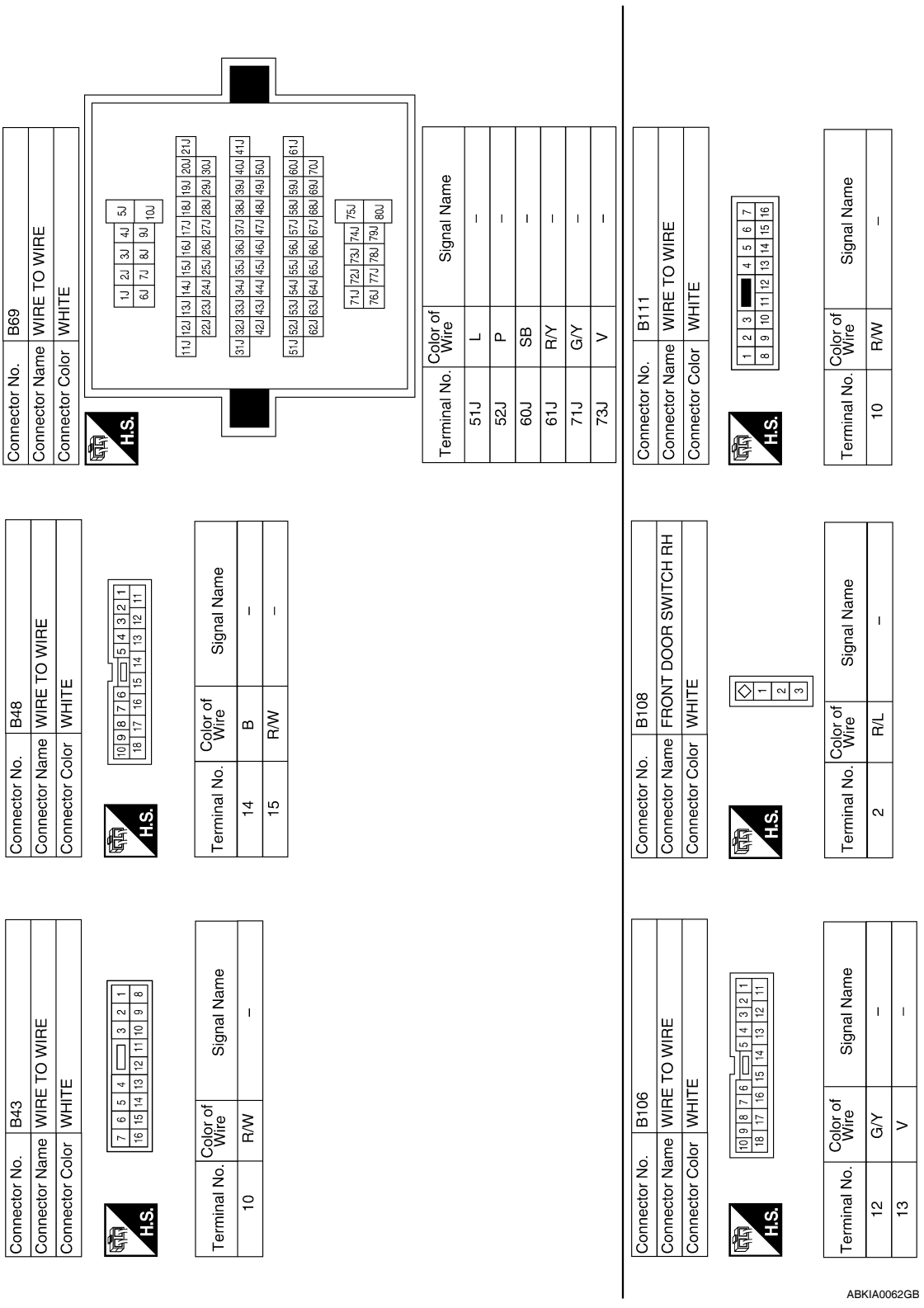

Connector No. B69
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1J 2J 3J 4J 5J
6J 7J 8J 9J 10J
11J 12J 13J 14J 15J 16J 17J 18J 19J 20J 21J
22J 23J 24J 25J 26J 27J 28J 29J 30J
31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J
42J 43J 44J 45J 46J 47J 48J 49J 50J
51J 52J 53J 54J 55J 56J 57J 58J 59J 60J 61J
62J 63J 64J 65J 66J 67J 68J 69J 70J
71J 72J 73J 74J 75J
76J 77J 78J 79J 80J
Terminal No. Color of Wire Signal Name
51J L –
52J P –
60J SB –
61J R/Y –
71J G/Y –
73J V –
Connector No. B48
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
10 9 8 7 6 5 4 3 2 1
18 17 16 15 14 13 12 11
Terminal No. Color of Wire Signal Name
14 B –
15 R/W –
Connector No. B43
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
7 6 5 4 3 2 1
16 15 14 13 12 11 10 9 8
Terminal No. Color of Wire Signal Name
10 R/W –
Connector No. B111
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
Terminal No. Color of Wire Signal Name
10 R/W –
Connector No. B108
Connector Name FRONT DOOR SWITCH RH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 R/L –
Connector No. B106
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
10 9 8 7 6 5 4 3 2 1
18 17 16 15 14 13 12 11
Terminal No. Color of Wire Signal Name
12 G/Y –
13 V –
ABKIA0062GB

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

H.S.

1
2
3

Terminal No.	Color of Wire	Signal Name
2	GR	–

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

H.S.

1	2	3	4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
5	L/W	–
6	Y/BR	–

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

H.S.

1	2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
2	L/O	–
3	B	–

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

H.S.

1M	2M	3M	4M	5M
6M	7M	8M	9M	10M

11M	12M	13M	14M	15M	16M	17M	18M	19M	20M	21M
22M	23M	24M	25M	26M	27M	28M	29M	30M

31M	32M	33M	34M	35M	36M	37M	38M	39M	40M	41M
42M	43M	44M	45M	46M	47M	48M	49M	50M

51M	52M	53M	54M	55M	56M	57M	58M	59M	60M	61M
62M	63M	64M	65M	66M	67M	68M	69M	70M

71M	72M	73M	74M	75M
76M	77M	78M	79M	80M

Terminal No.	Color of Wire	Signal Name
6M	G/Y	–
37M	L/O	–
38M	Y/BR	–
39M	L/W	–
56M	GR	–
61M	R/L	–
65M	R/W	–
74M	V	–

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

H.S.

1	2	3	4	5	6	7
8	9	10	11	12	13	14	15	16

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

ABKIA0063GB

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

H.S.

1	2	3	4	5	6

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

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

17	18	19

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

H.S.

1	2	3	4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
4	L	LOCK
6	R	UNLOCK
14	LG/W	ANTI PINCH SERIAL LINK

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

H.S.

1	2	3	4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	ANTI PINCH SERIAL LINK

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

H.S.

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19	20

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

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

H.S.

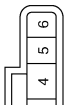
1	2	3	4
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
3	B	–
7	L/O	–
8	V	–
9	G/Y	–

ABKIA0064GB

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

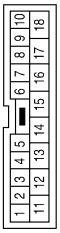
H.S.



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

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

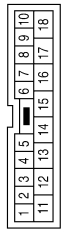
H.S.



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

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

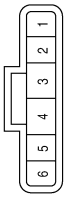
H.S.



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

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

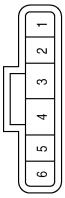
H.S.



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

Connector No.	D114
Connector Name	FRONT DOOR LOCK ASSEMBLY RH
Connector Color	BLACK

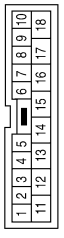
H.S.



Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK
4	L/O	–
5	B	–

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

H.S.



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

ABKIA0065GB

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

H.S.

1		2	3
4	5	6	7	8

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

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

H.S.

1	2	3	4	5		6	7	8	9	10
11	12	13	14	15	16	17	18			

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

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

H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14	13	12	11			

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

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
2	L/O	–
3	B	–

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
5	L/W	–
6	Y/BR	–

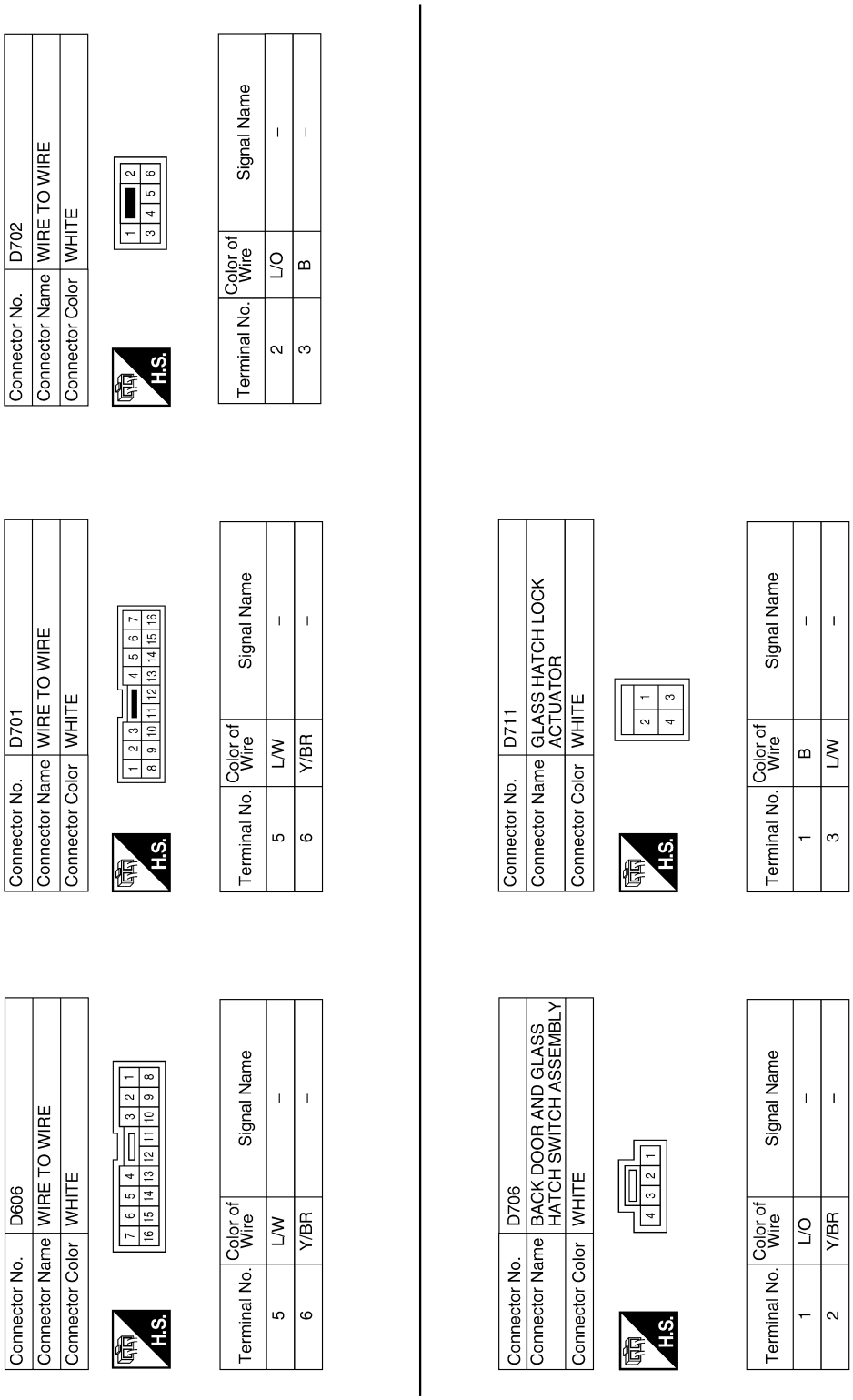
Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
2	L/O	–
3	B	–

ABKIA0066GB



AAKIA0057GB

Fail Safe

INFOID:0000000004193511

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.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

DTC Inspection Priority Chart

INFOID:0000000004193512

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

Priority	DTC
1	• U1000: CAN COMM CIRCUIT • U1010: CONTROL UNIT (CAN)
2	• 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	• C1729: VHCL SPEED SIG ERR • C1735: IGNITION SIGNAL
4	• C1704: LOW PRESSURE FL • C1705: LOW PRESSURE FR • C1706: LOW PRESSURE RR • C1707: LOW PRESSURE RL • 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:0000000004193513

NOTE:

Details of time display

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

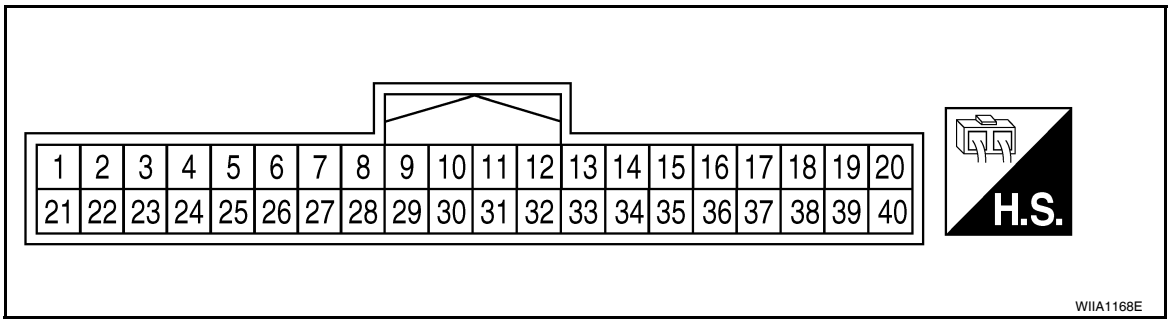
CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-30
U1010: CONTROL UNIT (CAN)	—	—	—	BCS-31
B2190: NATS ANTENNA AMP	—	—	—	SEC-27
B2191: DIFFERENCE OF KEY	—	—	—	SEC-30
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-31
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-33
B2552: INTELLIGENT KEY	—	—	—	SEC-35
B2590: NATS MALFUNCTION	—	—	—	SEC-36
C1704: LOW PRESSURE FL	—	—	—	WT-26
C1705: LOW PRESSURE FR	—	—	—	WT-26
C1706: LOW PRESSURE RR	—	—	—	WT-26
C1707: LOW PRESSURE RL	—	—	—	WT-26
C1708: [NO DATA] FL	—	—	—	WT-14
C1709: [NO DATA] FR	—	—	—	WT-14
C1710: [NO DATA] RR	—	—	—	WT-14
C1711: [NO DATA] RL	—	—	—	WT-14
C1712: [CHECKSUM ERR] FL	—	—	—	WT-16
C1713: [CHECKSUM ERR] FR	—	—	—	WT-16
C1714: [CHECKSUM ERR] RR	—	—	—	WT-16
C1715: [CHECKSUM ERR] RL	—	—	—	WT-16
C1716: [PRESSDATA ERR] FL	—	—	—	WT-18
C1717: [PRESSDATA ERR] FR	—	—	—	WT-18
C1718: [PRESSDATA ERR] RR	—	—	—	WT-18
C1719: [PRESSDATA ERR] RL	—	—	—	WT-18
C1720: [CODE ERR] FL	—	—	—	WT-16
C1721: [CODE ERR] FR	—	—	—	WT-16
C1722: [CODE ERR] RR	—	—	—	WT-16
C1723: [CODE ERR] RL	—	—	—	WT-16
C1724: [BATT VOLT LOW] FL	—	—	—	WT-16
C1725: [BATT VOLT LOW] FR	—	—	—	WT-16
C1726: [BATT VOLT LOW] RR	—	—	—	WT-16
C1727: [BATT VOLT LOW] RL	—	—	—	WT-16
C1729: VHCL SPEED SIG ERR	—	—	—	WT-19
C1735: IGNITION SIGNAL	—	—	—	—

INTELLIGENT KEY UNIT

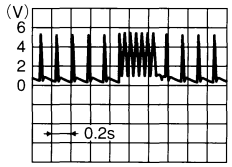
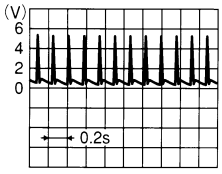
Reference Value - Intelligent Key Unit

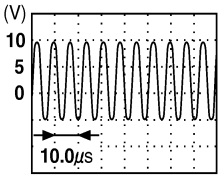
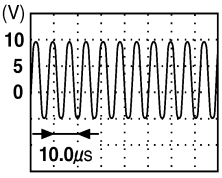
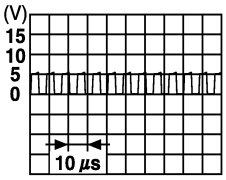
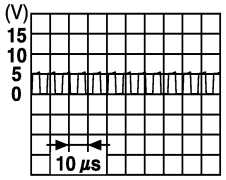
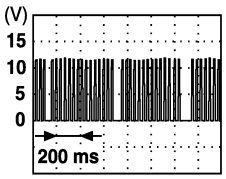
INFOID:0000000003775826

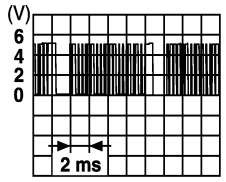
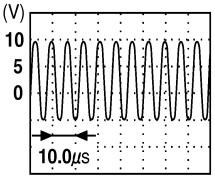
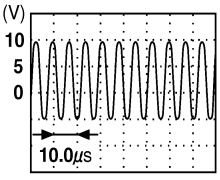
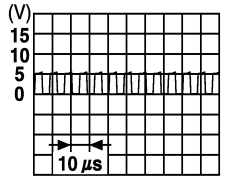
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal	Wire Color	Item	Condition			Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions		
1	L/Y	Steering lock solenoid power supply	LOCK	—		5
2	L	CAN-H	—	—		—
3	P	CAN-L	—	—		—
4	GR	Intelligent Key warning buzzer (front of vehicle)	LOCK	Operate door request switch.	Buzzer OFF	Battery voltage
					Buzzer ON	0
5	B/W	Front door request switch LH	—	Press front door request switch LH.		0
				Other than above		Battery voltage
6	G/R	Ignition switch (ON)	ON	—		Battery voltage
7	B/R	Key switch	LOCK	Insert mechanical key into ignition key cylinder.		Battery voltage
				Remove mechanical key from ignition key cylinder.		0
8	G	Remote keyless entry receiver ground	—	—		0
9	GR	Remote keyless entry receiver signal	—	When remote keyless entry receiver receives signal from keyfob.		
				Stand-by		
11	Y	Power source (Fuse)	—	—		Battery voltage
12	B	Ground	—	—		0

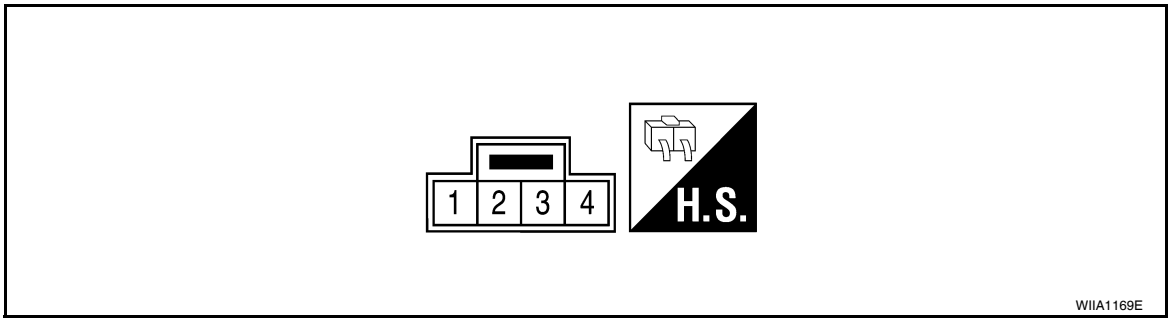
Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
13	B/W	Inside key antenna 3 (front of center console) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
14	W/G	Inside key antenna 3 (front of center console) (-) signal			
15	G	Inside key antenna 1 (rear of center console) (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
16	L	Inside key antenna 1 (rear of center console) (-) signal			
17	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
27	R/B	Ignition knob switch	—	Press ignition switch.	Battery voltage
				Return ignition switch to LOCK position.	0
28	R	Unlock sensor (driver side)	—	Door (driver side) is locked.	5
				Door (driver side) is unlocked.	0
29	LG/W	Back door open switch input	—	Back door handle switch ON.	0
				Back door handle switch OFF.	Battery voltage

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
30	G/B	Remote keyless entry receiver power supply	—	—	5
32	L/O	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
				Other than above	5
33	W	Inside key antenna 4 (overhead console area) (+) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	 PIIB7441E
34	BR	Inside key antenna 4 (overhead console area) (-) signal			
35	O	Inside key antenna 2 (luggage compartment) (+) signal	LOCK	Back door open → all doors closed	 PIIB7441E
36	R	Inside key antenna 2 (luggage compartment) (-) signal			
37	LG	Front outside antenna (+) signal RH	LOCK	Press front door request switch RH.	 SIIA1910J
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

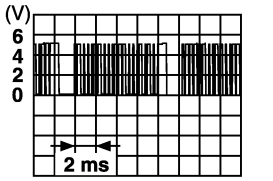
Reference Value - Steering Lock Solenoid

INFOID:0000000003775827

TERMINAL LAYOUT



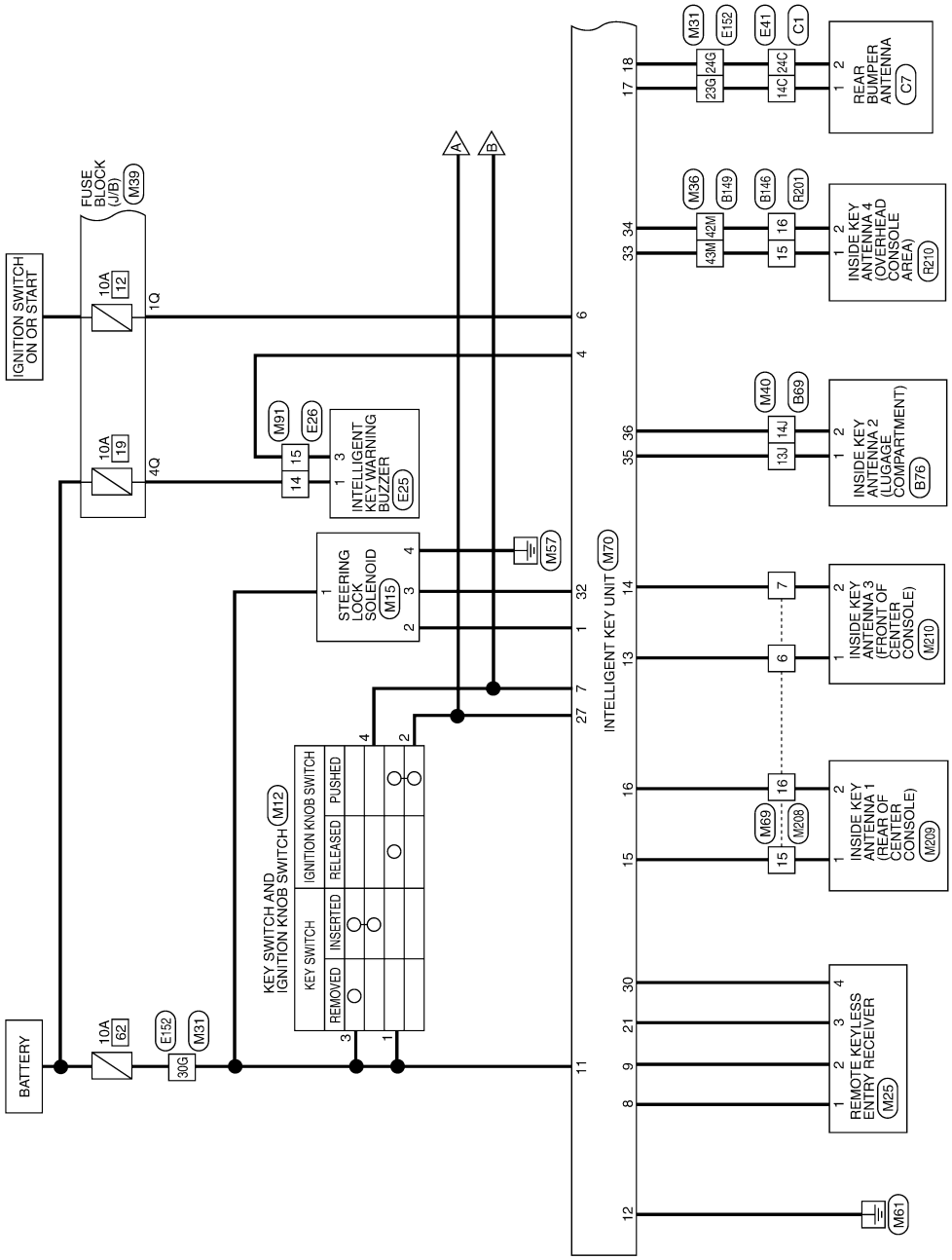
PHYSICAL VALUES

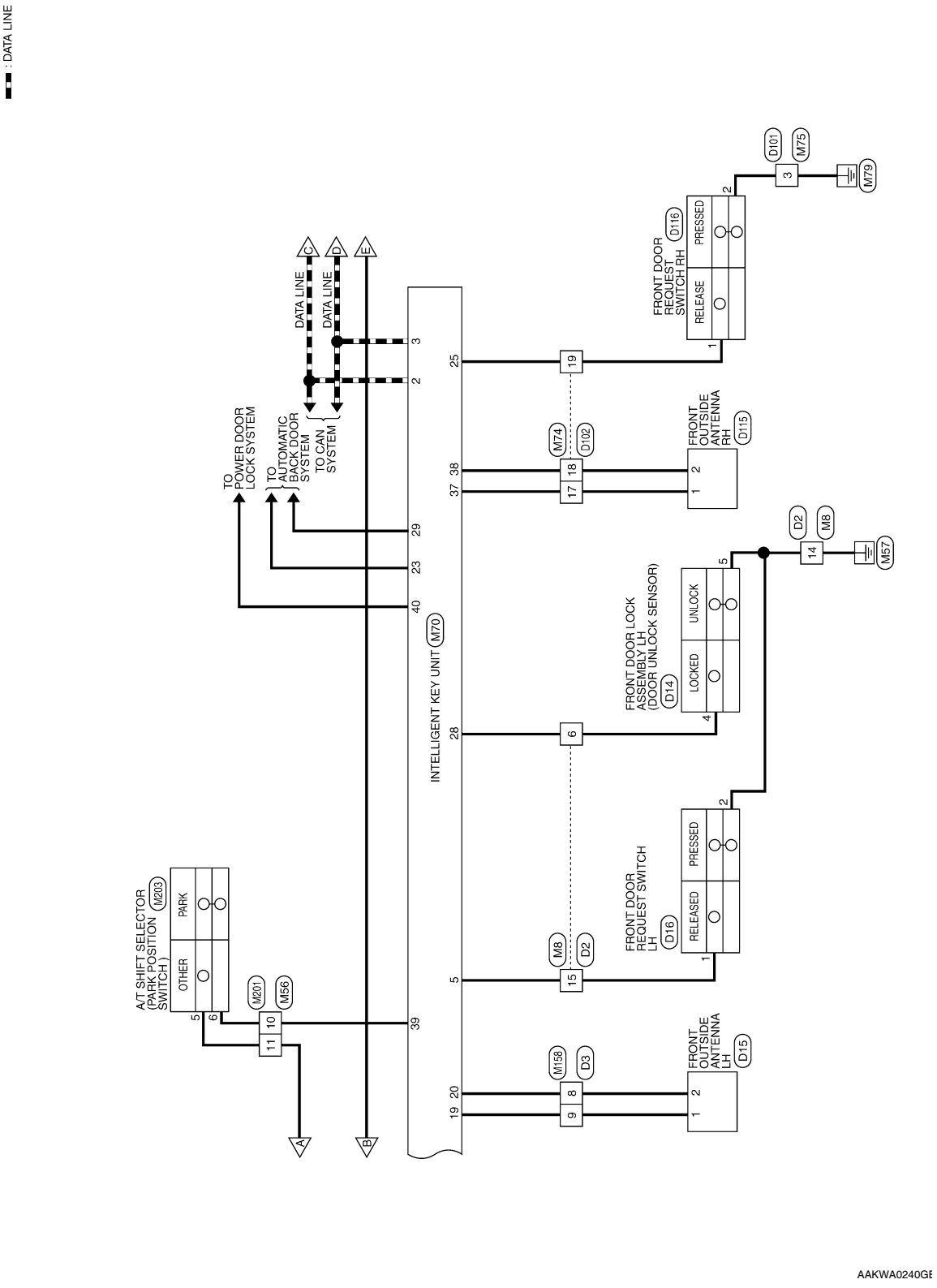
Terminal	Wire Color	Signal Designation	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
1	G/Y	Power source (fuse)	LOCK	—	Battery voltage
2	L/Y	Steering lock solenoid power supply	LOCK	—	5
3	L/O	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
				Other than the above	5
4	B	Steering lock solenoid ground	—	—	0

Wiring Diagram — INTELLIGENT KEY SYSTEM —

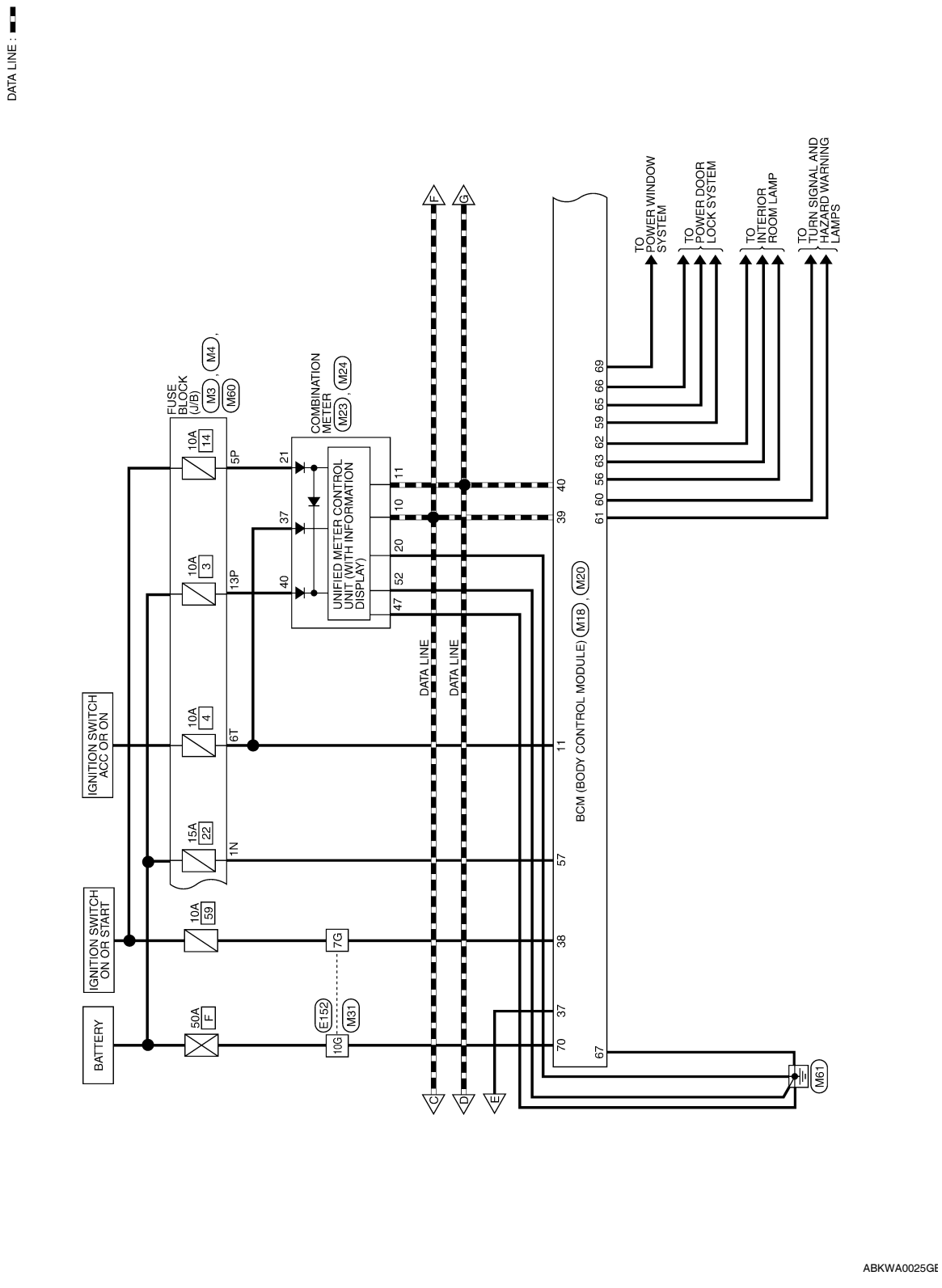
INFOID:0000000003775828

INTELLIGENT KEY SYSTEM





AAKWA0240GE



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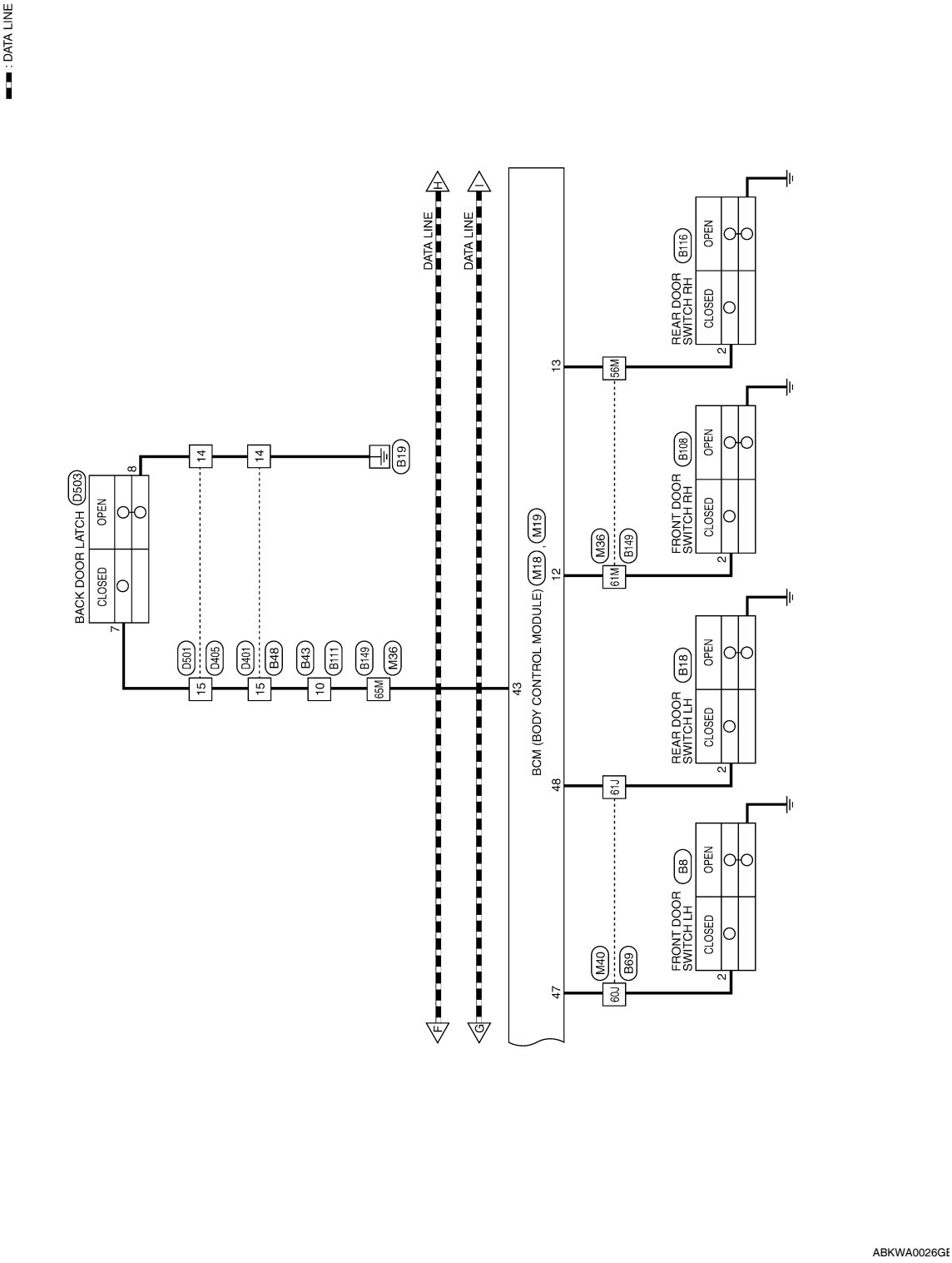
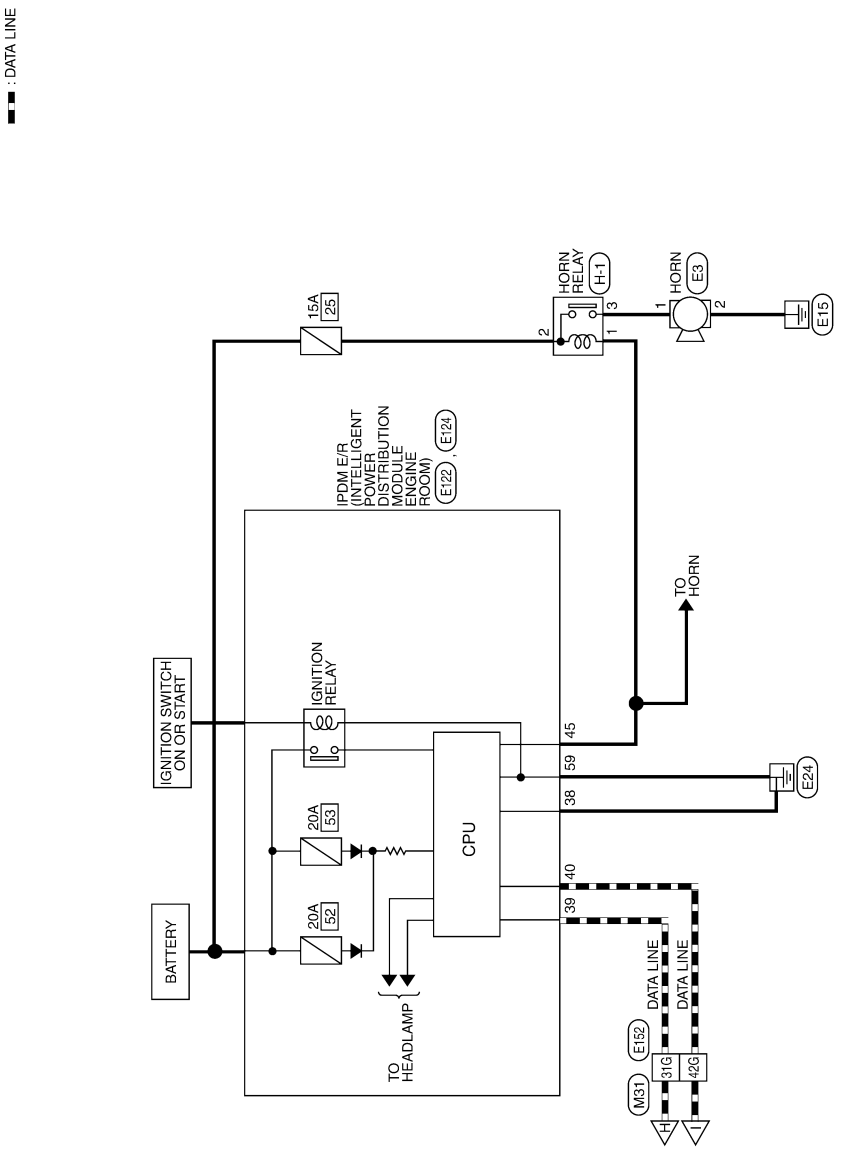
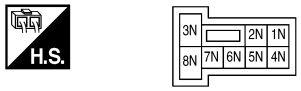

: DATA LINE
DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE) (M18), (M19)
BACK DOOR LATCH D503
OPEN
CLOSED
REAR DOOR SWITCH RH B116
FRONT DOOR SWITCH RH B108
REAR DOOR SWITCH LH B18
FRONT DOOR SWITCH LH B8
B19
D501
D405
D401
B48
B43
B111
B149
M36
M40
B69
56M
61M
61J
60J
ABKWA0026GB



ABKWA0027GE

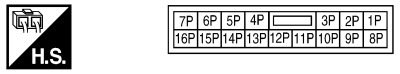
INTELLIGENT KEY SYSTEM CONNECTORS

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



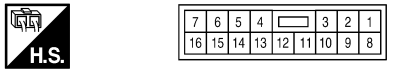
Terminal No.	Color of Wire	Signal Name
1N	Y/R	–

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



Terminal No.	Color of Wire	Signal Name
5P	O/L	–
13P	P	–

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



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

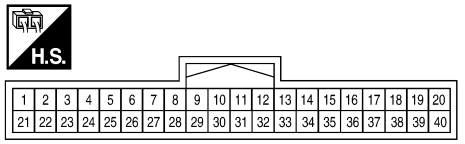
Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY

Terminal No.	Color of Wire	Signal Name
1	Y	–
2	R/B	–
3	Y	–
4	B/R	–

Connector No.	M15
Connector Name	STEERING LOCK SOLENOID
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	G/Y	B+
2	L/Y	5V PWR
3	L/O	SIG
4	B	GND

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)
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

ABKIA0067GB

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

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

H.S.

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)
59	G	DOOR UNLOCK OUTPUT (DR)

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

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	G	GND
2	GR	SIG
3	B/W	RSSI
4	G/B	5V

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	GROUND
21	O/L	RUN/START
37	O	ACC RUN
40	P	BATTER

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

H.S.

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)

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
47	B	POWER GND
52	B	POWER GND

AAKIA0059GB

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

H.S.

5G	4G	3G	2G	1G
10G	9G	8G	7G	6G

21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
30G	29G	28G	27G	26G	25G	24G	23G	22G		

41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
50G	49G	48G	47G	46G	45G	44G	43G	42G		

61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
70G	69G	68G	67G	66G	65G	64G	63G	62G		

75G	74G	73G	72G	71G
80G	79G	78G	77G	76G

Terminal No.	Color of Wire	Signal Name
7G	W/L	–
10G	W/B	–
23G	W/L	–
24G	W/R	–
30G	Y	–
31G	L	–
42G	P	–

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

H.S.

5M	4M	3M	2M	1M
10M	9M	8M	7M	6M

21M	20M	19M	18M	17M	16M	15M	14M	13M	12M	11M
30M	29M	28M	27M	26M	25M	24M	23M	22M		

41M	40M	39M	38M	37M	36M	35M	34M	33M	32M	31M
50M	49M	48M	47M	46M	45M	44M	43M	42M		

61M	60M	59M	58M	57M	56M	55M	54M	53M	52M	51M
70M	69M	68M	67M	66M	65M	64M	63M	62M		

75M	74M	73M	72M	71M
80M	79M	78M	77M	76M

Terminal No.	Color of Wire	Signal Name
42M	BR	–
43M	W	–
56M	GR	–
61M	R/L	–
65M	R/B	–

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

H.S.

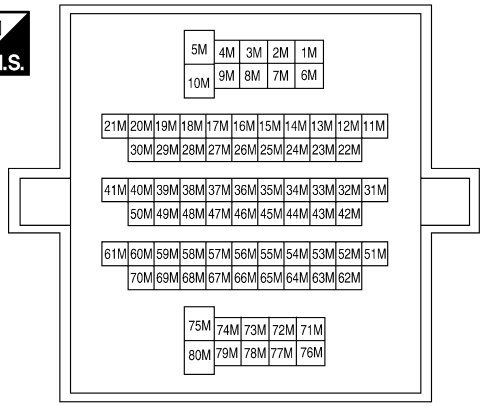
3Q		2Q	1Q
8Q	7Q	6Q	5Q	4Q

Terminal No.	Color of Wire	Signal Name
1Q	G/R	–
4Q	Y/R	–

ABKIA0068GB

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

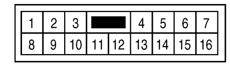
H.S.



Terminal No.	Color of Wire	Signal Name
13J	O	–
14J	R	–
60J	SB	–
61J	R/Y	–

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

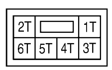
H.S.



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

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

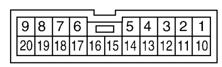
H.S.



Terminal No.	Color of Wire	Signal Name
6T	O	–

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.



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

AAKIA0083GB

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

H.S.

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
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

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

H.S.

9	8	7	6		5	4	3	2	1
20	19	18	17	16	15	14	13	12	11	10

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

Terminal No.	Color of Wire	Signal Name
8	G	RF TUNER GND
9	GR	RF TUNER SIGNAL
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.	M75
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3		2	1
10	9	8	7	6	5

Terminal No.	Color of Wire	Signal Name
3	B	–

Terminal No.	Color of Wire	Signal Name
26	–	–
27	R/B	PUSH SW INPUT
28	R	DR STATE SW INPUT
29	LG/W	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

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

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
14	Y/R	–
15	GR	–

ABKIA0069GB

Connector No.	M203
Connector Name	A/T SHIFT SELECTOR
Connector Color	WHITE

H.S.

1	2	3	4	5
6	7	8	9	10	11	12

Terminal No.	Color of Wire	Signal Name
5	R/B	–
6	L/R	–

Connector No.	M210
Connector Name	INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)
Connector Color	GRAY

H.S.

2	1

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

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

7	6	5	4	3	2	1
16	15	14	13	12	11	10	9	8

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

Connector No.	M209
Connector Name	INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)
Connector Color	WHITE

H.S.

2	1

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

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
10	9	8	7	6	5

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

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

H.S.

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19	20

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

AAKIA0430GB

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
14	Y/R	–
15	GR	–

Connector No.	E41
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

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

H.S.

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.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

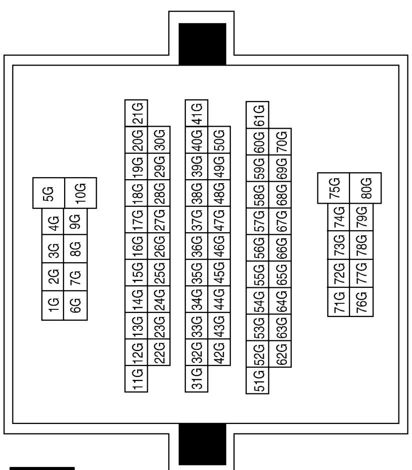
H.S.

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

AAKIA0084GB

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

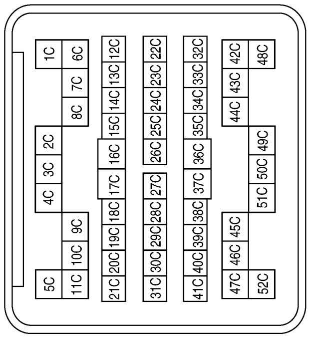
H.S.



Terminal No.	Color of Wire	Signal Name
7G	L/W	–
10G	W/B	–
23G	P	–
24G	W/R	–
30G	Y	–
31G	L	–
42G	P	–

Connector No.	C1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

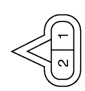
H.S.



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

Connector No.	C7
Connector Name	REAR BUMPER ANTENNA
Connector Color	GRAY

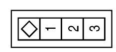
H.S.



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

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

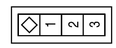
H.S.



Terminal No.	Color of Wire	Signal Name
2	SB	–

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

H.S.



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

ABKIA0071GB

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

H.S.

1J	2J	3J	4J	5J
6J	7J	8J	9J	10J

11J	12J	13J	14J	15J	16J	17J	18J	19J	20J	21J
	22J	23J	24J	25J	26J	27J	28J	29J	30J	

31J	32J	33J	34J	35J	36J	37J	38J	39J	40J	41J
	42J	43J	44J	45J	46J	47J	48J	49J	50J	

51J	52J	53J	54J	55J	56J	57J	58J	59J	60J	61J
		62J	63J	64J	65J	66J	67J	68J	69J	70J

71J	72J	73J	74J	75J
76J	77J	78J	79J	80J

Terminal No.	Color of Wire	Signal Name
13J	O	–
14J	R	–
60J	SB	–
61J	R/Y	–

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

H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14		13	12	11		

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

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

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

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

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

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

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

H.S.

1
2
3

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

Connector No.	B76
Connector Name	INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)
Connector Color	GRAY

H.S.

2	1

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

AAKIA0085GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

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

H.S.

Terminal No.	Color of wire	Signal Name
42M	BR	–
43M	W	–
56M	GR	–
61M	R/L	–
65M	R/W	–

Connector No.	R201
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

Connector No.	R210
Connector Name	INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	–
2	BR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
6	L/R	–
14	B	–
15	B/W	–

AAKIA0086GB

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	L/R	STATUS SWITCH
5	B	GND

Connector No.	D15
Connector Name	FRONT OUTSIDE ANTENNA LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	V	–

Connector No.	D16
Connector Name	FRONT DOOR REQUEST SWITCH LH
Connector Color	GRAY

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

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

ABKIA0072GB

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

H.S.

1	2	3	4	5		6	7	8	9	10
11	12	13	14	15		16	17	18		

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

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	P/L	–
2	B	–

Connector No.	D115
Connector Name	FRONT OUTSIDE ANTENNA RH
Connector Color	GRAY

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	B/Y	–

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

H.S.

1		2	3
4	5	6	7	8

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

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

H.S.

1	2	3	4	5		6	7	8	9	10
11	12	13	14	15		16	17	18		

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

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

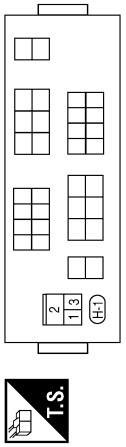
H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14	13				12	11

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

AAKIA0087GB

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX
Connector Color	–



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

ABKIA0073GB

Fail Safe

INFOID:0000000003775829

Fail-safe operation

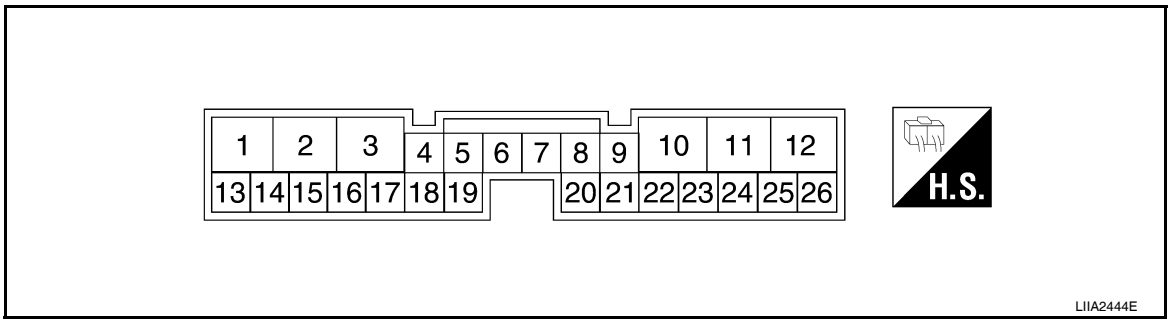
The Intelligent Key system operation will be interrupted if the Intelligent Key unit loses power or communication with the BCM.

BACK DOOR CONTROL UNIT

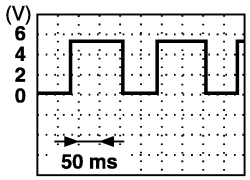
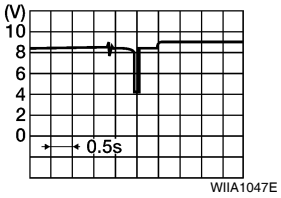
Reference Value

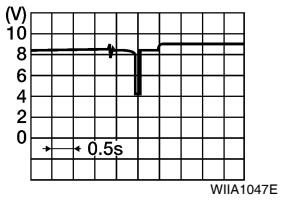
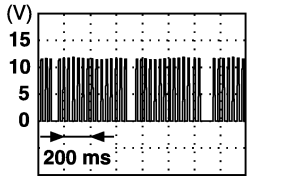
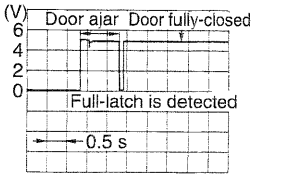
INFOID:0000000003775830

TERMINAL LAYOUT



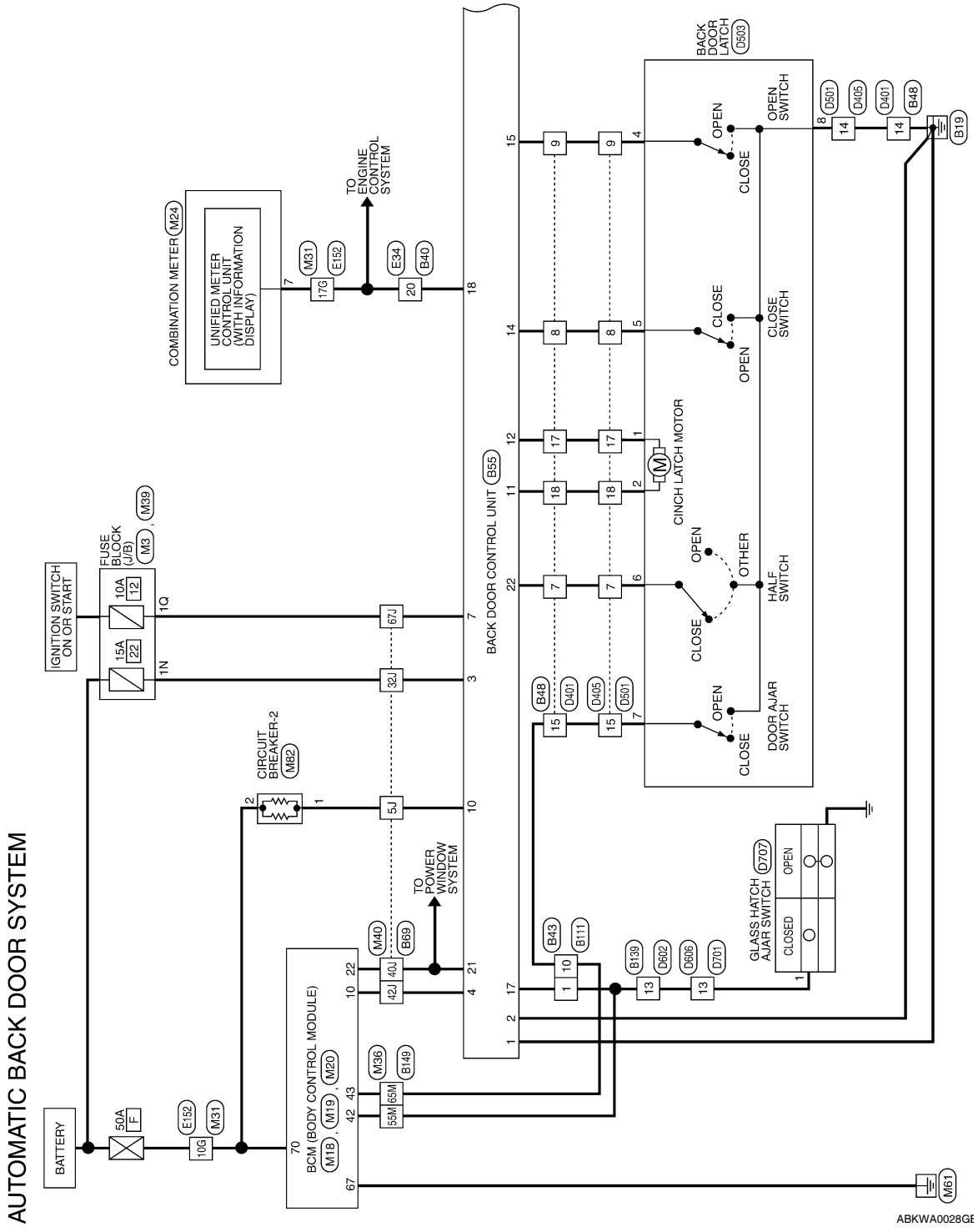
PHYSICAL VALUES

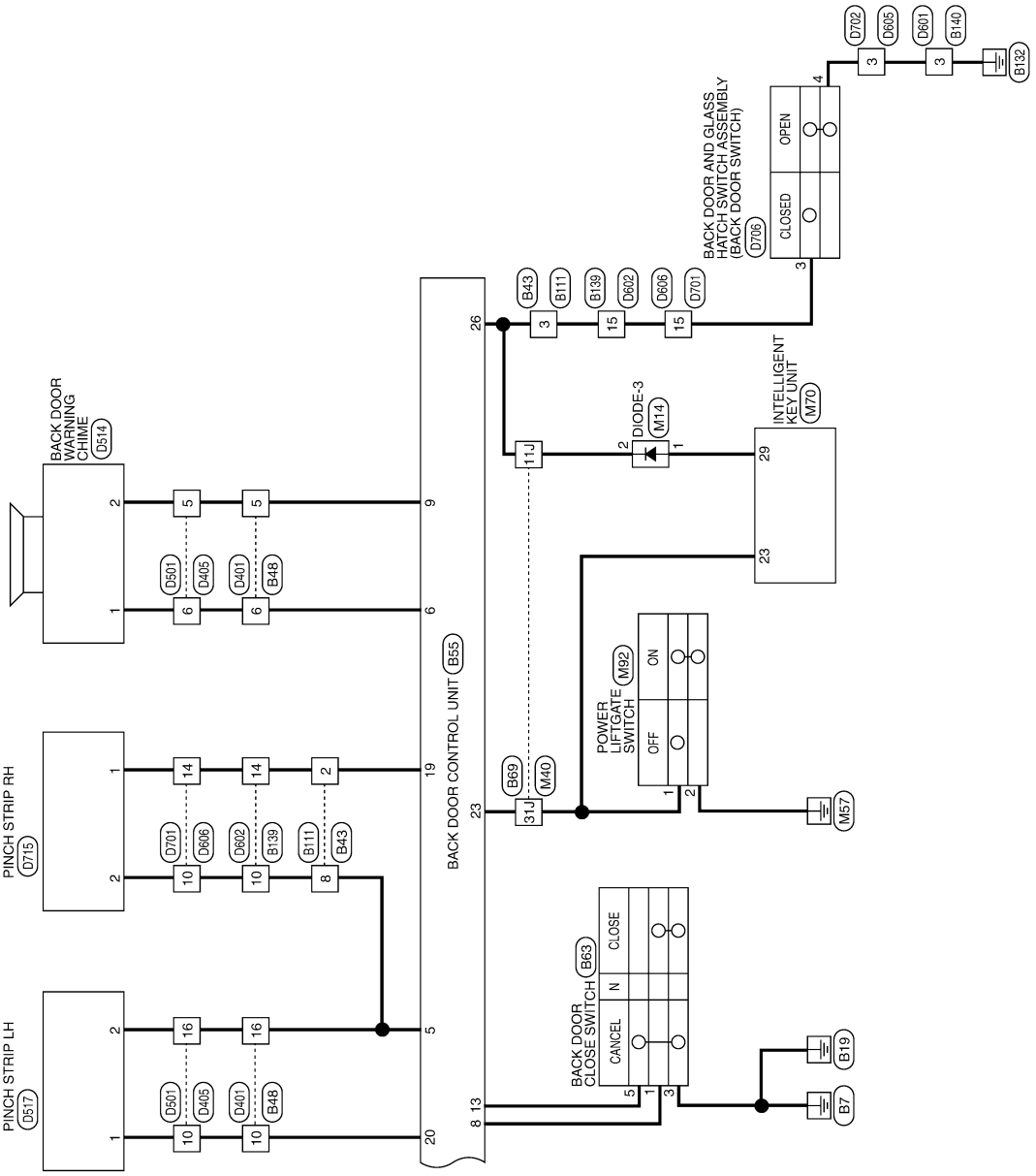
Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	B	Ground	—	—
2	B	Ground	—	—
3	Y/R	Battery power supply	—	Battery voltage
4	G	Hazard lamp output	Request to flash hazards	Pulse must be >50ms but less than 250ms 
5	B/P	Pinch strip ground	—	—
6	R	Warning chime output	Back door motor active	Battery 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	

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
15	O/L	Open switch signal	While fully closing back door	 WIIA1047E
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	—	 PIIA2344E
22	BR	Half switch signal	Back door half latch position	 PIIA2169E
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

Wiring Diagram—AUTOMATIC BACK DOOR SYSTEM—

INFOID:0000000003775831





ABKWA0029GE

AUTOMATIC BACK DOOR SYSTEM CONNECTORS

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

H.S.

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

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

H.S.

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

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

H.S.

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

H.S.

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

H.S.

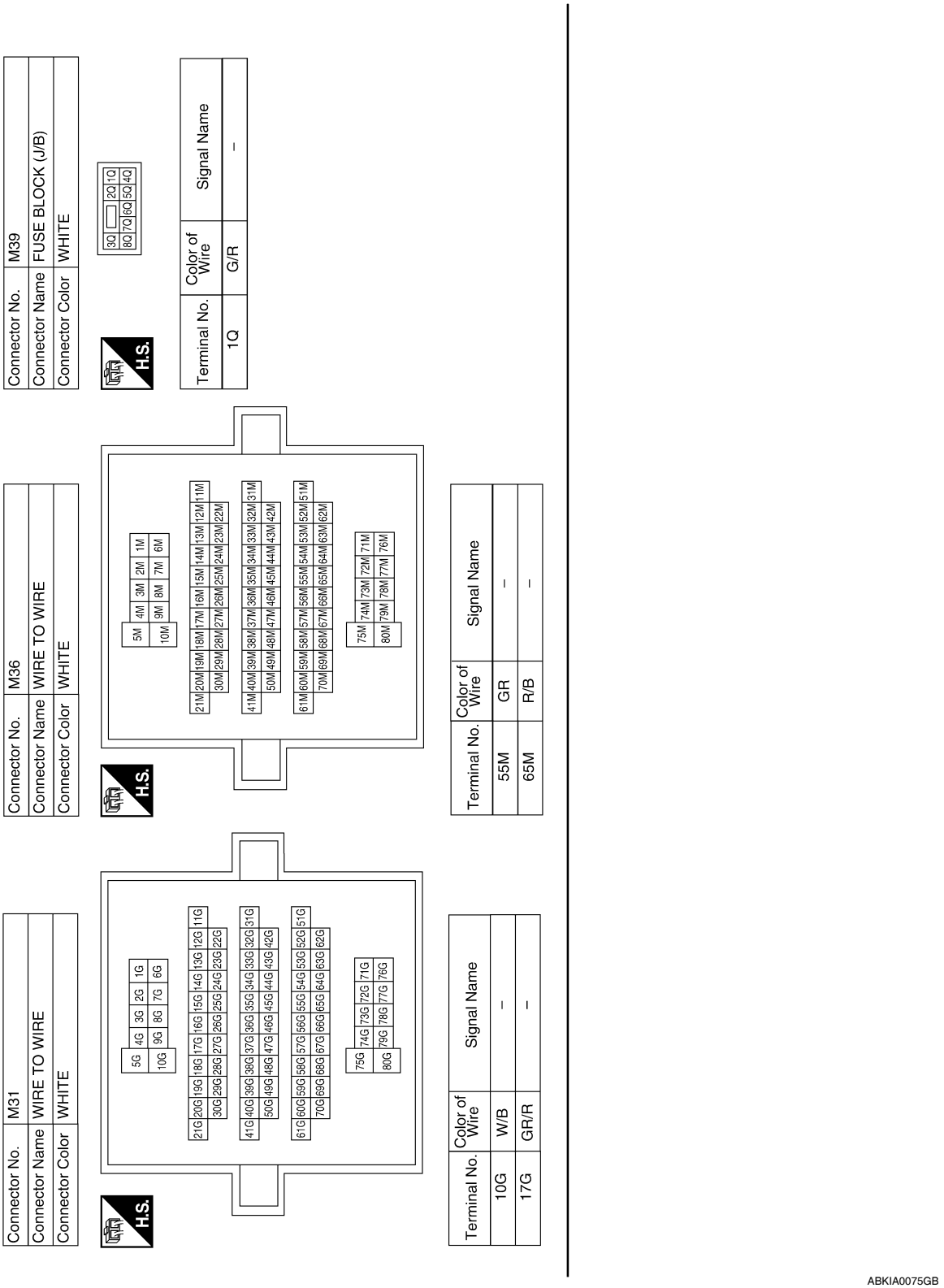
Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

ABKIA0074GB



ABKIA0075GB

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

H.S.

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
23	L/W	PBD RELAY OUTPUT
29	LG/W	BACK HANDLE SW INPUT

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13	12

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

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

H.S.

5J	4J	3J	2J	1J
	9J	8J	7J	6J
	10J			

21J	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J
	30J	29J	28J	27J	26J	25J	24J	23J	22J	

41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J
	50J	49J	48J	47J	46J	45J	44J	43J	42J	

61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J
	70J	69J	68J	67J	66J	65J	64J	63J	62J	

75J	74J	73J	72J	71J
	79J	78J	77J	76J
	80J			

Terminal No.	Color of Wire	Signal Name
5J	L/B	–
11J	W	–
31J	L/W	–
32J	Y/R	–
40J	W/V	–
42J	G	–
67J	G/R	–

Connector No.	M92
Connector Name	POWER LIFTGATE SWITCH
Connector Color	GRAY

H.S.

6	5	4	3	2	1

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

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

H.S.

1
2

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

ABKIA0076GB

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

H.S.

1	2	3	4	5	6		7	8	9	10	11
12	13	14	15	16	17	18	19	20	21	22	23	24

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

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.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

			1G	2G	3G	4G	5G												
			6G	7G	8G	9G	10G												
11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	21G									
	22G	23G	24G	25G	26G	27G	28G	29G	30G										
31G	32G	33G	34G	35G	36G	37G	38G	39G	40G	41G									
	42G	43G	44G	45G	46G	47G	48G	49G	50G										
51G	52G	53G	54G	55G	56G	57G	58G	59G	60G	61G									
	62G	63G	64G	65G	66G	67G	68G	69G	70G										
			71G	72G	73G	74G	75G												
			76G	77G	78G	79G	80G												

Terminal No.	Color of Wire	Signal Name
10G	W/B	–
17G	GR/R	–

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

H.S.

10	9	8	7	6		5	4	3	2	1
18	17	16	15	14		13	12	11		

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

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	BR/B	–
3	V	–
8	B/P	–
10	R/W	–

ABKIA0077GB

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15		17	18	19		20	21	22	23		26

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	PILLAR SW INPUT

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

H.S.

1J	2J	3J	4J	5J
6J	7J	8J	9J	10J

11J	12J	13J	14J	15J	16J	17J	18J	19J	20J	21J
	22J	23J	24J	25J	26J	27J	28J	29J	30J	
31J	32J	33J	34J	35J	36J	37J	38J	39J	40J	41J
	42J	43J	44J	45J	46J	47J	48J	49J	50J	
51J	52J	53J	54J	55J	56J	57J	58J	59J	60J	61J
	62J	63J	64J	65J	66J	67J	68J	69J	70J	

71J	72J	73J	74J	75J
76J	77J	78J	79J	80J

Terminal No.	Color of Wire	Signal Name
5J	L/B	–
11J	W	–
31J	L/W	–
32J	Y/R	–
40J	W/V	–
42J	G	–
67J	G/R	–

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
1	GR	–
2	BR/B	–
3	V	–
8	B/P	–
10	R/W	–

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

H.S.

6		5
1	2	3	4

Terminal No.	Color of Wire	Signal Name
1	GR/B	CLOSE
2	–	–
3	B	GND
4	–	–
5	P/L	DISABLE
6	–	–

Terminal No.	Color of Wire	Signal Name
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

ABKIA0078GB

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

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

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

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

H.S.

1		2
3	4	5	6

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

					5M
	1M	2M	3M	4M	
	6M	7M	8M	9M	10M

11M	12M	13M	14M	15M	16M	17M	18M	19M	20M	21M
22M	23M	24M	25M	26M	27M	28M	29M	30M		
31M	32M	33M	34M	35M	36M	37M	38M	39M	40M	41M
42M	43M	44M	45M	46M	47M	48M	49M	50M		
51M	52M	53M	54M	55M	56M	57M	58M	59M	60M	61M
62M	63M	64M	65M	66M	67M	68M	69M	70M		

71M	72M	73M	74M	75M
76M	77M	78M	79M	80M

Terminal No.	Color of Wire	Signal Name
55M	GR	–
65M	R/W	–

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

H.S.

1	2	3	4	5		6	7	8	9	10
11	12	13	14	15	16	17	18			

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

H.S.

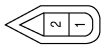
10	9	8	7	6		5	4	3	2	1
18	17	16	15	14	13	12	11			

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	–

AAKIA0088GB

Connector No.	D514
Connector Name	BACK DOOR WARNING CHIME
Connector Color	BROWN

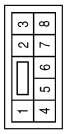
H.S.



Terminal No.	Color of Wire	Signal Name
1	R	–
2	L	–

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

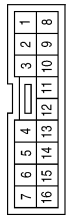
H.S.



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

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE

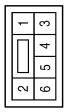
H.S.



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

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

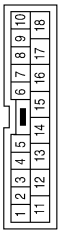
H.S.



Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.



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.	D517
Connector Name	PINCH STRIP LH
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	V/G	–
2	B/P	–

AAKIA0089GB

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–

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

H.S.

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

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–

Connector No.	D706
Connector Name	BACK DOOR AND GLASS HATCH SWITCH ASSEMBLY
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	V	–
4	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	GR	–

AAKIA0090GB

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

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

ABKIA0079GB

Fail Safe

INFOID:0000000003775832

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.

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000003775833

ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” and “LOCK/UNLOCK BY I-KEY” are ON when setting on CONSULT-III.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All doors and ignition switch do not respond to Intelligent Key command.	1. Check Intelligent Key function and battery inspection.	DLK-106
	2. Check Intelligent Key unit power supply and ground circuit.	DLK-68
	3. Check remote keyless entry receiver.	DLK-103
	4. Check BCM power supply and ground circuit.	DLK-68
	5. Replace Intelligent Key unit.	DLK-106

DOOR LOCK FUNCTION SYMPTOMS
DOOR LOCK AND UNLOCK SWITCH
DOOR LOCK AND UNLOCK SWITCH : Symptom Table

INFOID:0000000003775834

DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- Ignition switch is not depressed.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Power door lock does not operate with door lock and unlock switch.	1. Check BCM Power supply and ground circuit.	BCS-32
	2. Check door lock and unlock switch.	DLK-74
	3. Check door lock actuator (driver side)	DLK-86
	4. Check Intermittent Incident.	GI-38
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-79
	2. Replace power window main switch.	PWC-117
Specific door lock actuator does not operate.	1a. Check driver side door lock actuator.	DLK-86
	1b. Check passenger side door lock actuator.	DLK-87
	1c. Check rear LH side door lock actuator.	DLK-88
	1d. Check rear RH side door lock actuator.	DLK-90
	1e. Check back door lock operation (refer to back door).	DLK-210
	1f. Check glass hatch lock actuator.	DLK-92
	2. Check Intermittent Incident.	GI-38
Door lock/unlock do not operate by request switch.	1. Door switch check.	DLK-71
	2. Ignition knob switch check.	DLK-116
	3. Replace Intelligent Key unit.	SEC-111
Door lock/unlock does not operate by request switch (LH side).	1. Front door request switch LH check.	DLK-83
	2. Front outside antenna LH check.	DLK-97
	3. Replace Intelligent Key unit.	SEC-111
Door lock/unlock does not operate by request switch (RH side).	1. Front door request switch RH check.	DLK-83
	2. Front outside antenna RH check.	DLK-97
	3. Replace Intelligent Key unit.	SEC-111
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-56
	2. Replace Intelligent Key unit.	SEC-111

Symptom	Diagnosis/service procedure	Reference page
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	DLK-52
	2. Key switch check (BCM).	DLK-115
	3. Ignition knob switch check.	DLK-116
	4. Door switch check.	DLK-71
	5. Replace Intelligent Key unit.	SEC-111
Key reminder function does not operate properly.	1. Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	DLK-52
	2. Door switch check.	DLK-71
	3a. Inside key antenna 1 (rear of center console) check.	DLK-60
	3b. Inside key antenna 2 (luggage compartment) check.	DLK-62
	3c. Inside key antenna 3 (front of center console) check.	DLK-64
	3d. Inside key antenna 4 (overhead console area) check.	DLK-66
	4. Front door lock actuator LH (door unlock sensor) check.	DLK-81
	5. Intelligent Key battery and function inspection.	DLK-106
	6. Replace Intelligent Key unit.	SEC-111
Vehicle speed sensing auto LOCK operation does not operate.	1. Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-56
	2. Check combination meter vehicle speed signal.	MWI-29
	3. Check intermittent incident.	GI-38
Ignition OFF interlock door UNLOCK function does not operate.	1. Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-56
	2. Check BCM for DTC.	BCS-51
	3. Check intermittent incident.	GI-38

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:0000000003775835

REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to DLK-6, "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-106
	2. Remote Keyless Entry function check.	DLK-103
	3. Replace Intelligent Key unit.	SEC-111
Selective unlock function does not operate by Intelligent Key remote control button.	1. Check “SELECT UNLOCK FUNCTION” setting in “WORK SUPPORT”.	DLK-56
	2. Intelligent Key battery inspection.	DLK-106
	3. Replace Intelligent Key unit.	SEC-111

Symptom	Diagnosis/service procedure		Reference page
Auto lock function does not operate properly.	1.	Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	DLK-56
	2.	Key switch check (BCM).	DLK-115
	3.	Ignition knob switch check.	DLK-116
	4.	Door switch check.	DLK-71
	5.	Replace Intelligent Key unit.	SEC-111
Key reminder function does not operate properly.	1.	Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	DLK-56
	2.	Door switch check.	DLK-71
	3a.	Inside key antenna 1 (rear of center console) check.	DLK-60
	3b.	Inside key antenna 2 (luggage compartment) check.	DLK-62
	3c.	Inside key antenna 3 (front of center console) check.	DLK-64
	3d.	Inside key antenna 4 (overhead console area) check.	DLK-66
	4.	Front door lock actuator LH (door unlock sensor) check.	DLK-81
	5.	Intelligent Key battery inspection.	DLK-106
	6.	Replace Intelligent Key unit.	SEC-111
Panic alarm function does not operate properly.	1.	Check “PANIC ALARM DELAY” setting in “WORK SUPPORT”.	DLK-56
	2.	Theft warning operation check.	DLK-212
	3.	Intelligent Key battery inspection.	DLK-106
	4.	Key switch check (BCM).	DLK-115
	5.	Ignition knob switch check.	DLK-116
	6.	Replace Intelligent Key unit.	SEC-111
Back door open function does not operate properly.	1.	Back door diagnosis.	DLK-123
	2.	Intelligent Key battery inspection.	DLK-106
	3.	Replace Intelligent Key unit.	SEC-111
Power window down function does not operate.	1.	Check “PW DOWN SET” setting in “WORK SUPPORT”.	DLK-56
	2.	Intelligent Key battery inspection.	DLK-106

BACK DOOR OPENER FUNCTION
BACK DOOR OPENER SWITCH
BACK DOOR OPENER SWITCH : Symptom Table

INFOID:0000000003775836

TRUNK OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "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-141
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	DLK-133
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	DLK-141
	Back door close switch system inspection	DLK-137
	Auto back door power supply and ground circuit system inspection.	DLK-69
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	DLK-133
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	DLK-243
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	DLK-140
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	DLK-103
	Power window serial link	—
	Pinch strip system inspection	DLK-133
Auto closure does not operate.	Half-latch switch system	DLK-135
	Cinch latch motor system	DLK-139
	Handle switch system	DLK-140
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	DLK-136
	Handle switch system	DLK-140
Warning chime does not sound.	Back door warning chime system	DLK-134
Auto closure operation works, but the back door is not fully closed	Close switch system	DLK-137
	Handle switch system	DLK-140
	Cinch latch motor system	DLK-139
	Back door latch assembly mechanism damaged or worn.	DLK-243
Auto open operation releases lock, but does not fully open back door.	Glass hatch ajar switch check	DLK-129
Glass hatch lock actuator does not operate (Right front door must be unlocked for normal operation)	Glass hatch switch check	DLK-127
	Glass hatch lock actuator check	DLK-92
	Replace BCM	BCS-56

BACK DOOR HANDLE

BACK DOOR HANDLE : Symptom Table

INFOID:0000000003775837

BACK DOOR OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "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 switch (doors unlocked).	1. Refer to diagnosis chart.	DLK-210
	2. Check Intermittent Incident.	GI-38
Back door open function does not operate by back door switch only. (doors locked but Intelligent Key present).	1. Outside key antenna check.	DLK-97
	2. Intelligent Key unit power back door input signal.	DLK-140
	3. Intelligent Key unit power back door output signal.	DLK-141
	4. Intelligent Key battery and function check.	DLK-106

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:0000000003775838

BACK DOOR OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "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-106
	2. Intelligent Key unit power and ground check.	DLK-68
	3. Check intermittent incident.	GI-38

WARNING FUNCTION SYMPTOMS

Symptom Table

INFOID:0000000003775839

WARNING FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-6, "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-116
		2. Check door switch.	DLK-71
		3. Check warning chime function.	DLK-111
		4. Check Intermittent Incident.	GI-38
	For external	1. Check ignition knob switch.	DLK-116
		2. Check door switch.	DLK-71
		3. Check Intelligent Key warning buzzer.	DLK-95
		4. Check Intermittent Incident.	GI-38
P position warning does not operate.		1. Check Park position switch.	TM-44
		2. Check door switch.	DLK-71
		3. Check Intelligent Key warning buzzer.	DLK-95
		4. Check warning chime function.	DLK-111
		5. Check combination meter display function.	DLK-110
		6. Check Intermittent Incident.	GI-38
ACC warning does not operate		1. Check ignition knob switch.	DLK-116
		2. Check warning chime function.	DLK-111
		3. Check combination meter display function.	DLK-110
		4. Check Intermittent Incident.	GI-38

Symptom		Diagnosis/service procedure		Reference page
Take away warning does not operate.	Door open to close	1. Check door switch.		DLK-71
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	DLK-60
			Luggage compartment	DLK-62
			Front of center console	DLK-64
			Overhead console area	DLK-66
		3. Check Intelligent Key warning buzzer.		DLK-95
		4. Check warning chime function.		DLK-111
		5. Check ignition knob switch.		DLK-116
		6. Check combination meter display function.		DLK-110
		7. Check Intermittent Incident.		GI-38
	Push-button ignition switch operation	1. Check ignition knob switch.		DLK-116
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	DLK-60
			Luggage compartment	DLK-62
			Front of center console	DLK-64
			Overhead console area	DLK-66
		3. Check warning chime function.		DLK-111
		4. Check combination meter display function.		DLK-110
		5. Check Intermittent Incident.		GI-38
	Door is open	1. Check ignition knob switch.		DLK-116
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	DLK-60
			Luggage compartment	DLK-62
			Front of center console	DLK-64
			Overhead console area	DLK-66
		3. Check combination meter display function.		DLK-110
		4. Check Intermittent Incident.		GI-38
	Take away through window	1. Check “TAKE OUT FROM WIN WARN” setting in “WORK SUPPORT”.		DLK-56
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	DLK-60
			Luggage compartment	DLK-62
			Front of center console	DLK-64
			Overhead console area	DLK-66
		3. Check warning chime function.		DLK-111
		4. Check ignition knob switch.		DLK-116
		5. Check combination meter display function.		DLK-110
		6. Check Intermittent Incident.		GI-38
Key warning chime does not operate.		1. Check door switch.		DLK-71
		2. Check warning chime function.		DLK-111
		3. Check ignition knob switch.		DLK-116
		4. Check combination meter display function.		DLK-110
		5. Check Intermittent Incident.		GI-38

Symptom	Diagnosis/service procedure		Reference page
Door lock operation warning chime does not operate.	1. Check door switch.		DLK-71
	2. Check ignition knob switch.		DLK-116
	3. Check Intelligent Key warning buzzer.		DLK-95
	4. Check inside key antennas (1, 2, 3, 4).	Rear of center console	DLK-60
		Luggage compartment	DLK-62
		Front of center console	DLK-64
		Overhead console area	DLK-66
	5. Check Intermittent Incident.		GI-38

KEY REMINDER FUNCTION SYMPTOMS

Symptom Table

INFOID:0000000003775840

KEY REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-6, "Work Flow".
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure		Reference page
Key reminder function does not operate.	1. Check “ANTI KEY LOCK IN FUNCTI”setting in “WORK SUPPORT”.		DLK-56
	2. Check door switch.		DLK-71
	3. Check inside key antennas (1, 2, 3, 4)	Rear of center console	DLK-60
		Luggage compartment	DLK-62
		Front of center console	DLK-64
		Overhead console area	DLK-66
	4. Check unlock sensor.		DLK-81
	5. Check Intelligent Key battery inspection.		DLK-106
	6. Check Intermittent Incident.		GI-38

HAZARD FUNCTION

Symptom Table

INFOID:0000000003775841

HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-6, "Work Flow".
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-56
	2. Check hazard function.	DLK-112
	3. Check Intermittent incident.	GI-38
Hazard reminder does not operate by Intelligent Key. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-56
	2. Check hazard function.	DLK-112
	3. Check Intelligent Key battery inspection.	DLK-106
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-56
	2. Check Intelligent Key warning buzzer.	DLK-95
	3. Check Intermittent incident.	GI-38

HORN FUNCTION

Symptom Table

INFOID:0000000003775842

HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-6, "Work Flow".
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-56
	2. Check hazard function.	DLK-112
	3. Check Intermittent Incident.	GI-38
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-56
	2. Check hazard function.	DLK-112
	3. Check Intelligent Key battery inspection.	DLK-106
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-56
	2. Check Intelligent Key warning buzzer.	DLK-95
	3. Check Intermittent Incident.	GI-38
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	DLK-56
	2. Check horn function.	DLK-108
	3. Check Intermittent Incident.	GI-38

HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

INFOID:0000000003775843

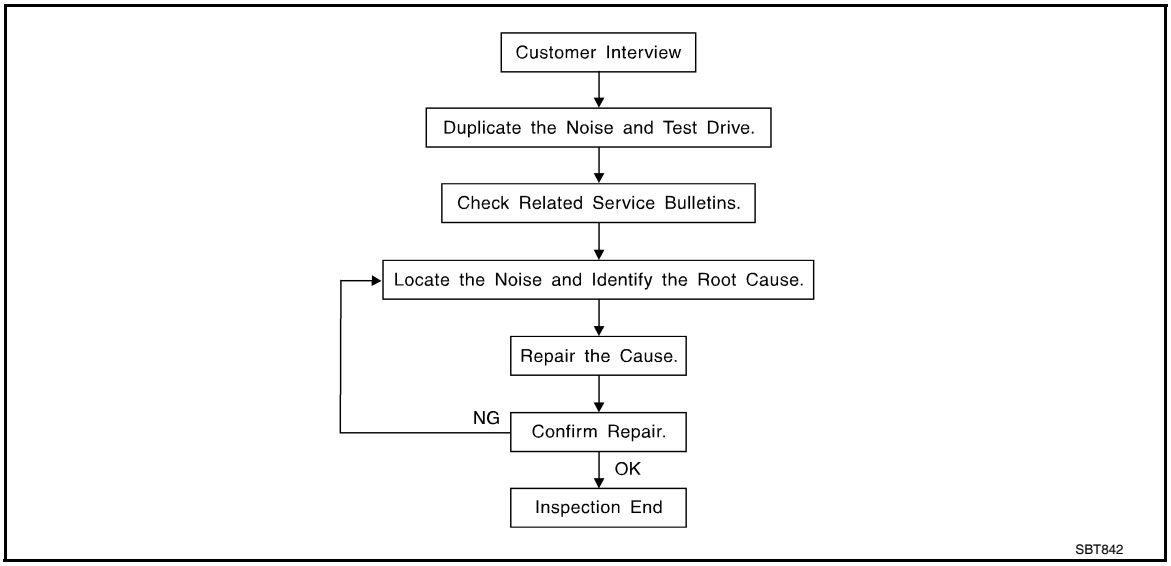
HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	DLK-144
	2. Check Intermittent Incident.	GI-38

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000003775844



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-223, "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.

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

1) Close a door.
2) Tap or push/pull around the area where the noise appears to be coming from.
3) Rev the engine.
4) Use a floor jack to recreate vehicle “twist”.
5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on A/T model).
6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.

- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.
If a TSB relates to the symptom, follow the procedure to repair the noise.

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear and mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to DLK-221, "Inspection Procedure".

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:

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

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
NOTE:
Always check with the Parts Department for the latest parts information.
The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50 × 50 mm (1.97 × 1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)
INSULATOR (Light foam block)
80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97 in)
FELT CLOTHTAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15 × 25 mm (0.59 × 0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll
The following materials, not found in the kit, can also be used to repair squeaks and rattles.
UHMW (TEFLON) TAPE

Insulates where slight movement is present. Ideal for instrument panel applications.
SILICONE GREASE
Used in place of UHMW tape that will be visible or not fit. Will only last a few months.
SILICONE SPRAY
Use when grease cannot be applied.
DUCT TAPE
Use to eliminate movement.

CONFIRM THE REPAIR

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

Inspection Procedure

INFOID:0000000003775845

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

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

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

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.
In addition look for:

1. Trunk lid dampers 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

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

SUNROOF/HEADLINING

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

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

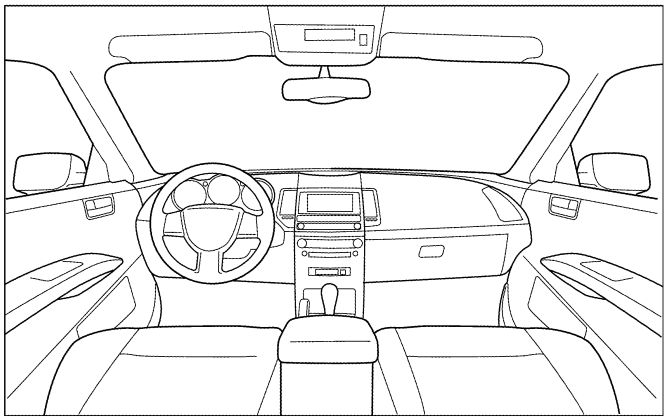
Diagnostic Worksheet

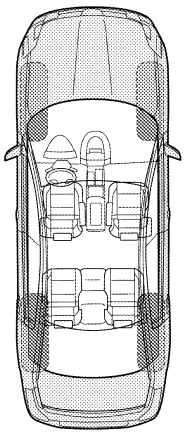
INFOID:0000000003775846

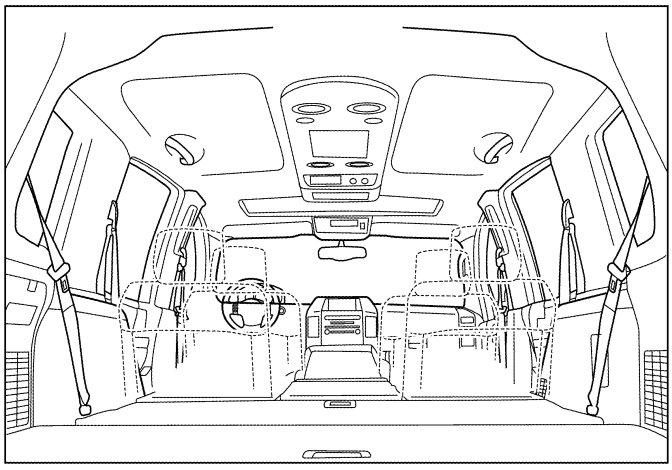
Dear Customer:
We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions.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

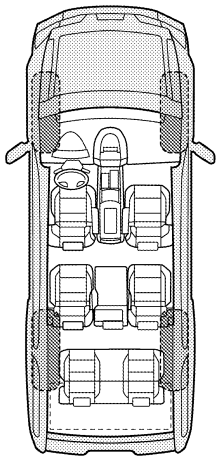
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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.

-1-

LAIA0072E

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)

- ☐ Anytime
- ☐ 1st time in the morning
- ☐ Only when it is cold outside
- ☐ Only when it is hot outside
- ☐ After sitting out in the rain
- ☐ When it is raining or wet
- ☐ Dry or dusty conditions
- ☐ 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	☐	☐	_____
- Noise verified on test drive	☐	☐	_____
- Noise source located and repaired	☐	☐	_____
- Follow up test drive performed to confirm repair	☐	☐	_____

VIN: _____ Customer Name _____

W.O.# _____ Date: _____

This form must be attached to Work Order

LAIA0071E

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005877749

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:0000000005877750

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-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.
For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.
If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

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.

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-III.

Precaution for work

INFOID:0000000003775848

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

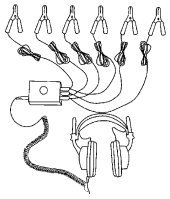
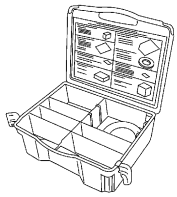
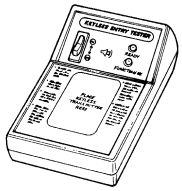
PREPARATION

PREPARATION

Special Service Tool

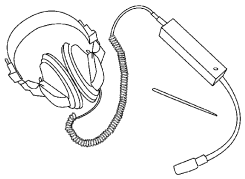
INFOID:0000000003775849

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
— (J-39570) Chassis ear	 SIIA0993E	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit	 SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	 LEL946A	Used to test keyfobs

Commercial Service Tool

INFOID:0000000003775850

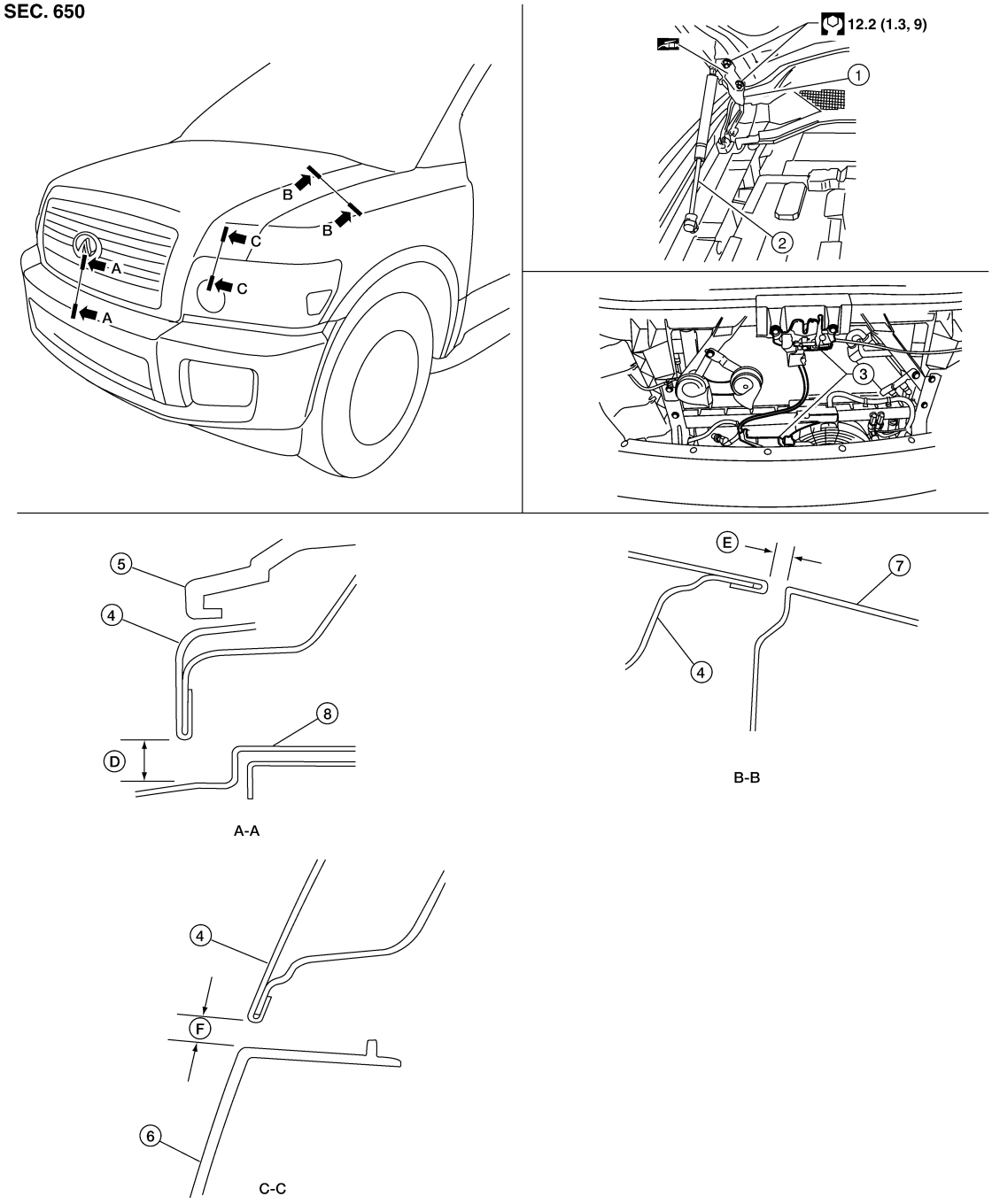
(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

ON-VEHICLE REPAIR

HOOD

Fitting Adjustment

INFOID:0000000003775851



AWKIA0674ZZ

1. Hood hinge
2. Hood stay
3. Hood lock assembly
4. Hood assembly
5. Front grille
6. Headlamp
7. Front fender
8. Front bumper fascia
D. 8.0 mm (0.315 in)
E. 2.0 mm (0.079 in)
F. 8.0 mm (0.315 in)

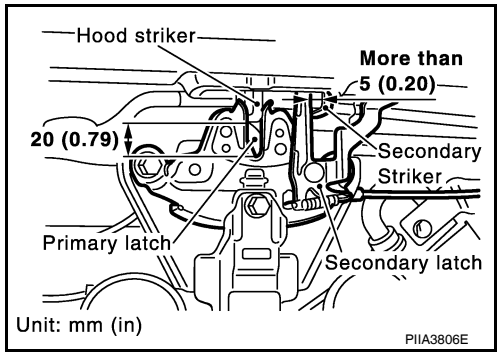
CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to EXT-17, "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 mounting 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) : 2.0 mm or less
5. Install the front grille. Refer to EXT-17, "Removal and Installation".

HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to EXT-17, "Removal and Installation".
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).
   CAUTION:
   Do not drop the hood from 300 mm (11.81 in) height or higher.
4. After adjusting hood lock, tighten the lock bolts.
5. Install the front grille. Refer to EXT-17, "Removal and Installation".

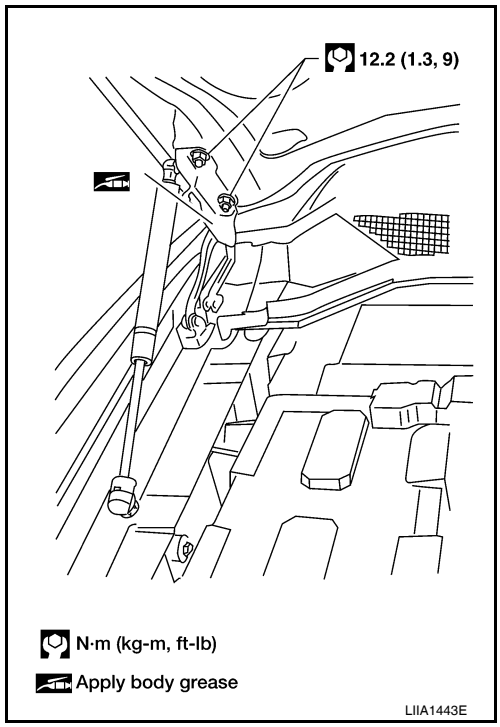


Removal and Installation of Hood Assembly

INFOID:0000000003775852

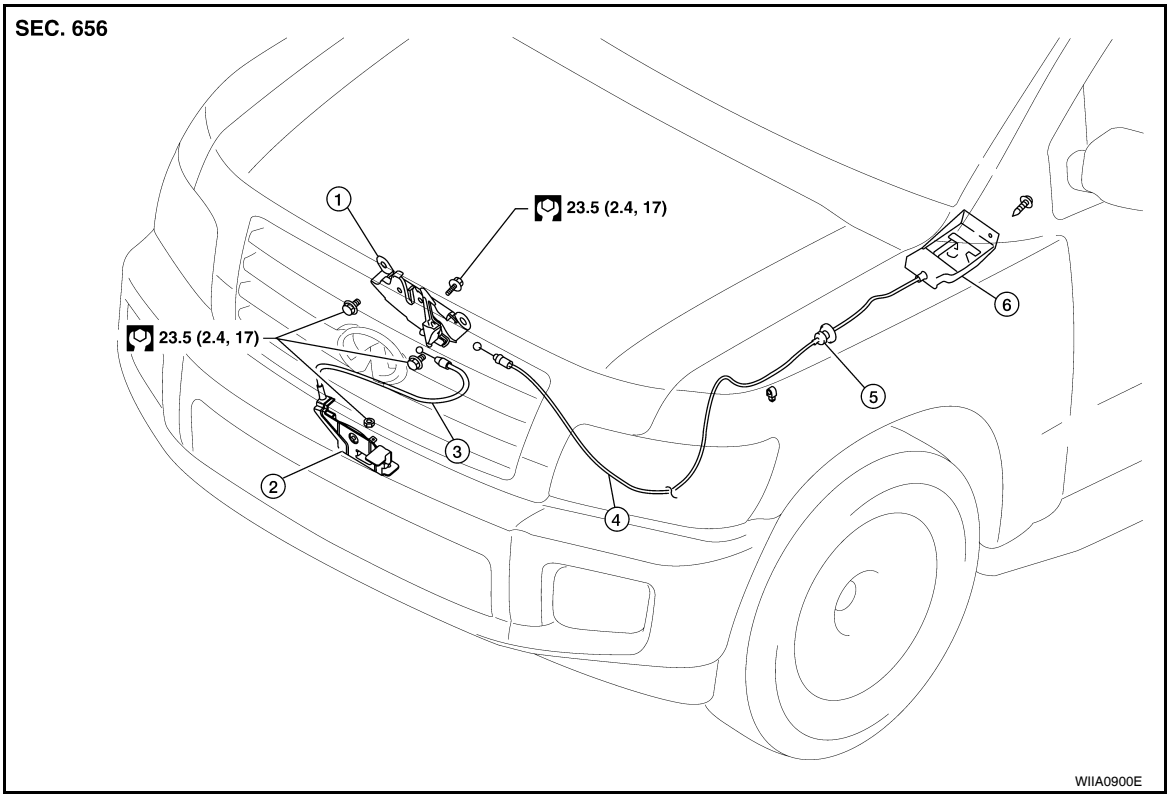
1. Support the hood striker with proper material to prevent it from falling.
   WARNING:
   Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.
2. Remove the hinge nuts from the hood to remove the hood assembly.

CAUTION:
Operate with two workers, because of its heavy weight.
Installation is in the reverse order of removal.



Removal and Installation of Hood Lock Control

INFOID:0000000003775853



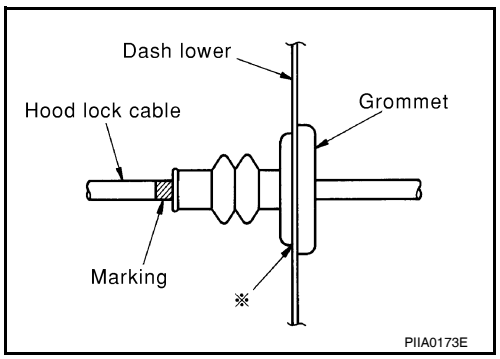
1. Hood lock assembly
2. Secondary hood lock release assembly
3. Secondary hood lock cable
4. Primary hood lock cable
5. Grommet
6. Hood lock release handle

REMOVAL

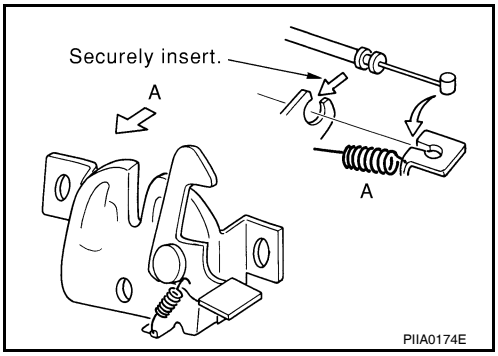
1. Remove the bolts and the hood lock assembly.
2. Remove the front fender protector (LH). Refer to EXT-23, "Removal and Installation".
3. Disconnect the hood lock primary and secondary hood lock cables from the hood lock. Unclip the primary cable from the radiator core support upper and hood ledge.
4. Remove the hood lock assembly.
5. Remove the nuts and the secondary hood lock release assembly.
6. Remove the grommet from the dash lower, and pull the primary hood lock cable into the passenger room.
   CAUTION:
   While pulling, be careful not to damage the outside of the hood lock cable.

INSTALLATION

1. Pull the hood lock cable through the dash lower hole into the engine room.
   Be careful not to bend the cable too much, keeping the radius 100mm (3.94 in) or more.
2. Make sure the cable is not offset from the positioning grommet, and push the grommet into the dash lower hole securely.
3. Apply sealant around the grommet at * mark.



4. Install the primary and secondary cables securely to the hood lock.
5. Install the hood lock and the secondary hood lock release assemblies.
6. Check the hood lock adjustment and hood opener operation. Refer to DLK-229, "Fitting Adjustment".
7. Install the remaing componets in the reverse order of removal.

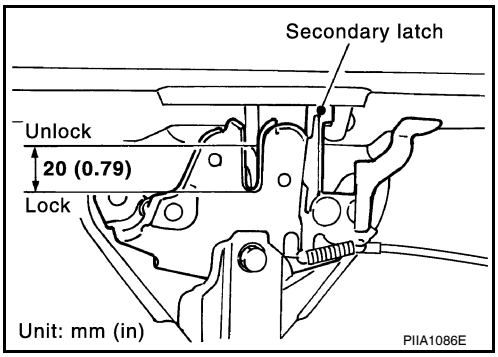


Hood Lock Control Inspection

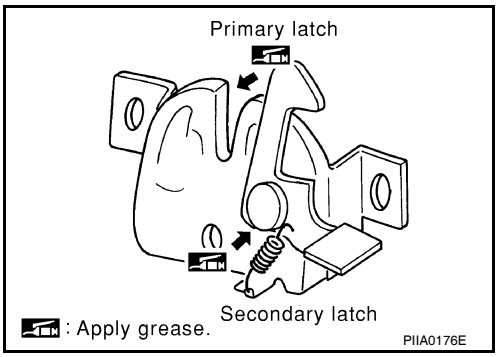
INFOID:0000000003775854

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

1. Remove the front grille. Refer to EXT-17, "Removal and Installation".
2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



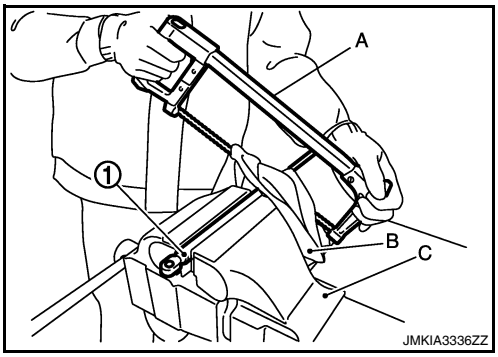
4. Check the hood lock lubrication condition. If necessary, apply “body grease” to the points shown in the figure.
5. Install the front grille. Refer to EXT-17, "Removal and Installation".



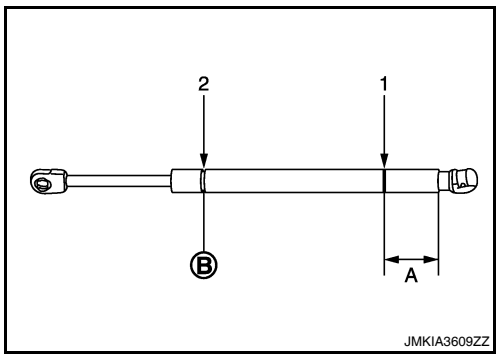
Hood Stay Disposal

INFOID:0000000005877751

1. Fix hood stay (1) using a vise (C).
2. Using hacksaw (A) slowly make 2 holes in the hood stay, in numerical order as shown in the figure.
   CAUTION:
   - **When cutting a hole on hood stay, always cover a hacksaw using a shop cloth (B) to avoid scattering metal fragments or oil.**
   - **Wear eye protection (safety glasses).**
   - **Wear gloves.**



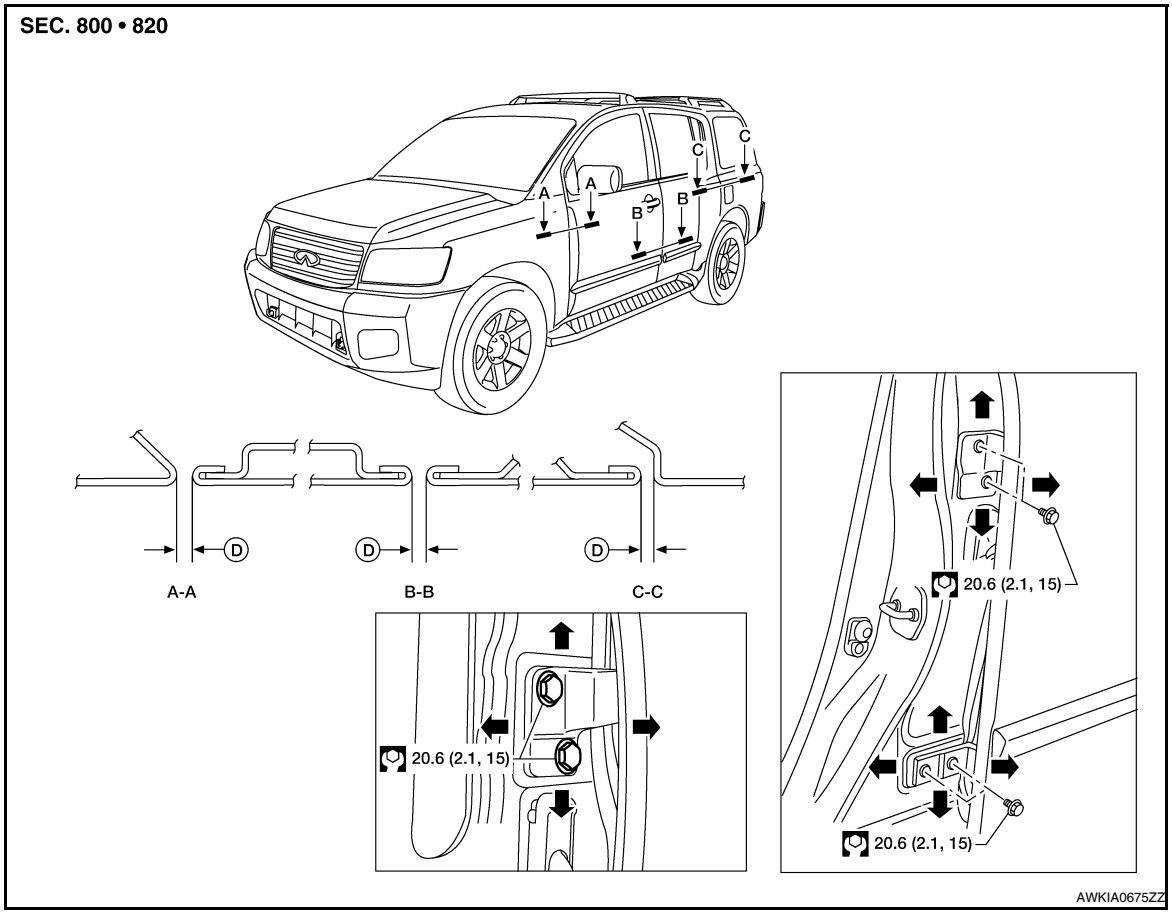
A: 20 mm (0.787 in)
B: Cut at the groove.



DOOR

Fitting Adjustment

INFOID:0000000003775855



D. 4.5 ± 1.0 mm (0.177 ± 0.039 in)

Front door

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to EXT-20, "Removal and Installation".
2. Loosen the hinge bolts. Raise the front door at rear end to adjust.
3. Install the fender. Refer to EXT-20, "Removal and Installation".

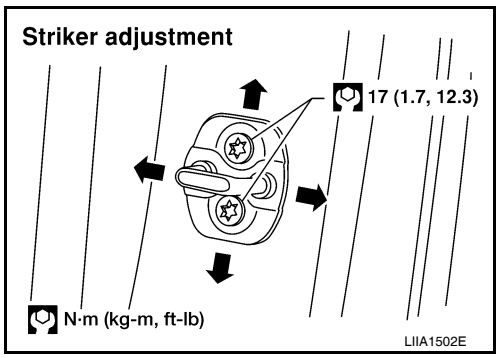
Rear door

Longitudinal clearance and surface height adjustment at front end

1. Loosen the bolts. Open the rear door, and raise the rear door at rear end to adjust.

Striker adjustment

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



Removal and Installation

INFOID:0000000003775856

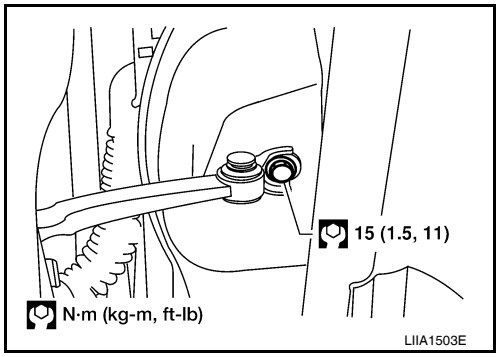
FRONT DOOR

Removal

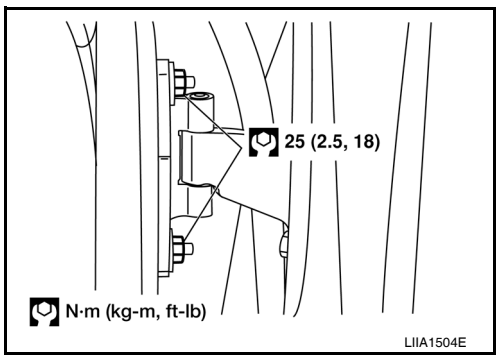
CAUTION:

- **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-15, "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.

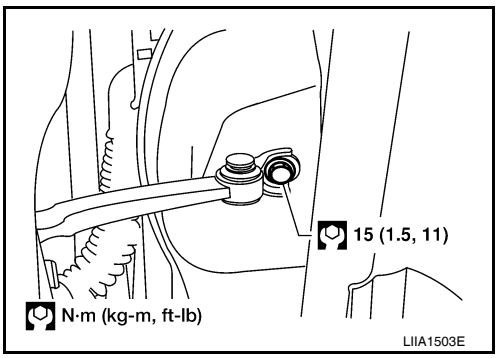
REAR DOOR

Removal

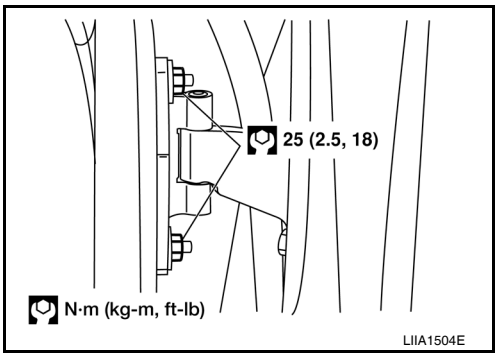
CAUTION:

- **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".**

1. Remove the door window and module assembly. Refer to GW-19, "Removal and Installation".
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.

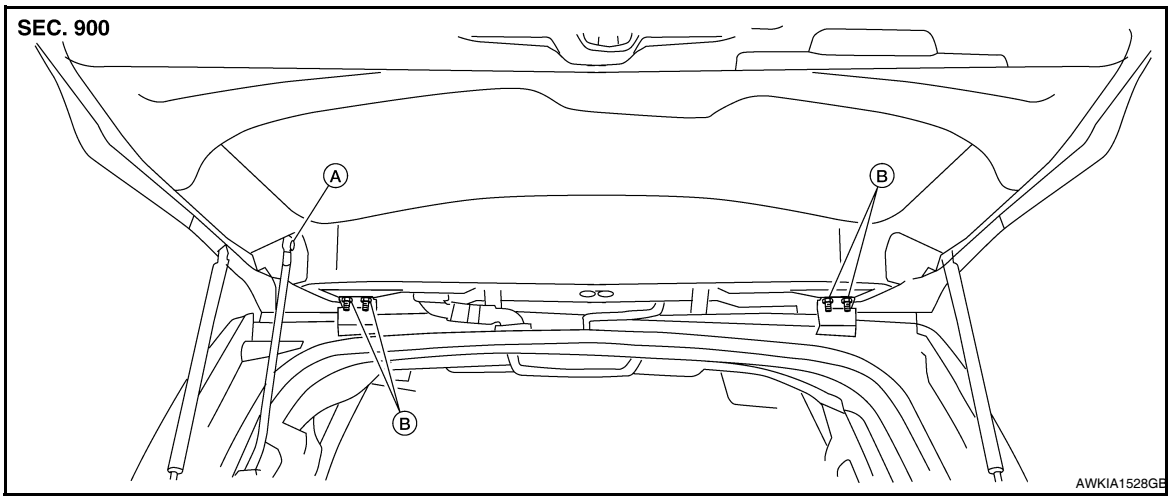


5. Remove the door-side hinge nuts and bolts, and remove the door assembly.



Installation
Installation is in the reverse order of removal.

BACK DOOR



A. 15.2 Nm (1.6 Kg-m, 11 ft-lb) **B. 17.0 Nm (1.7 Kg-m, 13 ft-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-13, "Removal and Installation".
2. Remove the back door lock assembly. Refer to DLK-244, "Door Lock Assembly".
3. Remove the rear wiper motor. Refer to WW-81, "Rear Wiper Motor".
4. Remove the back door wire harness.

5. Remove the rear washer nozzle and hose from the back door. Refer to WW-83, "Rear Washer Tube Layout".

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

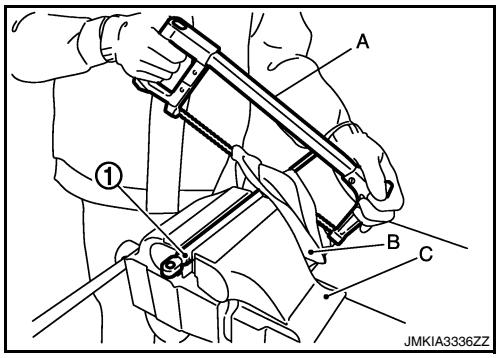
6. Support the back door.
7. Disconnect the power back door lift arm from the door.
8. Remove the back door stays.
9. Remove the door side nuts and the back door assembly.

Installation
Installation is in the reverse order of removal.

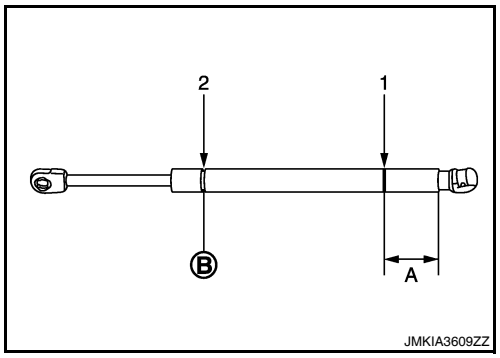
Back Door Stay Disposal

INFOID:0000000005877753

1. Fix back door stay (1) using a vise (C).
2. Using hacksaw (A) slowly make 2 holes in the back door stay, in numerical order as shown in the figure.
   CAUTION:
   - **When cutting a hole on back door stay, always cover a hacksaw using a shop cloth (B) to avoid scattering metal fragments or oil.**
   - **Wear eye protection (safety glasses).**
   - **Wear gloves.**



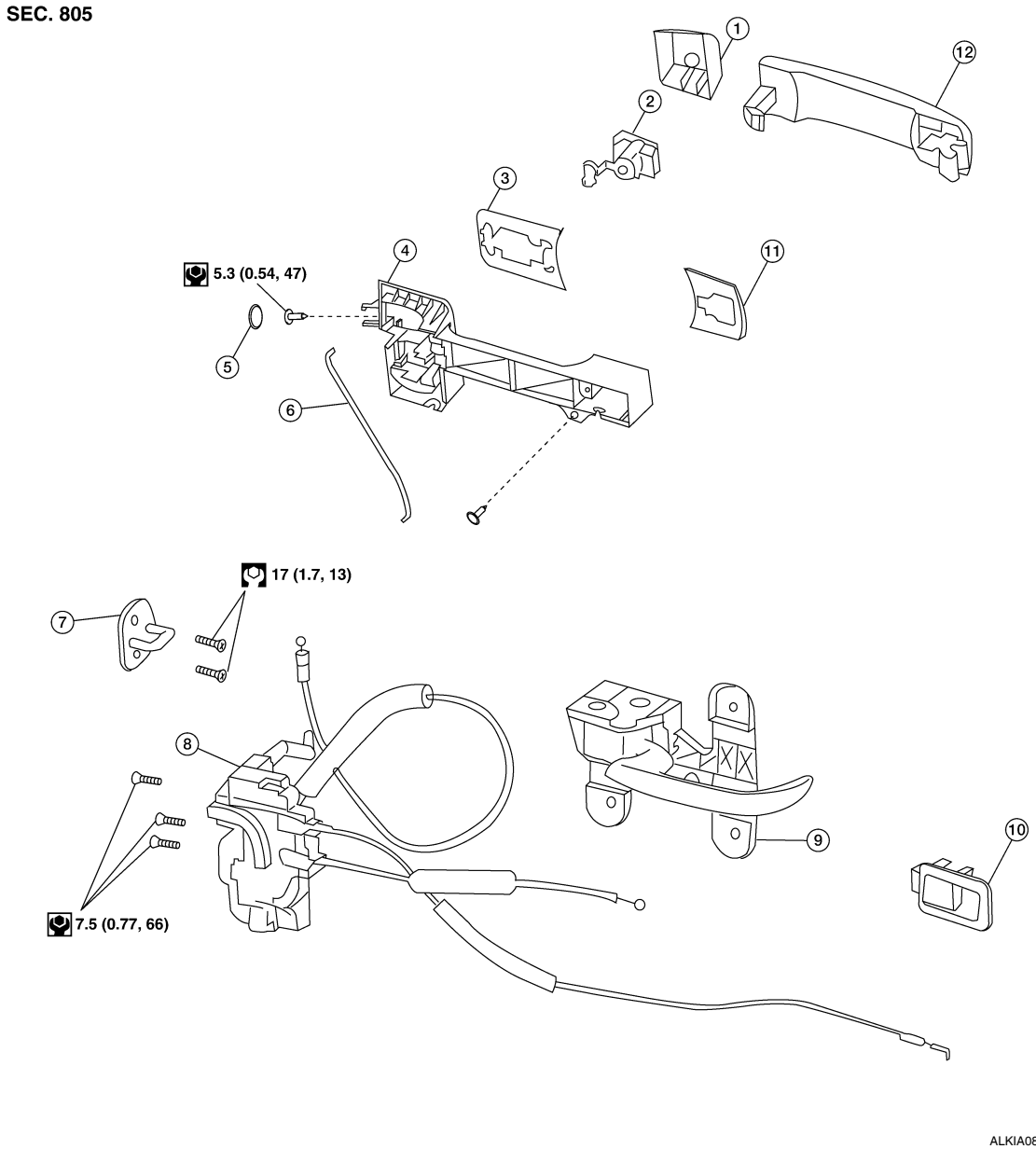
A: 20 mm (0.787 in)
B: Cut at the groove.



FRONT DOOR LOCK

Component Structure

INFOID:0000000003775857



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

Removal and Installation

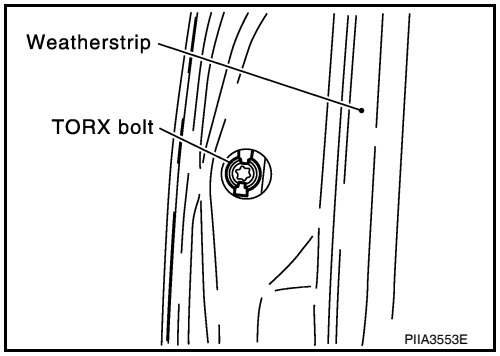
INFOID:0000000003775858

REMOVAL

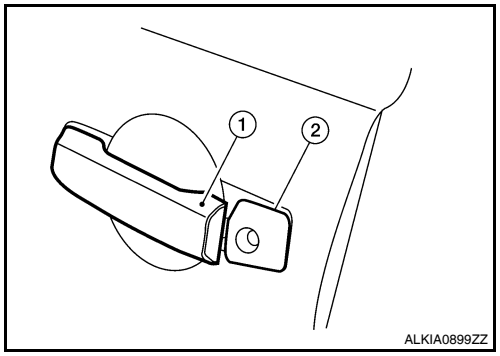
1. Remove the front door window regulator. Refer to GW-15, "Removal and Installation".
2. Remove the front door window rear glass run.

3. Remove the door side grommet, and the bolt (TORX T30) from the grommet hole.

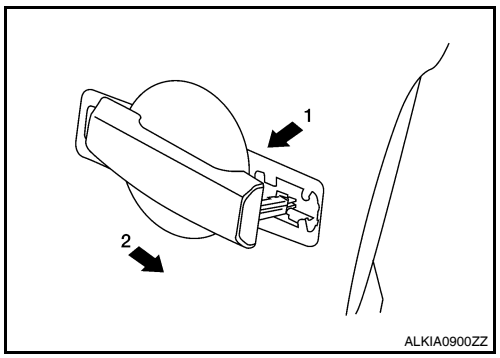
Torx bolt **5.3 N·m (0.54 kg-m, 47 in-lb)**



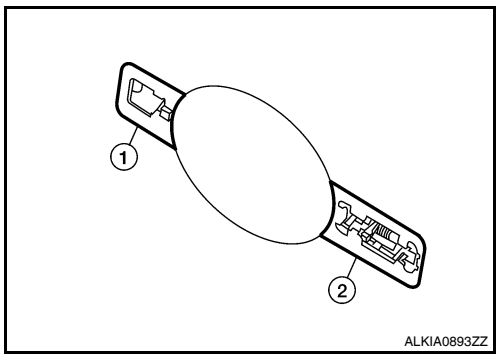
4. While pulling the outside handle (1), remove the door key cylinder assembly (LH) (2) or outside handle escutcheon (RH) (2).



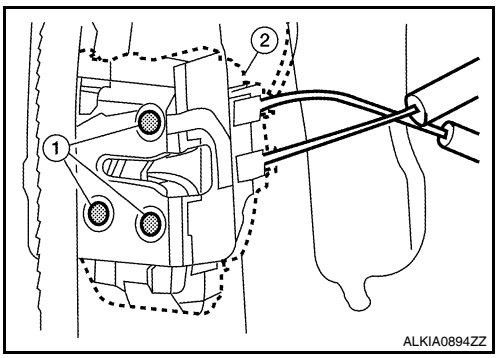
5. Separate the key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling the outside handle, slide it toward rear of vehicle to remove as shown.



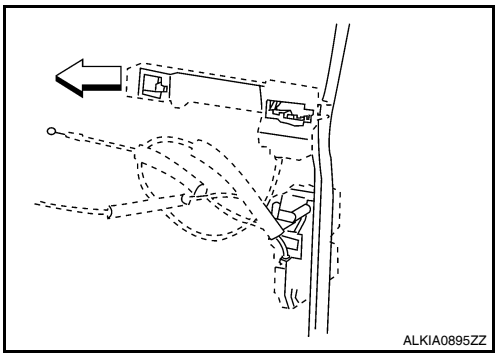
7. Remove the front gasket (1) and rear gasket (2).



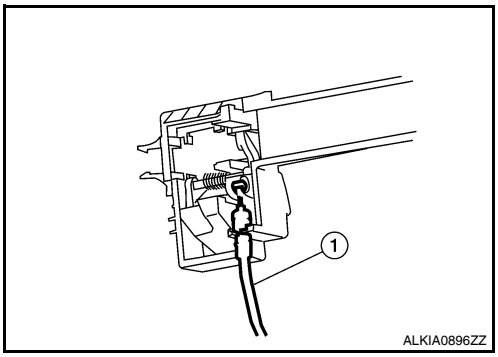
8. Remove the TORX bolts (T30) (1), and separate the door lock assembly (2) from the door.



9. While pulling the outside handle bracket, slide it toward the front of the vehicle to remove it and the door lock assembly as shown.
⇐ : Front



10. Disconnect the door lock actuator electrical connector.
11. Separate the outside handle cable connection (1) from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

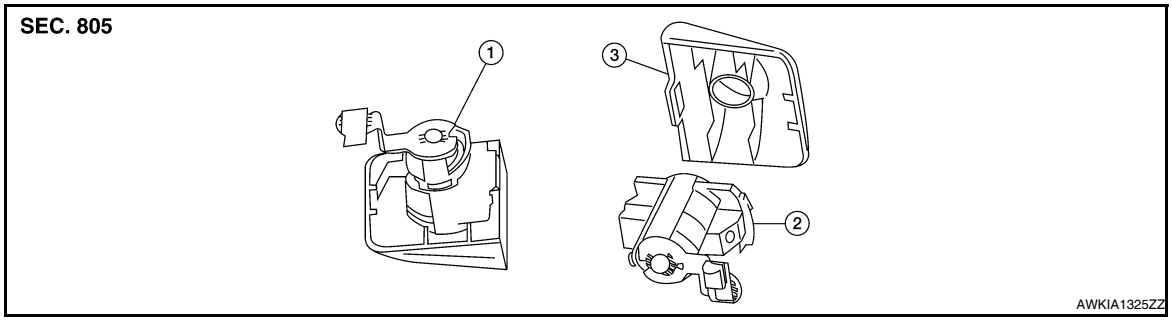
CAUTION:

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

Disassembly and Assembly

INFOID:0000000003775859

DOOR KEY CYLINDER ASSEMBLY



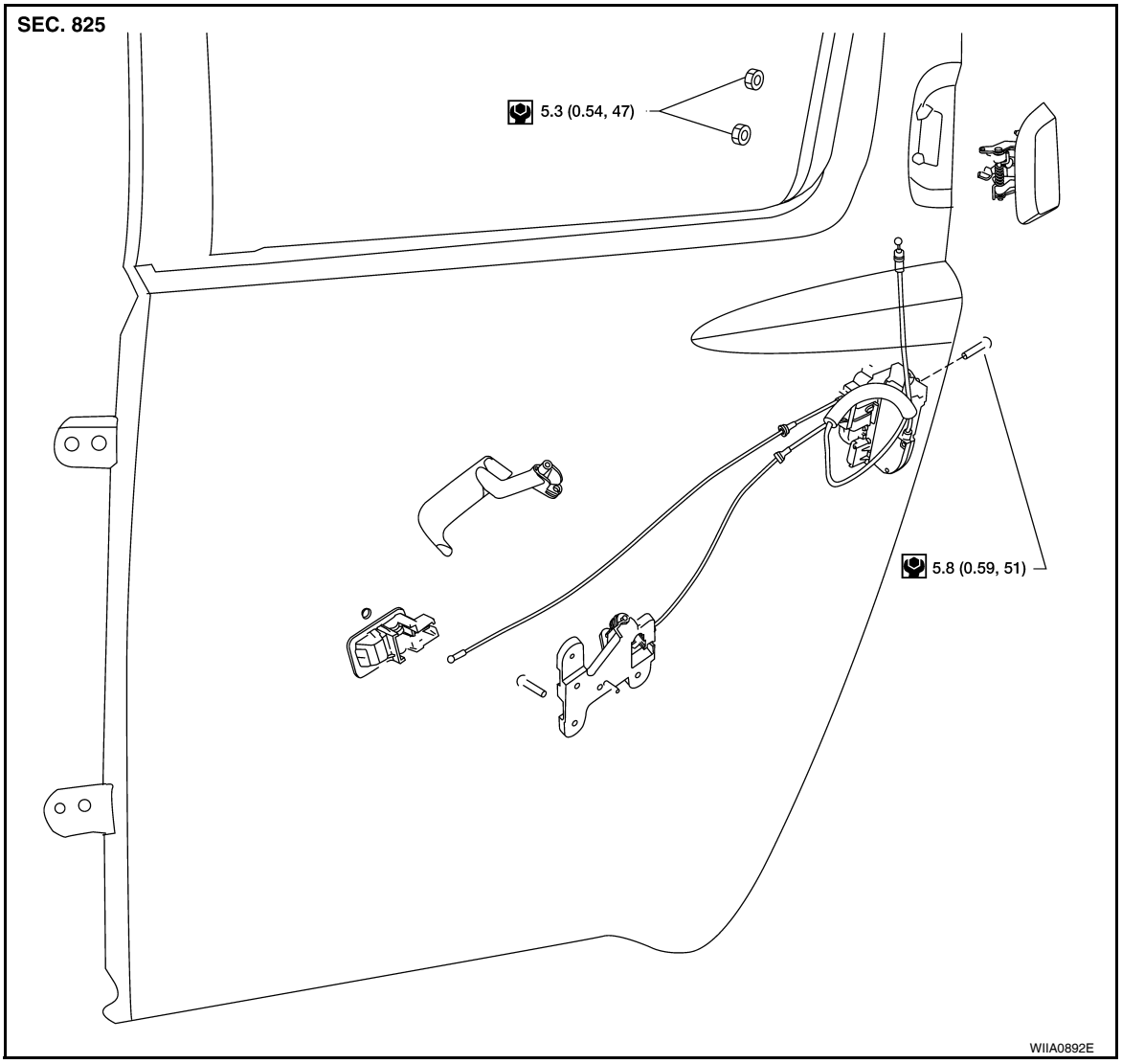
1. Door key cylinder assembly
2. Key cylinder assembly
3. Door key cylinder escutcheon

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

REAR DOOR LOCK

Component Structure

INFOID:0000000003775860



Removal and Installation

INFOID:0000000005877754

REMOVAL

1. Remove the rear door finisher. Refer to INT-11, "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.

INSTALLATION

Installation is in the reverse order of removal.

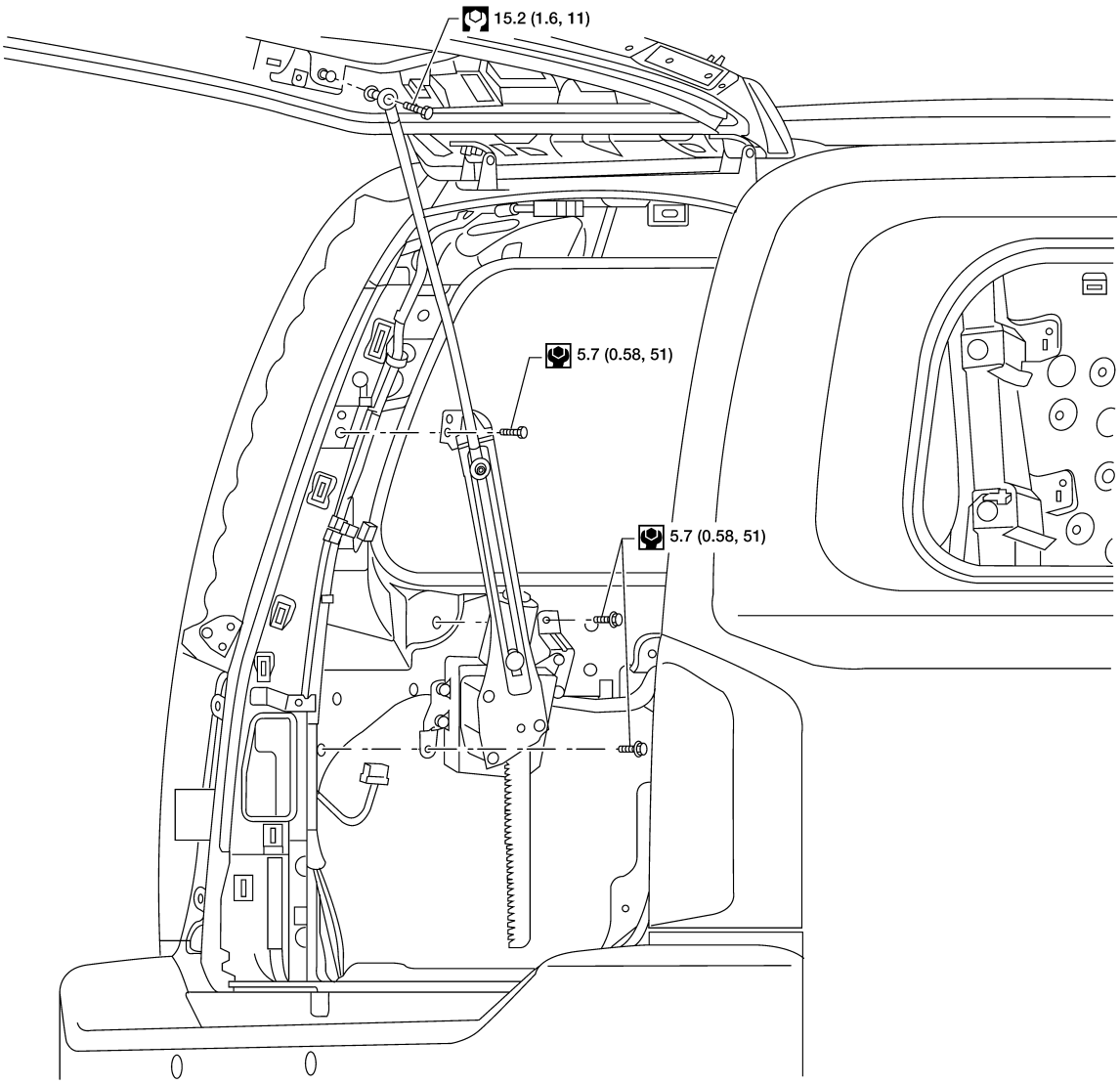
BACK DOOR LOCK

Power Back Door Opener

INFOID:0000000003775862

Removal

SEC. 905



WIIA0893E

1. Disconnect the battery negative terminal. Refer to PG-76, "Removal and Installation".
2. Remove the LH luggage side upper. Refer to INT-19, "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

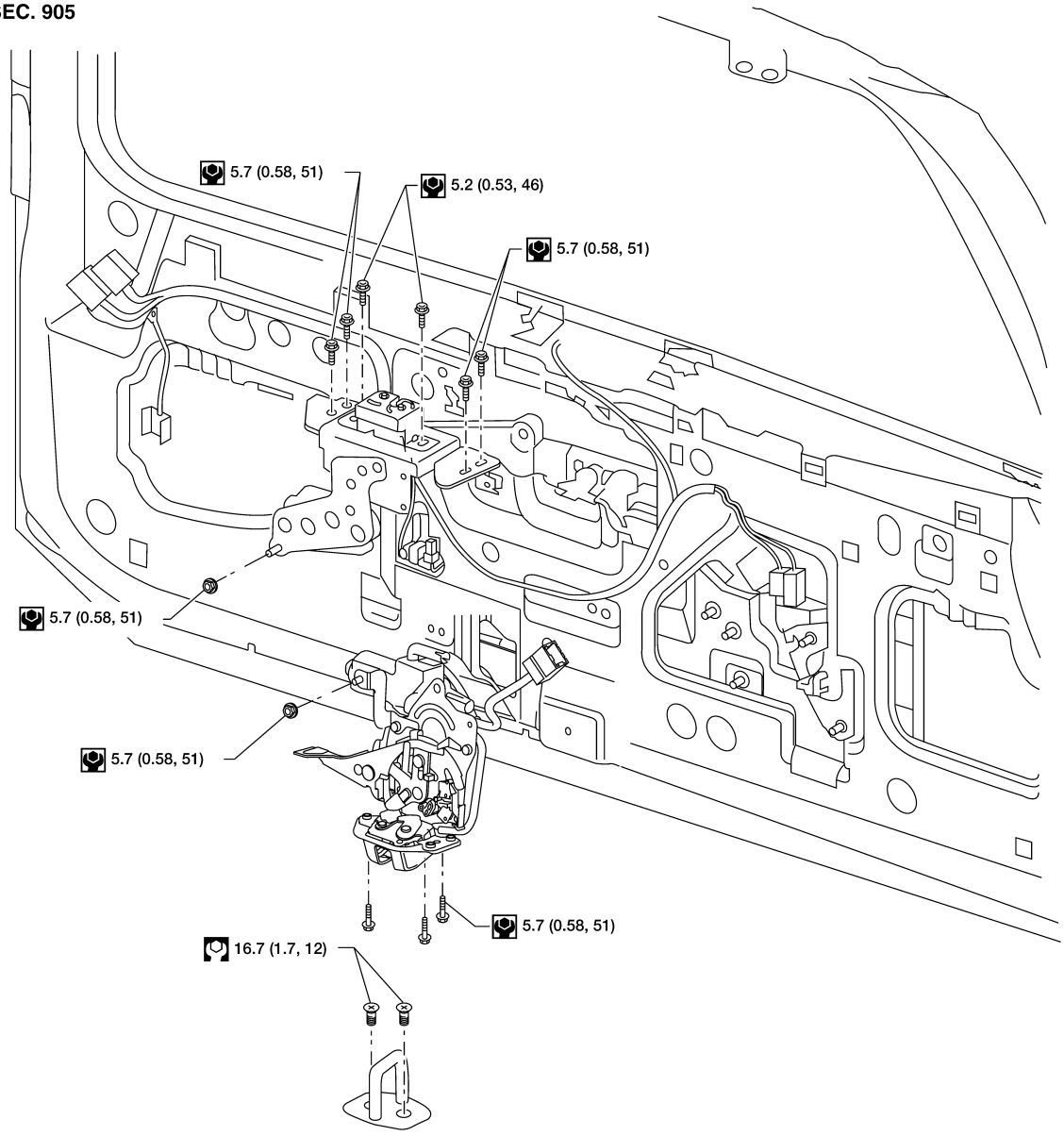
Installation is in the reverse order of removal.

Door Lock Assembly

INFOID:0000000003775863

Removal

SEC. 905



WIIA0894E

1. Remove the lower back door trim panel. Refer to INT-21, "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.