SECTION DLK
DOOR & LOCK

CONTENTS

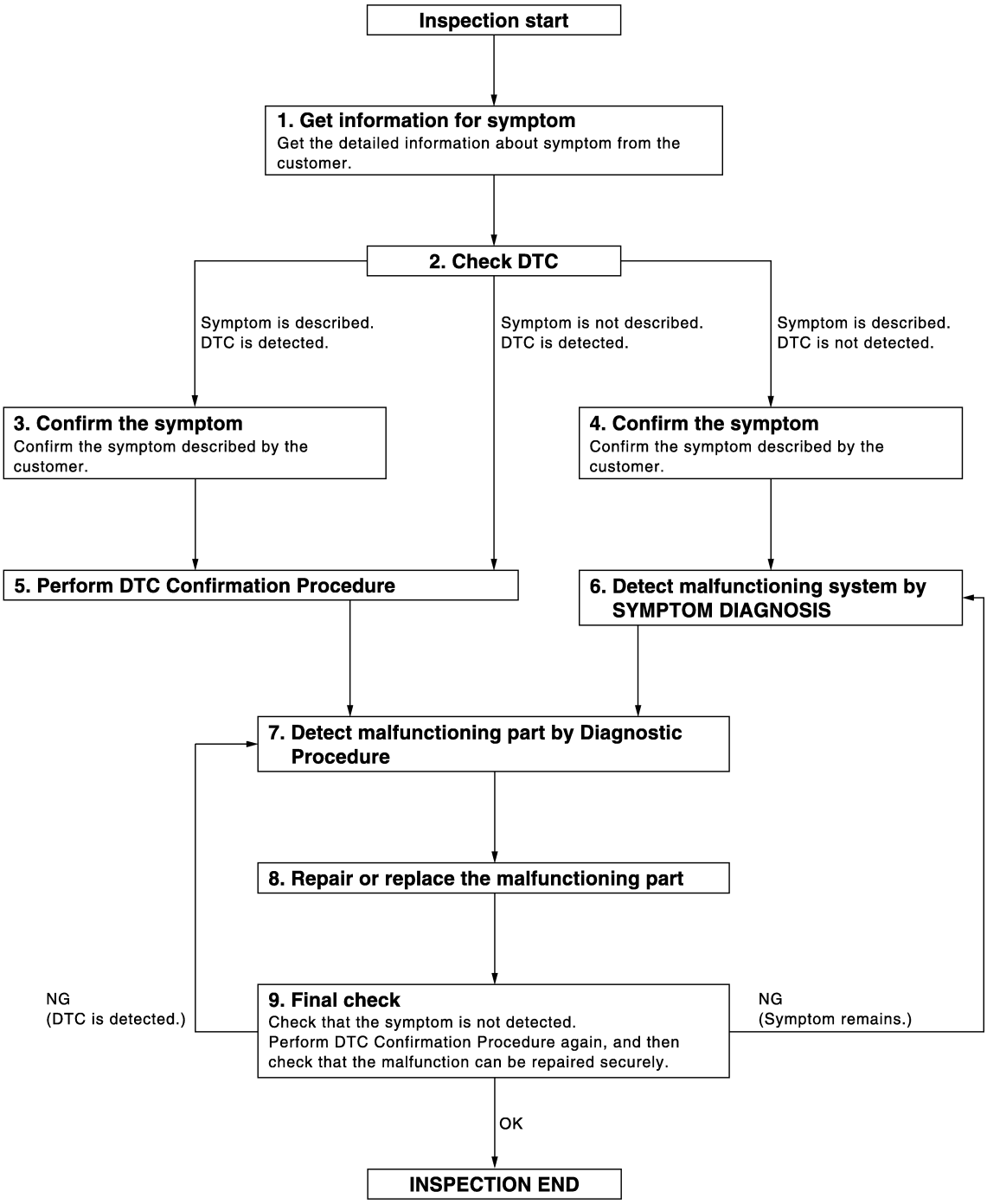
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005259832

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-143, "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-37, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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.

Is the inspection result normal?

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

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000005259833

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:0000000005259834

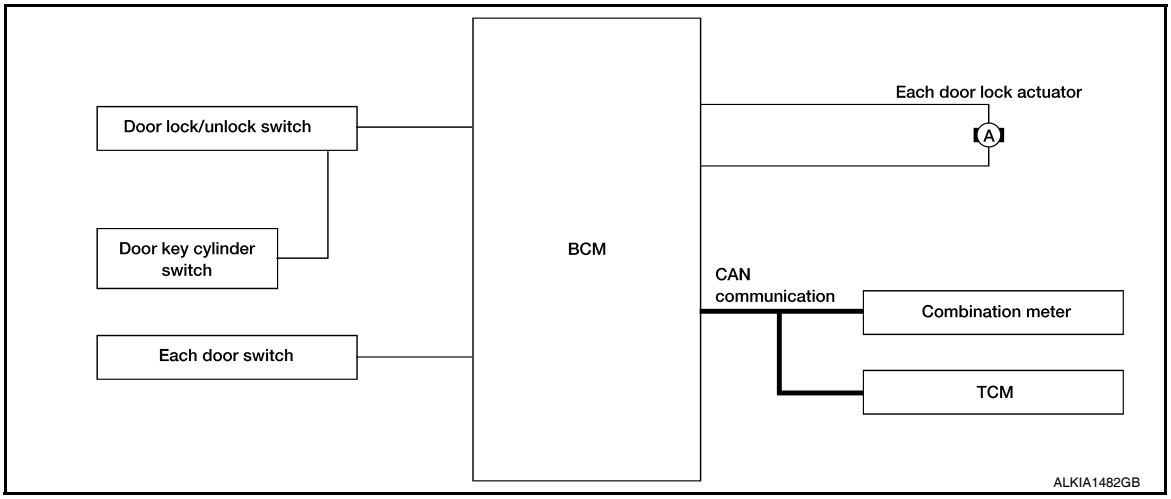
Refer to the CONSULT-III Operation Manual for the initialization procedure.

FUNCTION DIAGNOSIS

AUTOMATIC DOOR LOCKS

System Diagram

INFOID:0000000005259835



System Description

INFOID:0000000005259836

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-41, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

BCM outputs the lock signal to all door lock actuators when it detects that the ignition switch is turned ON, all doors are closed and the vehicle speed received from the combination meter via CAN communication becomes 24 km/h (15 MPH) 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 lock 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-41, "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 lock 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-41, "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.

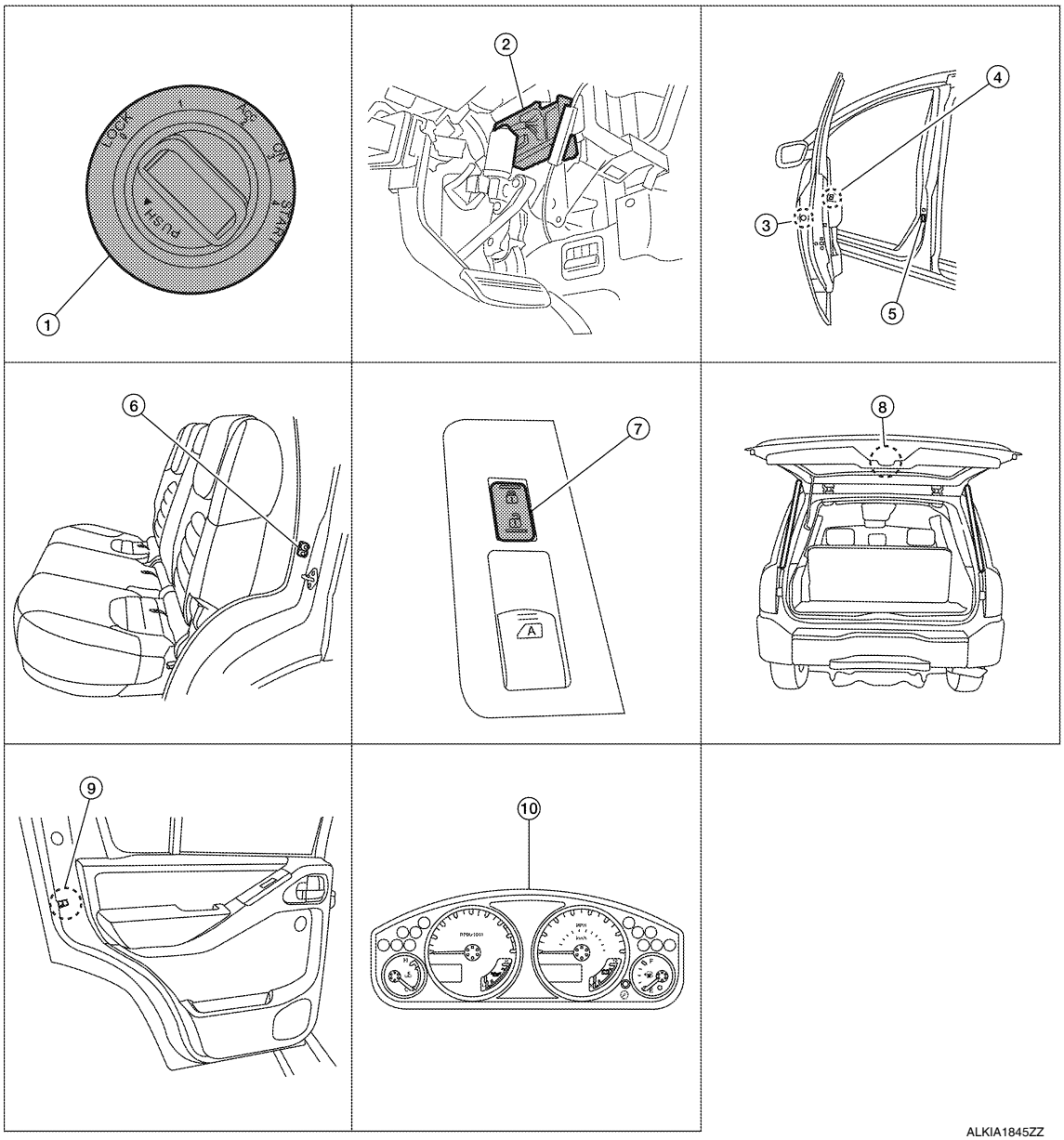
OFF → ON	: 2 blinks
ON → OFF	: 1 blink

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:0000000005259837



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1. Key switch and ignition knob switch M66
2. BCM M18, M19, M20
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) D502
9. Rear door lock actuator LH D205
   RH D305
10. Combination meter M24

Component Description

INFOID:0000000005259838

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

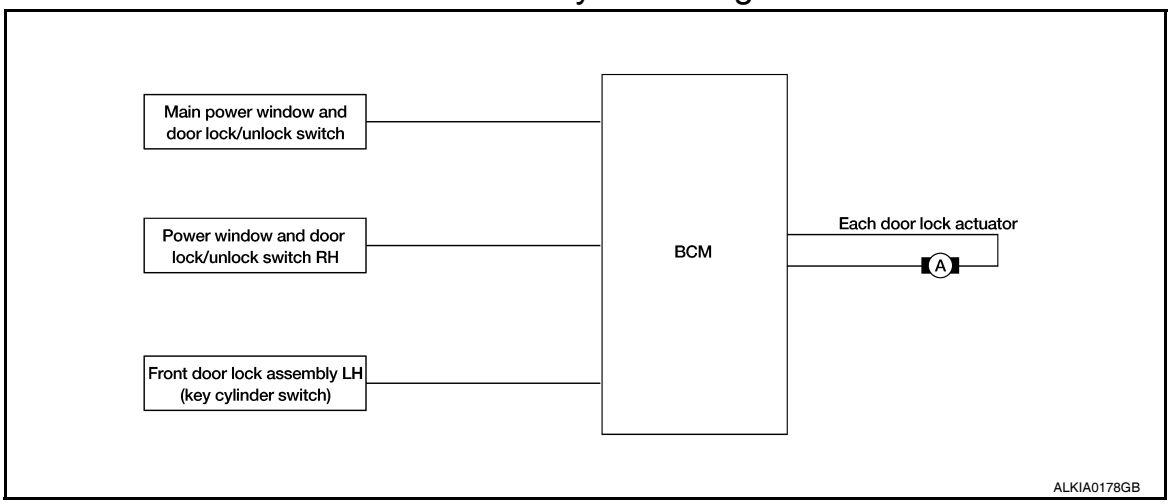
Item	Function
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Input door open/close condition to BCM.
Door key cylinder switch	• Input lock or unlock signal to main power window and door lock/unlock switch. • Main power window and door lock/unlock switch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

DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:0000000005259839



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:0000000005259840

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 actuators
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 doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors are unlocked, back door opener switch is enabled, and mechanical glass hatch switch is enabled.
- When the back door opener switch is pressed, the Intelligent Key unit terminal 24 receives signal from the back door opener switch terminal 1.
- The Intelligent Key unit checks the park/neutral switch position and vehicle speed. If the back door operating enable conditions are met, it sends a signal through terminal 23 to the BCM terminal 30.
- When the BCM receives the signal, if the back door operating enable conditions are met, it sends a signal through terminal 53 to open the back door latch.

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 doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.

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.

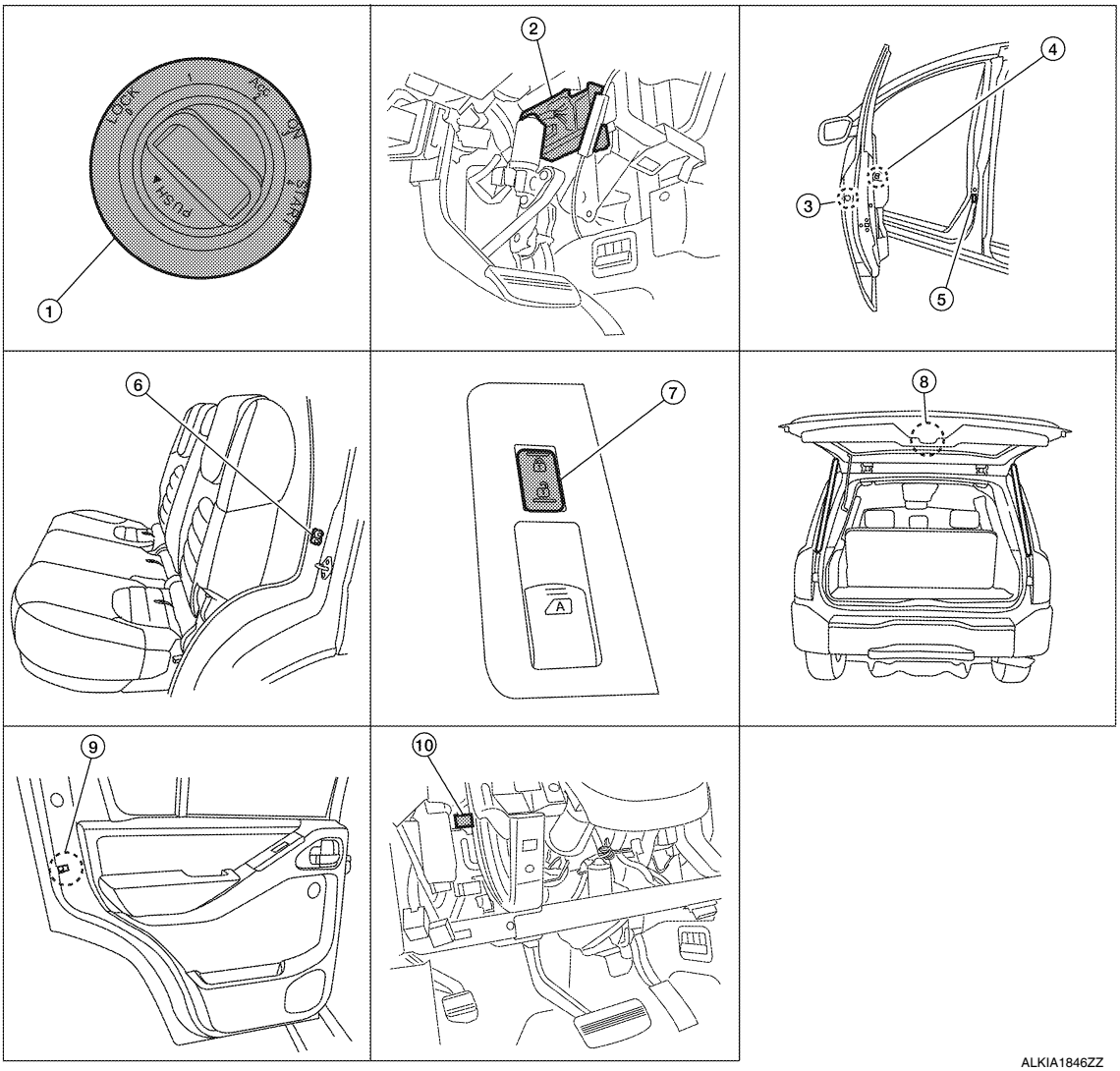
Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in “WORK SUPPORT”. Refer to DLK-41, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Key Reminder System

Refer to DLK-32, "System Description".

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:0000000005259841



1. Key switch and ignition knob switch M66
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) D502
9. Rear door lock actuator
   LH D205
   RH D305
10. Passenger select unlock relay M11 (view with instrument panel LH removed)

DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:0000000005259842

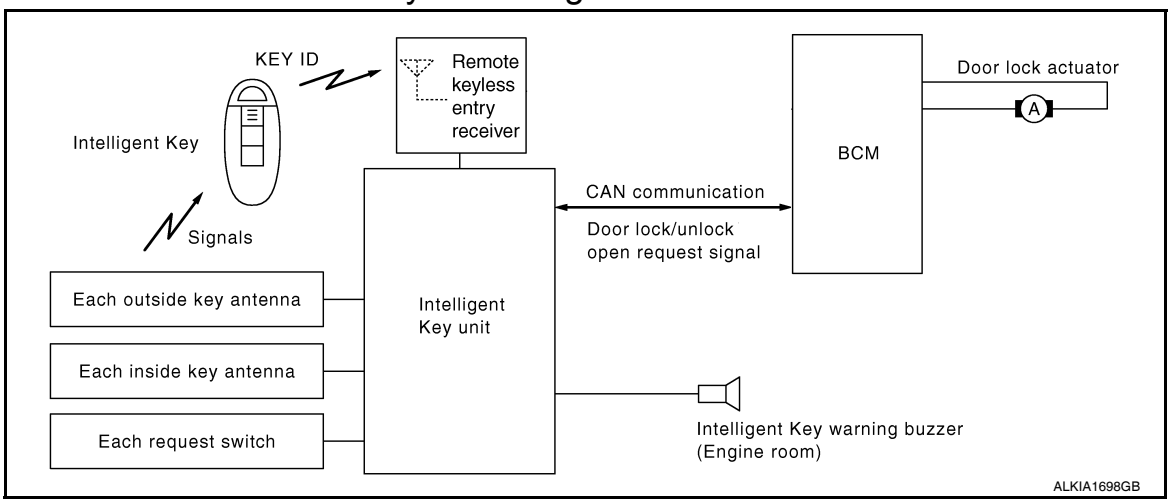
Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.

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:0000000005259843



DOOR REQUEST SWITCH : System Description

INFOID:0000000005259844

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

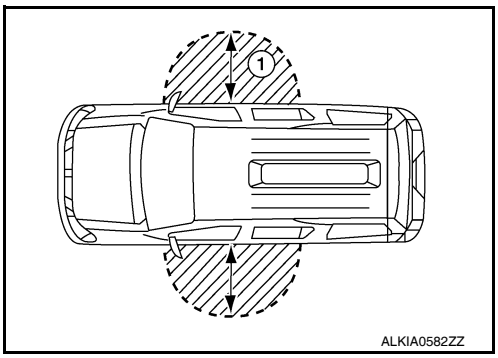
If the following conditions are not satisfied, door lock/unlock operation is not performed even if the request switch is operated.

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.

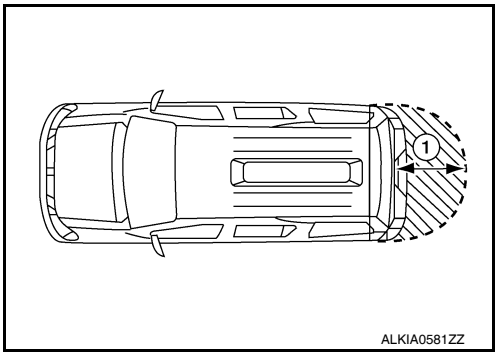
OUTSIDE KEY ANTENNA DETECTION AREA

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
Trunk open	—	Four times

How to change hazard and buzzer reminder mode
Refer to DLK-41, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

AUTO RELOCK 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-41, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

ROOM LAMP OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for up to 30 seconds maximum) by receiving UNLOCK signal from door request switch. For detailed description, refer to DLK-15, "DOOR LOCK AND UNLOCK SWITCH : System Description".

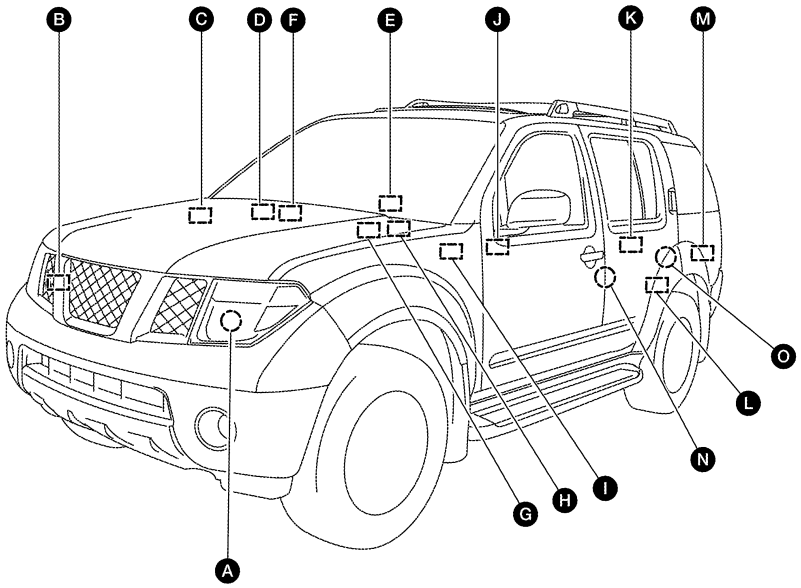
LIST OF OPERATION RELATED PARTS

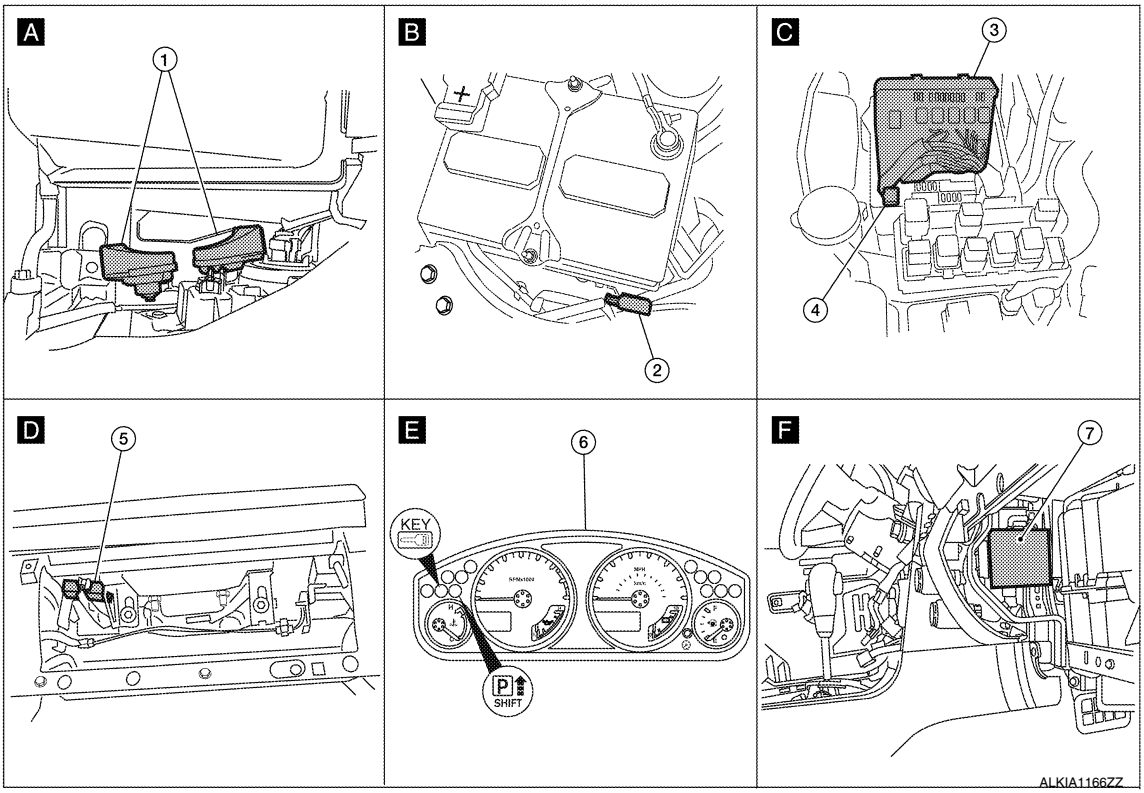
Parts marked with × are the parts related to operation.

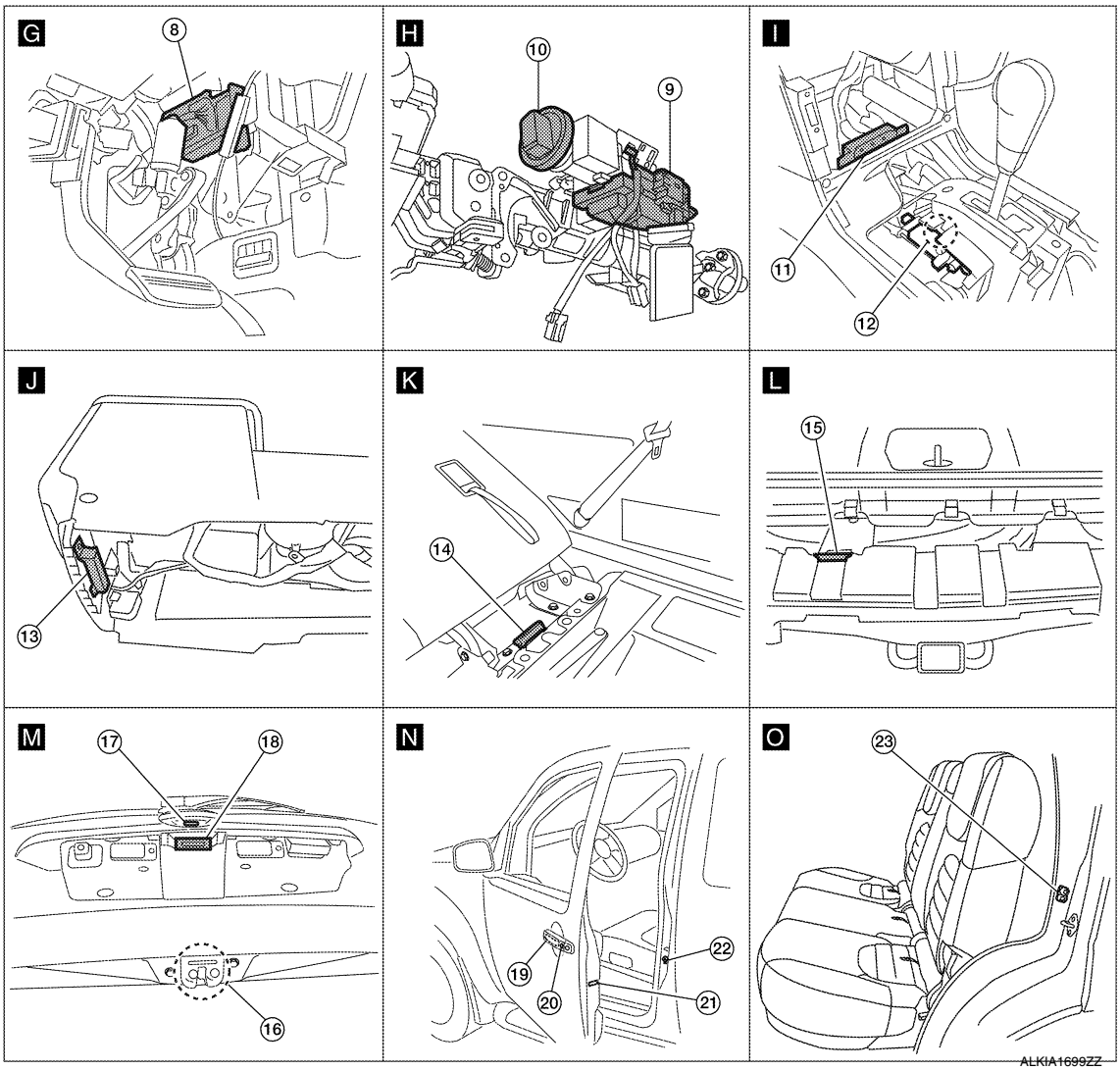
Door lock function	Intelligent Key	Ignition key switch	Remote keyless entry receiver	Door switch	Door request switch (Driver, Passenger)	Door lock actuator	Inside key antenna	Outside key antenna (Driver, Passenger)	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamp
Door lock/unlock 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:0000000005259845







1. Horn E3 (Behind front combination lamp LH)
2. Intelligent key warning buzzer E60
3. IPDM E/R E122, E124 (view with cover removed)
4. Horn relay H-1
5. Remote keyless entry receiver M67 (view with glove box removed)
6. Combination meter M24
7. Intelligent Key unit M164 (view with glove box removed)
8. BCM M18, M19, M20 (view with instrument panel LH removed)
9. Steering lock solenoid M65 (view with steering column removed)
10. Key switch and ignition knob switch M66
11. Instrument panel area antenna M68 (view with center console cover removed)
12. A/T shift selector [park position switch (Intelligent Key system)] M158
13. Center console area antenna M212 (view with center console removed)
14. Luggage area antenna B129 (behind right side of 3rd row seat)
15. Rear bumper antenna C127 (view with rear bumper removed)
16. Back door latch (door ajar switch) D502
17. Back door request switch D552
18. Back door opener switch D511
19. Front outside antenna LH D15 Front outside antenna RH D115
20. Front door request switch LH D16 Front door request switch RH D116
21. Front door lock assembly LH (door unlock sensor) D14
22. Front door switch LH B8 RH B108
23. Rear door switch LH B18 RH B116

DOOR REQUEST SWITCH : Component Description

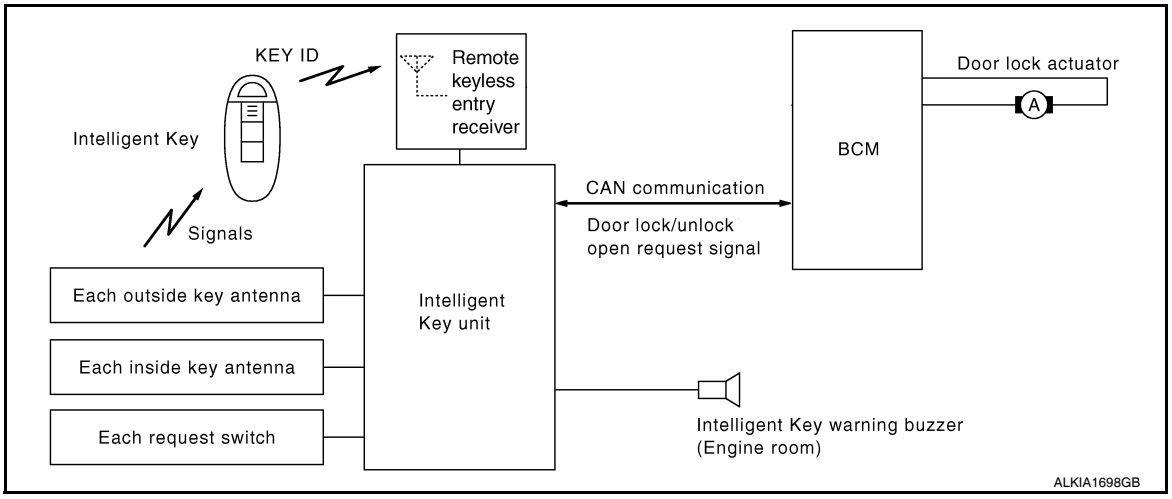
INFOID:0000000005259846

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:0000000005259847



INTELLIGENT KEY : System Description

INFOID:0000000005259848

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 including 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 (31.50 in) 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.

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

Without CONSULT-III

Refer to Owner's Manual for instructions.

AUTO RELOCK 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 60 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-41, "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-41, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

KEYLESS POWER WINDOW DOWN (OPEN) FUNCTION

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

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

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

ROOM LAMP ILLUMINATION OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for 30 seconds) by receiving UNLOCK signal from Intelligent Key. For detailed description, refer to DLK-22, "INTELLIGENT KEY : System Description".

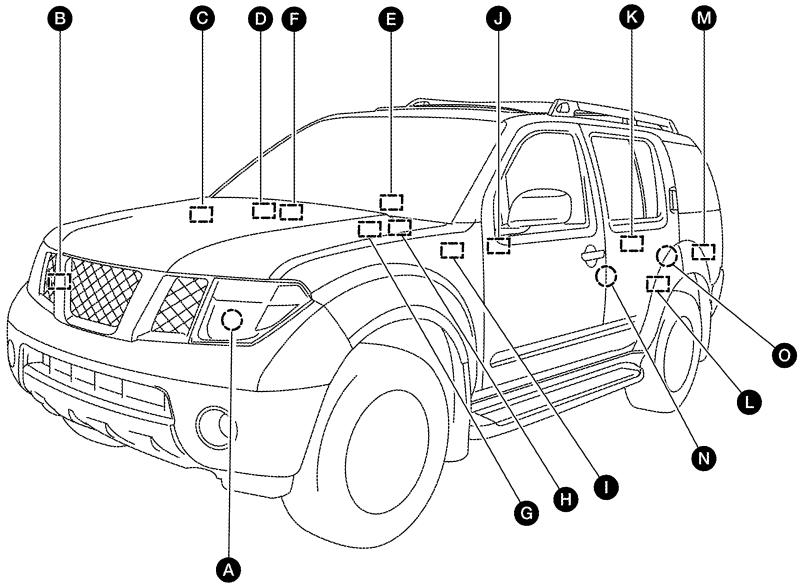
LIST OF OPERATION RELATED PARTS

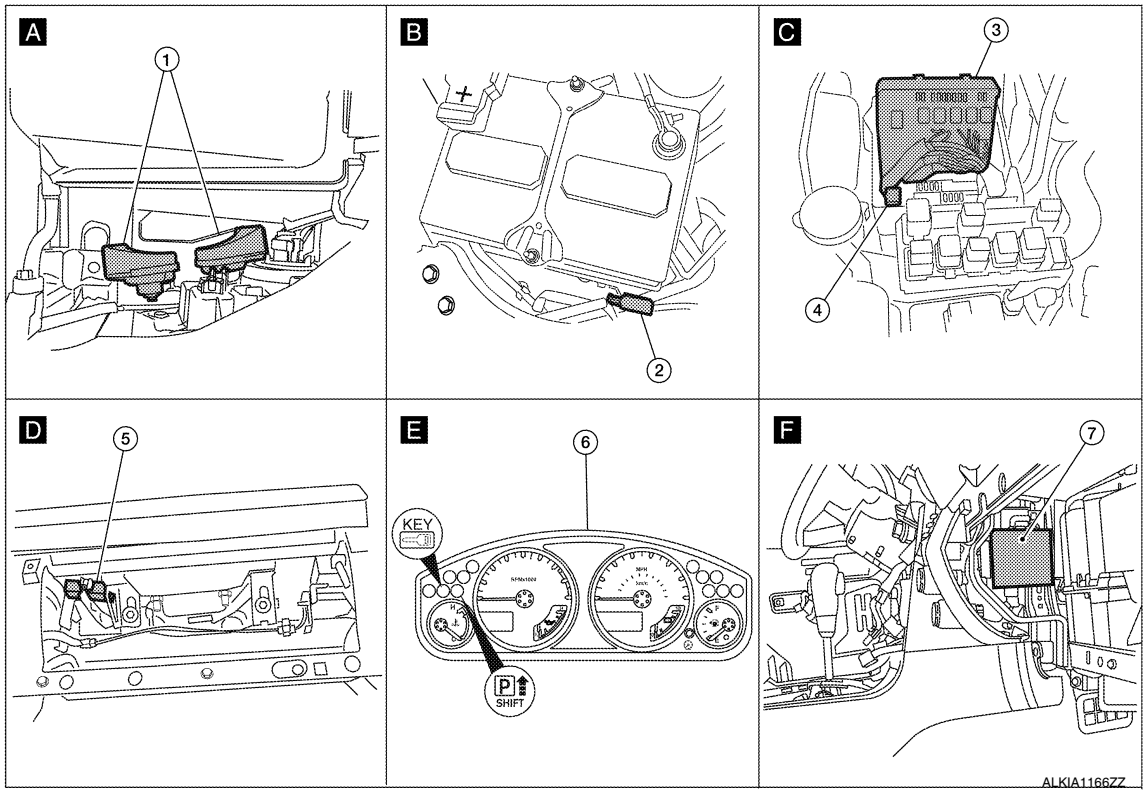
Parts marked with × are the parts related to operation.

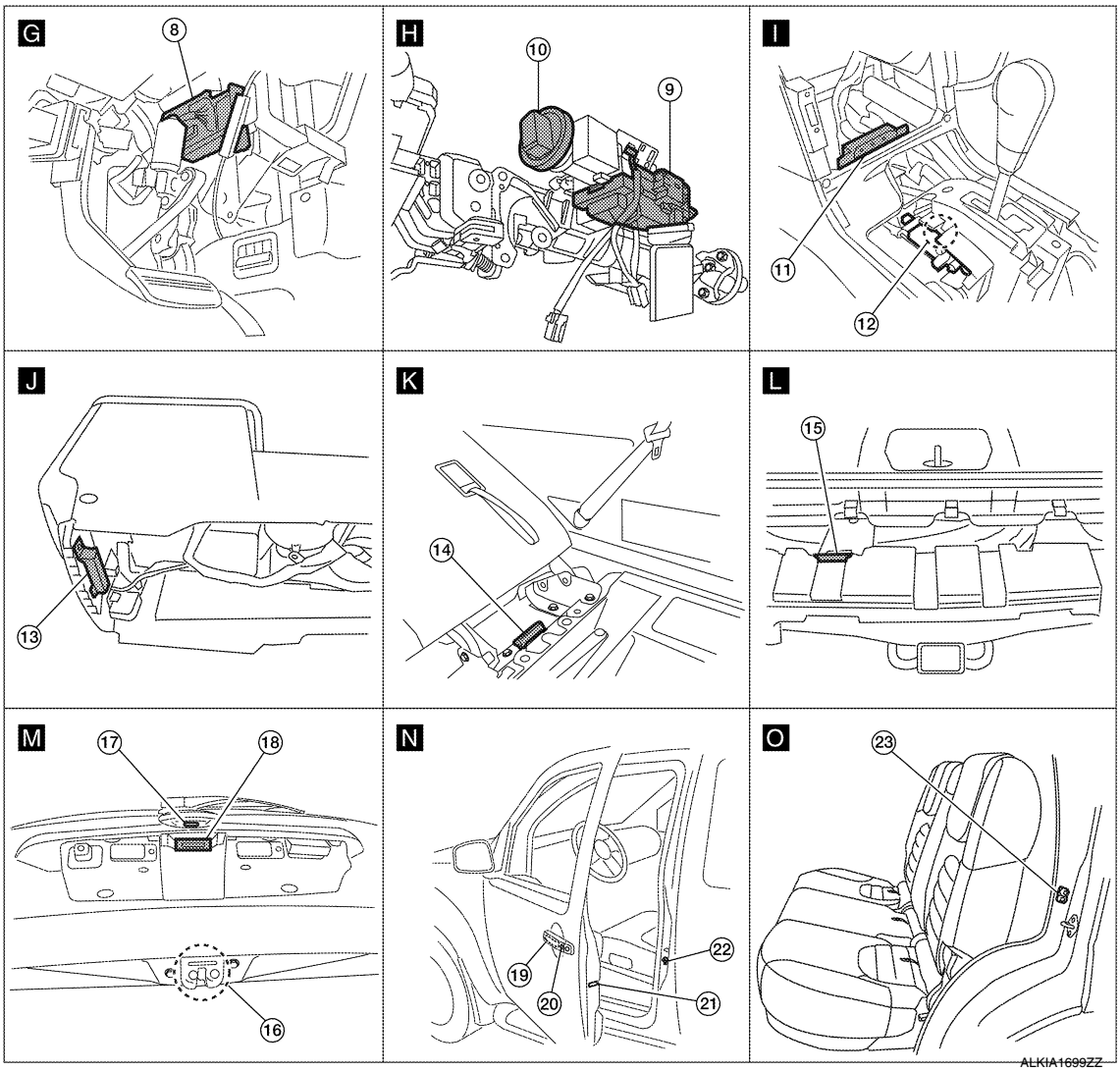
Remote keyless entry functions	Intelligent Key	Intelligent Key unit	Key switch and ignition knob switch	Door request switch (Driver, Passenger)	Door switch	Door lock actuator	Intelligent Key warning buzzer	CAN communication system	BCM	Combination meter	Hazard warning lamps	Horn	IPDM E/R	Head lamp
Door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

INTELLIGENT KEY : Component Parts Location

INFOID:0000000005484868







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22. Front door switch LH B8 RH B108
23. Rear door switch LH B18 RH B116

INTELLIGENT KEY : Component Description

INFOID:0000000005259850

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.

WARNING FUNCTION

System Description

INFOID:0000000005259851

WARNING CHIME/BUZZER/LAMPS FUNCTION

Operation Description

The following warning chime (combination meter), intelligent key warning buzzer (front of vehicle), and warning lamps "KEY" and “P-SHIFT” (combination meter) are given to the user as warning information while using the intelligent key system.

- Ignition switch warning chime
- Ignition key warning chime
- OFF position warning chime
- OFF position warning chime (after door closed)
- Take away warning chime
- Take away warning chime (from window)
- Door lock operation warning chime
- Intelligent Key low battery warning
- P position warning

OPERATION CONDITION

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

Operation	Condition	Intelligent Key warning sound	Warning lamp illuminates
Ignition switch warning chime	• Key switch is OFF. • Ignition switch is in the ACC, OFF or LOCK position. [ignition switch is pressed (ignition knob switch is ON)]. • Driver door is open.	Chime (Instrument panel)	—
Ignition key warning chime (When mechanical key is used)	• Mechanical key is inserted in ignition switch (key switch is ON). • Ignition switch is in the ACC, OFF or LOCK position. • Driver door is open.	Chime (Instrument panel)	—
OFF position warning chime	• Ignition switch is turned from ACC to OFF. [ignition switch is pressed (ignition knob switch is ON)]. • Ignition switch is in the LOCK position and pressed for 1 second.	Chime (Instrument panel)	—
OFF position warning chime (after door closed)	When driver door is opened and then closed while the OFF position warning chime above is operating.	Buzzer (front of vehicle)	—
Take away warning chime	• Engine is running. • Door open to close. • Intelligent Key is not found inside vehicle.	Buzzer (front of vehicle)	“KEY” (red) blinking
Take away warning chime (from window)	• Engine is running. • Door is closed. • Intelligent Key is not found inside vehicle.	Chime (Instrument panel)	“KEY” (red) blinking
Door lock operation warning chime	When request switch is pushed under the following conditions: • All door are closed. • Door is unlocked. • Intelligent Key is inside vehicle.	Buzzer (front of vehicle)	—
Intelligent Key low battery warning	When Intelligent Key battery is low, Intelligent Key unit is detected after ignition switch is turned ON.	—	“KEY” (green) blinking (30 sec)
P position warning	When selector lever is in other than P position, ignition switch is turned from ON to OFF.	—	“P-SHIFT”

KEY WARNING LAMP & P-SHIFT WARNING LAMP

The key indicator and p-shift indicator Intelligent Key system status.

Operation Condition

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

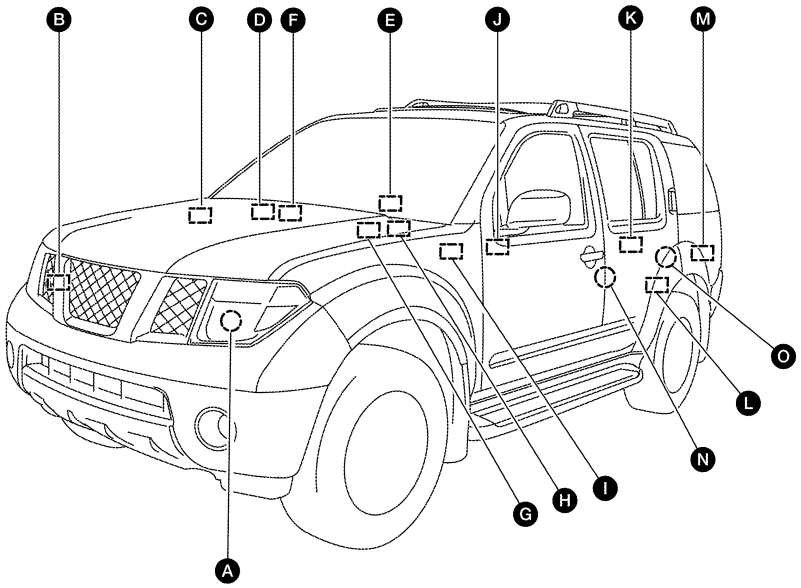
List of Operation Related Parts

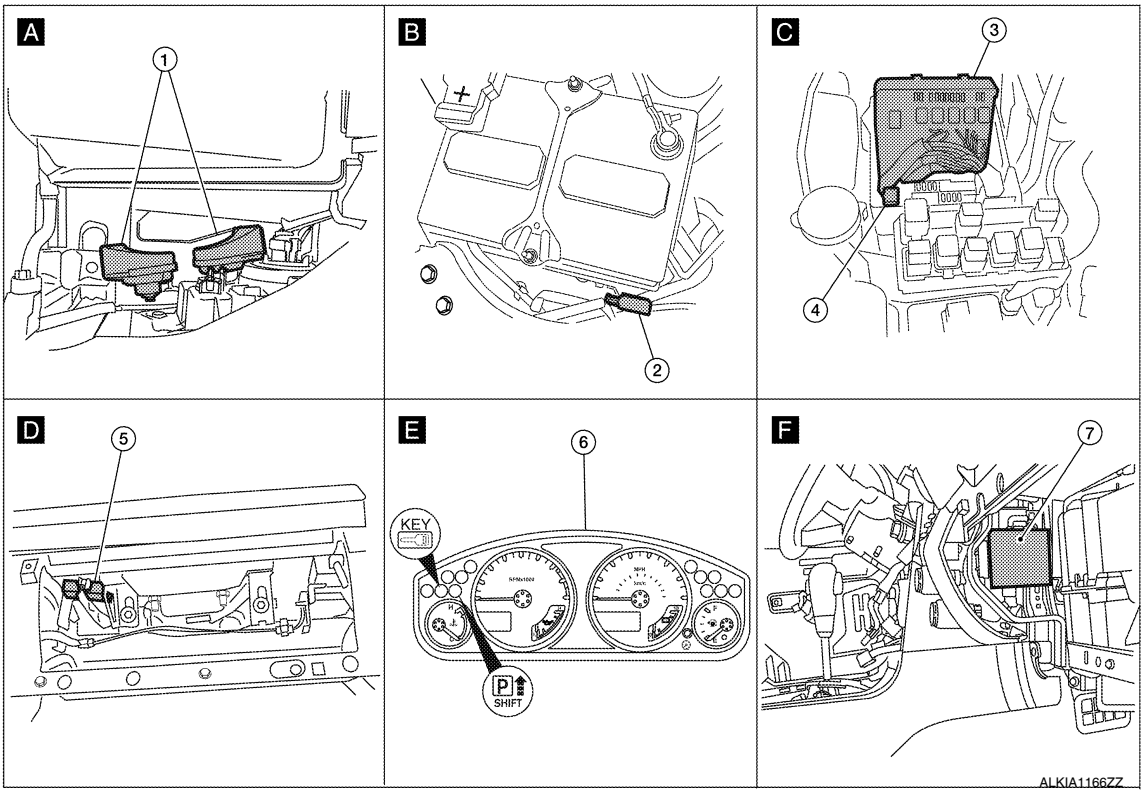
Parts marked with × are the parts related to operation.

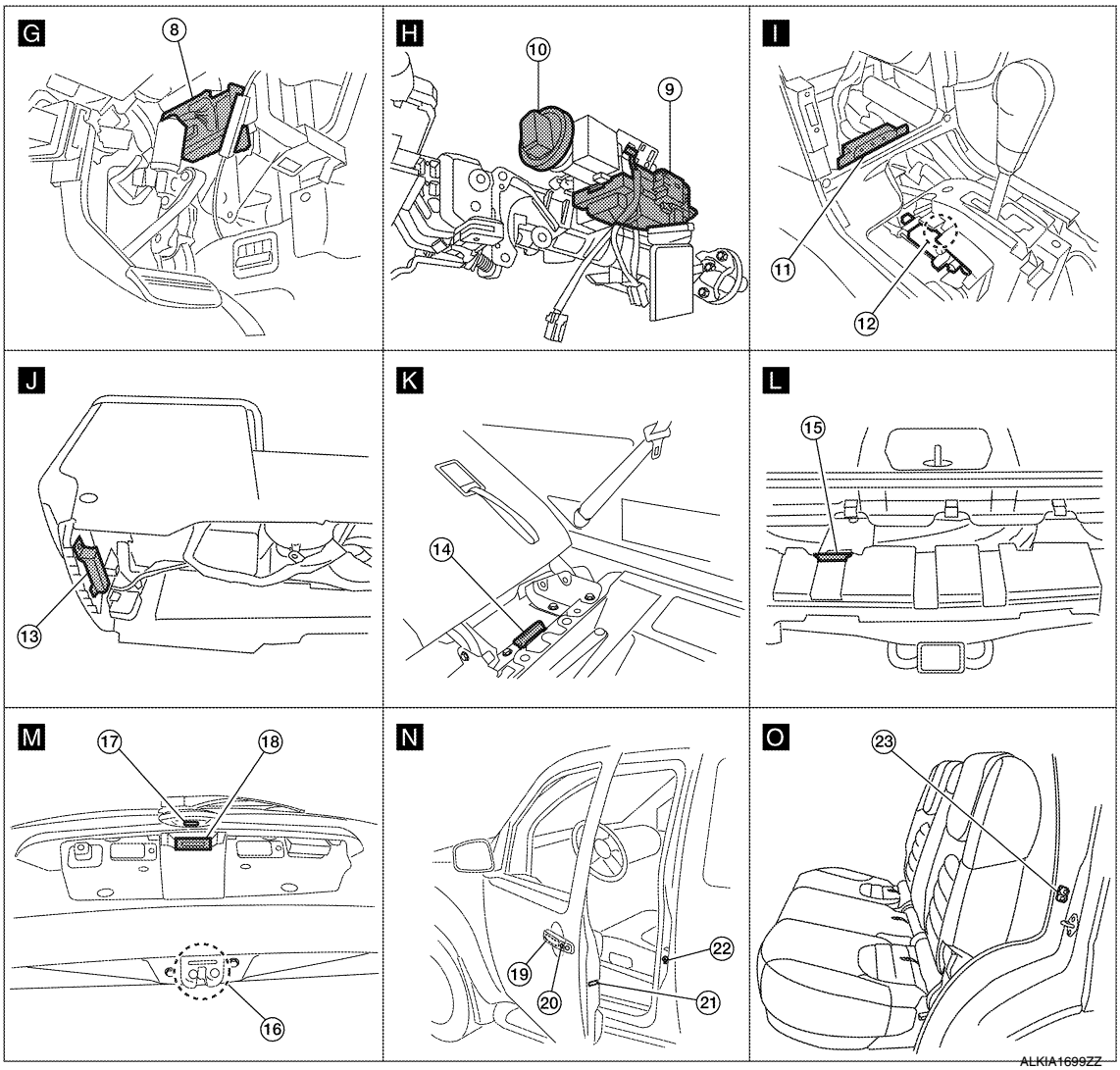
Warning and alarm functions	Intelligent Key	Key switch	Ignition knob switch	Ignition switch ACC position input signal	Ignition switch ON position input signal	Door switch	Door request switch	Inside key antenna	Front outside antenna (LH, RH)	Rear bumper antenna	Intelligent Key warning buzzer	Intelligent Key unit	CAN communication system	BCM	Combination meter	A/T shift selector (park position switch)
Ignition switch warning chime			×		×	×						×				
Ignition key warning chime (When mechanical key used)		×			×	×							×	×	×	
OFF position warning chime			×	×	×						×	×				
OFF position warning chime (after door close)			×	×	×	×					×	×				
Take away warning chime	×		×			×		×			×	×			×	
Take away warning chime (from window)	×		×			×		×			×	×			×	
Door lock operation warning chime	×		×			×	×	×	×		×	×				
Intelligent Key low battery warning	×				×			×				×			×	
P position warning					×							×			×	×

Component Parts Location

INFOID:0000000005484873







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KEY REMINDER FUNCTION

System Description

INFOID:0000000005259853

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 trunk 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 performed in these cases.

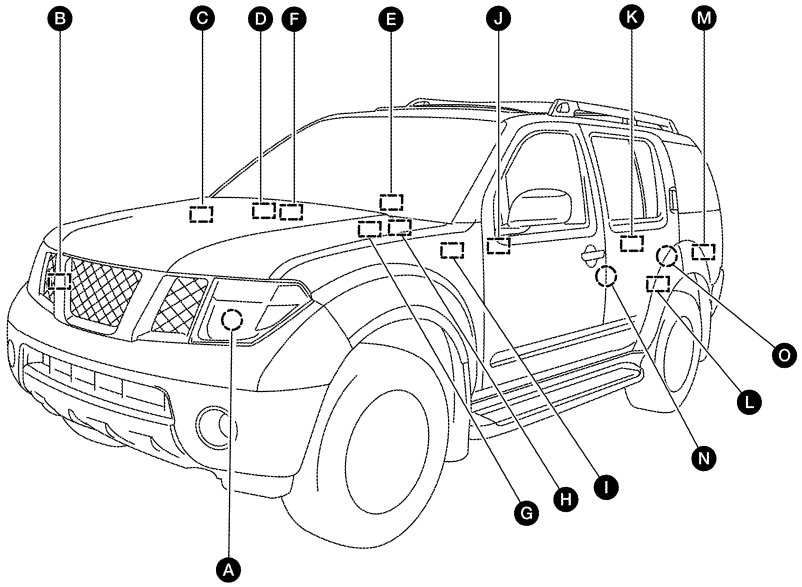
CAUTION:

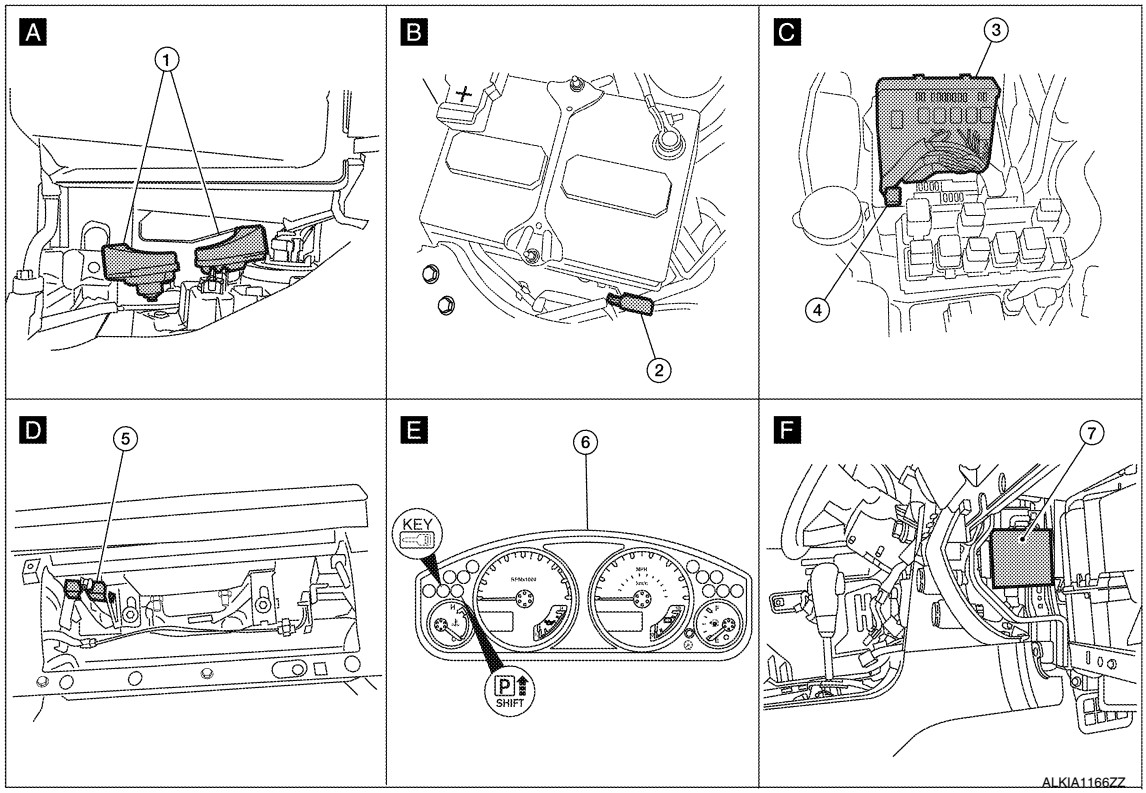
- **The above function operates when the Intelligent Key is inside the vehicle. However, there may be times when the Intelligent Key cannot be detected, and this function will not operate when the Intelligent Key is on the instrument panel, rear of vehicle, or in the glove box. Also, this system sometimes does not operate if the Intelligent Key is in the door pocket for the open door.**
- **When the key reminder function is operated when the trunk is open/closed and the buzzers sound, if the following operations are performed, the key reminder function is cleared and buzzer sounds are stopped.**

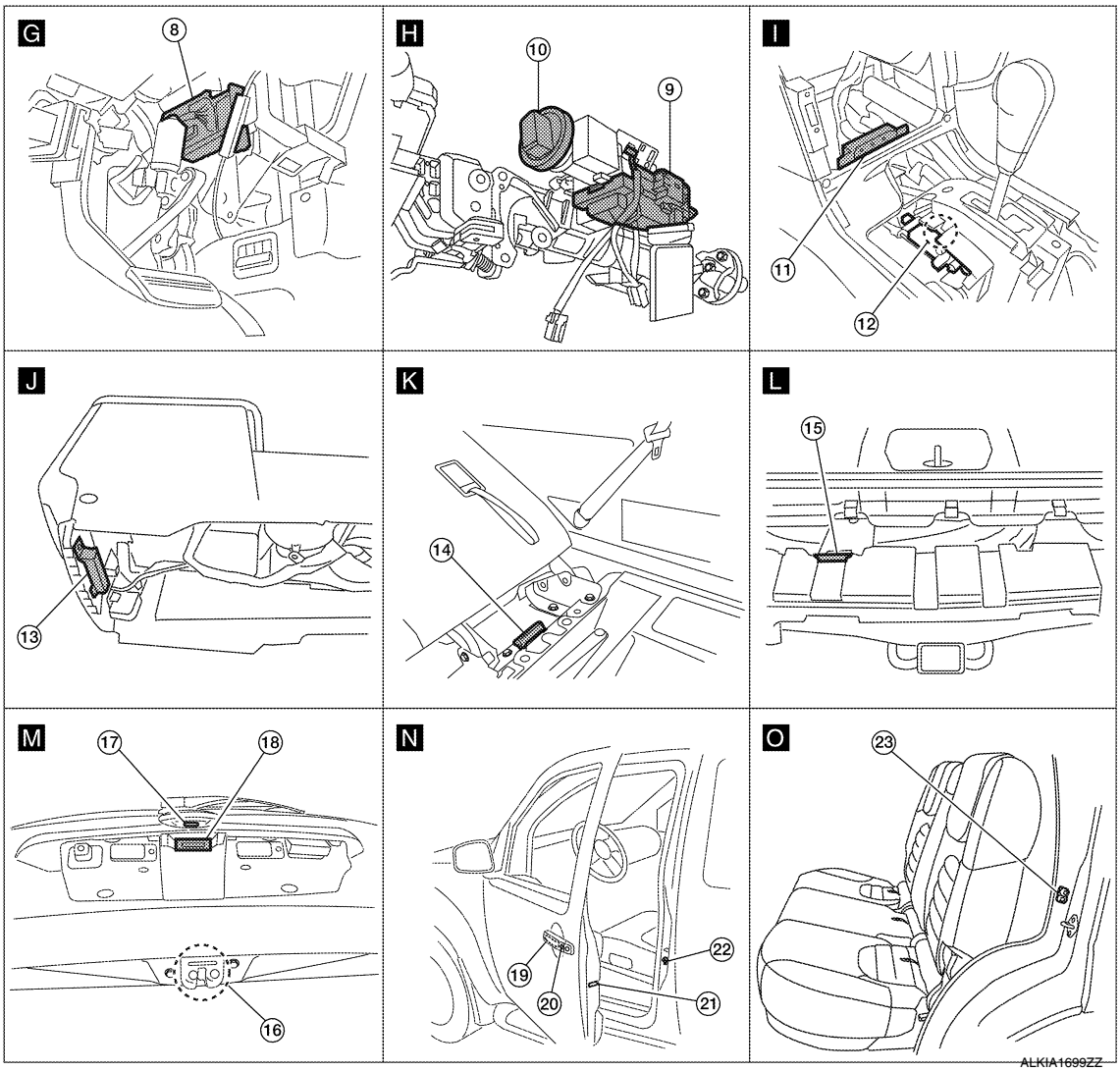
- Remote controller door lock button operation of Intelligent Key
- Remote controller door unlock button operation of Intelligent Key
- When the liftgate is closed, the Intelligent Key is not inside the vehicle
- When any door is open

Component Parts Location

INFOID:0000000005484874







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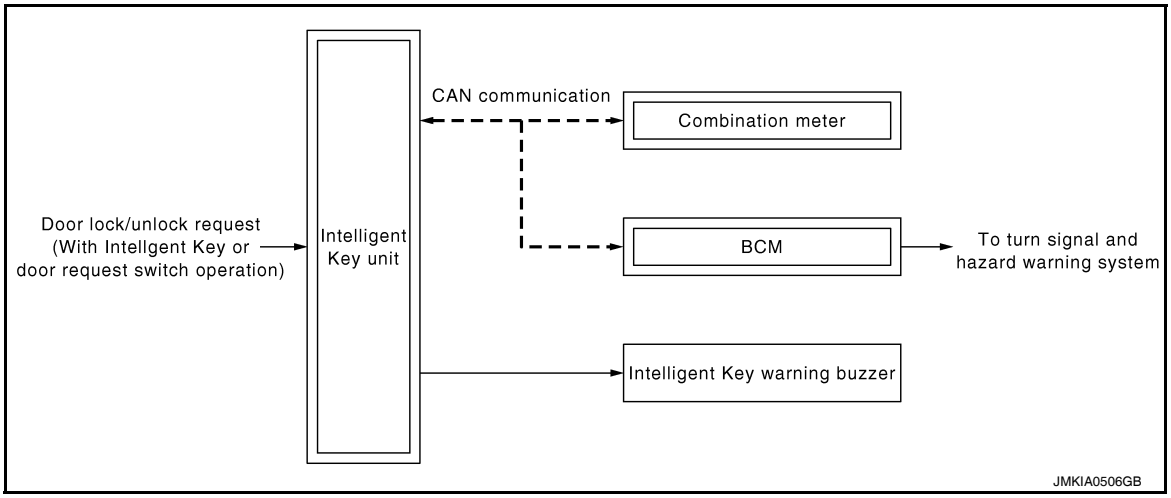
HAZARD AND BUZZER REMINDER FUNCTION

System Diagram

INFOID:0000000005259855

HAZARD & BUZZER REMINDER FUNCTION



System Description

INFOID:0000000005259856

HAZARD AND BUZZER REMINDER FUNCTION

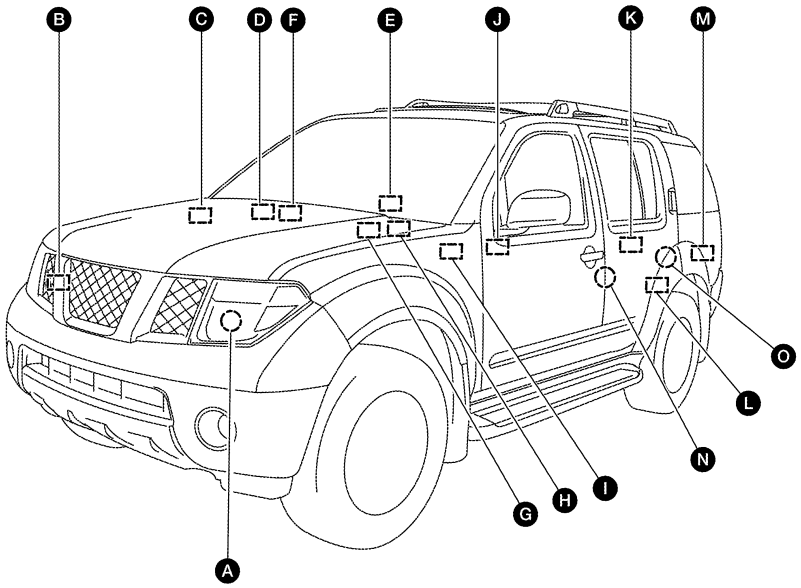
When door is locked or unlocked by Intelligent Key or door request switch, Intelligent Key unit sounds buzzer and sends hazard request signal to BCM via CAN communication. Then BCM flashes hazard warning lamps as a reminder.

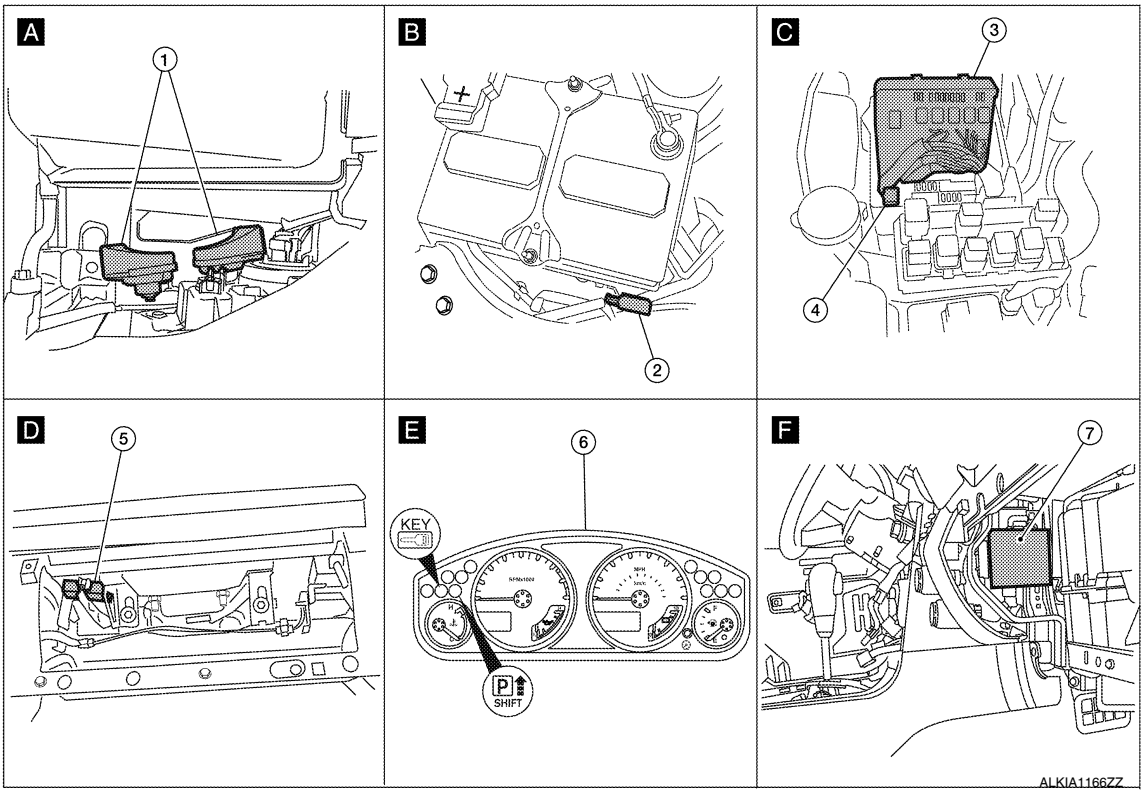
NOTE:

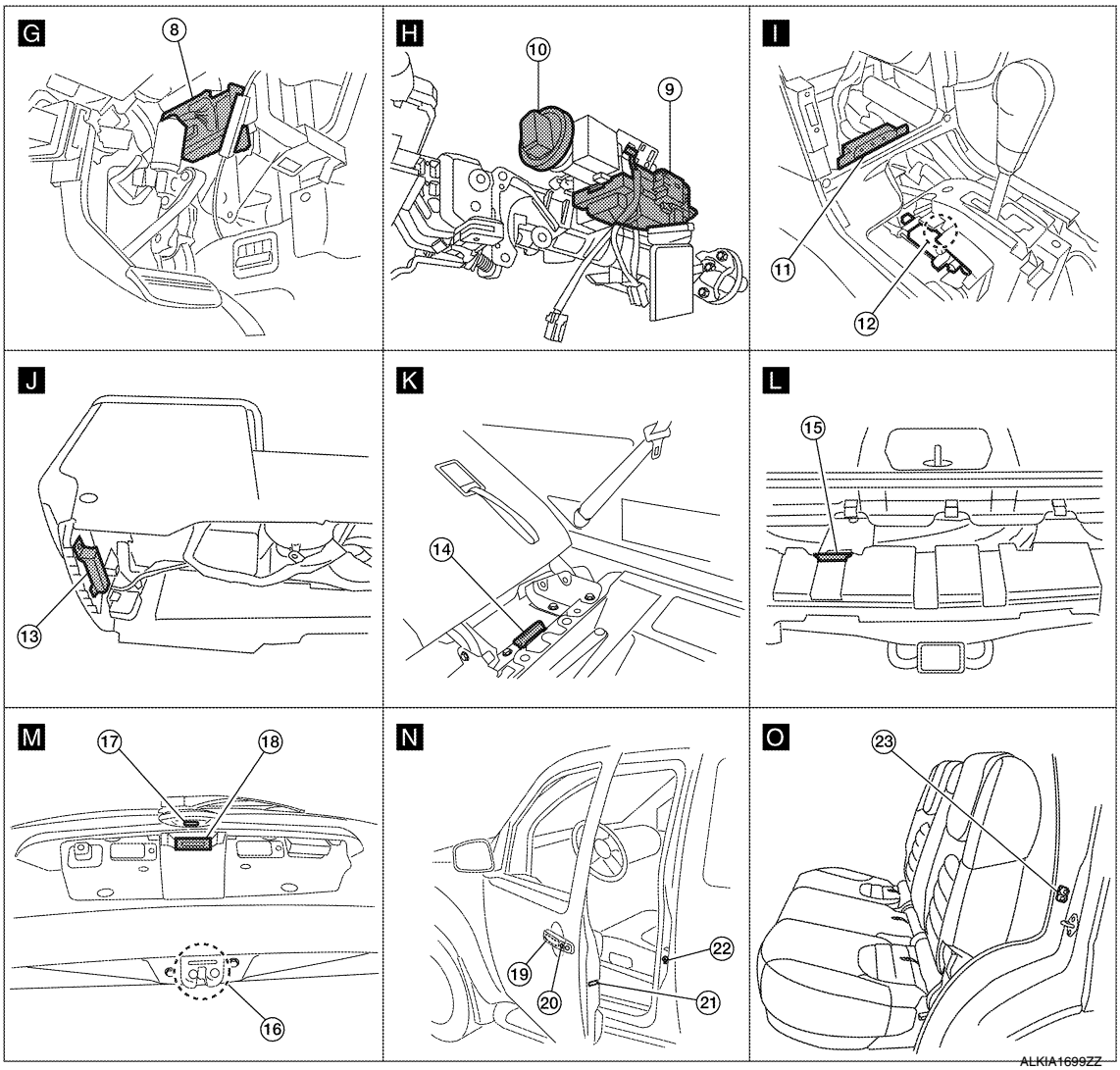
Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to DLK-43, "CONSULT-III Function (INTELLIGENT KEY)".

Component Parts Location

INFOID:0000000005484875







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23. Rear door switch LH B18 RH B116

Component Description

INFOID:0000000005259858

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:0000000005259859

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:0000000005483714

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-54, "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[1]	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[2]	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	THEFT ALM	×	×	×
Panic alarm	PANIC ALARM			×

1: With remote keyless entry system

2: With Intelligent Key

DOOR LOCK

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

INFOID:0000000005483715

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
KEYLESS LOCK[1] [ON/OFF]	Indicates condition of lock signal from keyfob
KEYLESS UNLOCK[1] [ON/OFF]	Indicates condition of unlock signal from keyfob
I-KEY LOCK[2] [ON/OFF]	Indicates condition of lock signal from Intelligent Key
I-KEY UNLOCK[2] [ON/OFF]	Indicates condition of unlock signal from Intelligent Key

1: With remote keyless entry system

2: With 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].

INTELLIGENT KEY

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

INFOID:0000000005483717

DATA MONITOR

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

TRUNK

TRUNK : CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005483718

DATA MONITOR

Monitor Item [Unit]	Contents
IGN ON SW [ON/OFF]	Indicates condition of ignition switch in ON position
I-KEY TRUNK [ON/OFF]	Indicates condition of Intelligent Key back door opening operation
TRNK OPNR SW [ON/OFF]	Indicates condition of back door opener switch.
VEHICLE SPEED [ON/OFF]	Indicates condition of vehicle speed signal from combination meter

ACTIVE TEST

Test Item	Description
TRUNK/BACK DOOR	This test is able to check back door open operation. Back door open when “OPEN” on CONSULT-III screen is touched.

DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

CONSULT-III Function (INTELLIGENT KEY)

INFOID:0000000005259865

APPLICATION ITEM

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

Diagnosis mode	Function Description
SELF-DIAG RESULTS	Displays the diagnosis results judged by Intelligent Key unit.
DATA MONITOR	The Intelligent Key unit input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from Intelligent Key unit.
ECU IDENTIFICATION	The Intelligent Key unit part number is displayed.

SELF-DIAG RESULT

Refer to DLK-143, "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	This item is shown but not monitored.
KEYLESS PANIC	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: Instrument panel area antenna detects Intelligent Key when “ROOM ANT1” is selected. • ROOM ANT2: Center console and luggage area antennas detect Intelligent Key when “ROOM ANT2”is selected. • LUG ANT:This selection is not used. • DRIVER ANT: Outside key antenna (driver side) detects Intelligent Key when “DR ANT” is selected. • ASSIST ANT: Outside key antenna (passenger side) detects Intelligent Key when “AS ANT” is selected. • BK DOOR ANT: Outside key antenna (rear bumper) detects Intelligent Key when “BK DR ANT” is selected.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. • 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
INDICATOR	This test is able to check Intelligent Key warning lamps operation. • Green "KEY" warning lamp illuminates when "BLUE ON" on CONSULT-III screen is touched. • Red "KEY" warning lamp illuminates when "RED ON" on CONSULT-III screen is touched. • Shift to park warning lamp illuminates when "KNOB ON" on CONSULT-III screen is touched. • Green "KEY" warning lamp flashes when "BLUE IND" on CONSULT-III screen is touched. • Red "KEY" warning lamp flashes when "RED IND" on CONSULT-III screen is touched. • Shift to park warning lamp (P-SHIFT) flashes when "KNOB IND" on CONSULT-III screen is touched. • OFF

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000005259866

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-53, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000005259867

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)

Diagnosis Procedure

INFOID:0000000005259868

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-5, "CAN Communication Control Circuit".
NO >> Refer to GI-37, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000005259869

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:0000000005259870

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM. Refer to BCS-59, "Removal and Installation".

>> Replace BCM.

Special Repair Requirement

INFOID:0000000005259871

1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to (Body Control System) for BCM configuration.
Initialize NVIS by CONSULT-III. For the details of initialization, refer to CONSULT-III Operation Manual.

>> Work End.

INSTRUMENT PANEL AREA ANTENNA

Description

INFOID:0000000005259872

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000005259873

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

1. Check “ANTENNA” in “Active Test” mode with CONSULT-III.
2. Touch “ROOM ANT1”.
3. When Intelligent Key is inside instrument panel area antenna detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Instrument panel area antenna • Between Intelligent Key unit and instrument panel area antenna

Is the inspection result normal?

YES >> Instrument panel area antenna is OK.
NO >> Refer to DLK-47, "Diagnosis Procedure".

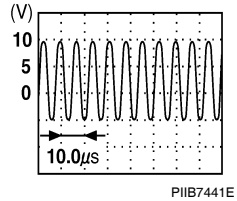
Diagnosis Procedure

INFOID:0000000005259874

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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)
M164	Intelligent Key unit	15	Ground	Ignition switch is pushed.	

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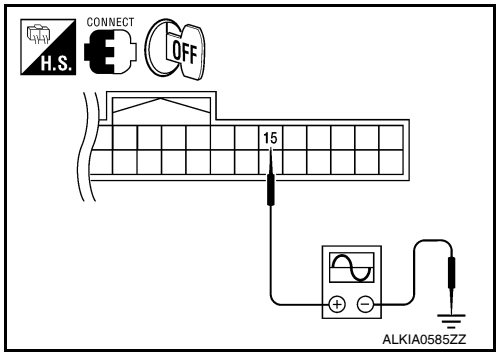

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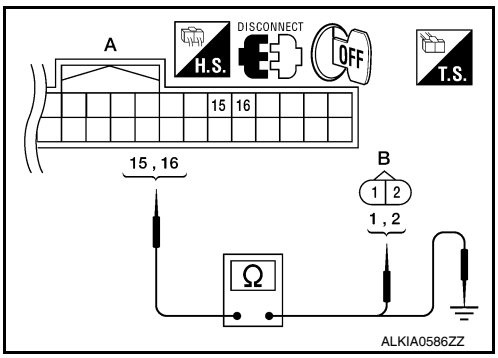
Is the inspection result normal?

YES >> Instrument panel area antenna is OK.
NO >> GO TO 2

2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and instrument panel area antenna connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 15, 16 and instrument panel area antenna harness connector (B) M68 terminals 1, 2.

Intelligent Key unit connector	Terminals	Instrument panel area antenna connector	Terminals	Continuity
A: M164	15	B: M68	1	Yes
	16		2	



3. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 15, 16 and ground.

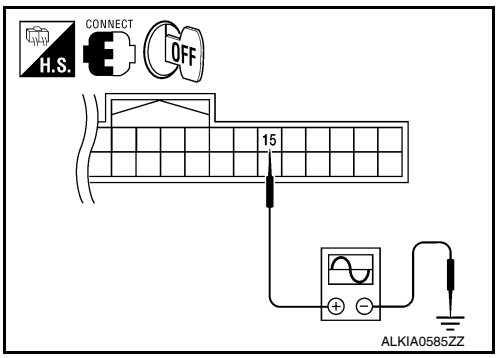
Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M164	15	Ground	No
		16		

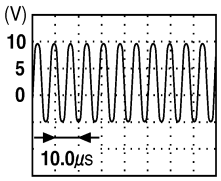
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between Intelligent Key unit and instrument panel area antenna.

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace instrument panel area 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)
M164	Intelligent Key unit	15	Ground	Ignition switch is pushed.	

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Is the inspection result normal?

YES >> Replace instrument panel area antenna.
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

CENTER CONSOLE AREA ANTENNA

Description

INFOID:0000000005259875

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000005259876

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

1. Check “ANTENNA” in “Active Test” mode with CONSULT-III.
2. Touch “ROOM ANT2”.
3. When Intelligent Key is inside center console area antenna detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key unit	• Center console area antenna • Between Intelligent Key unit and center console area antenna

Is the inspection result normal?

YES >> Center console area antenna is OK.
NO >> Refer to DLK-49, "Diagnosis Procedure".

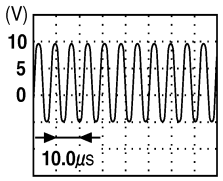
Diagnosis Procedure

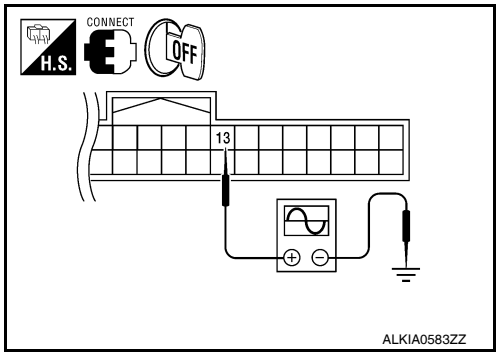
INFOID:0000000005259877

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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)
M164	Intelligent Key unit	13	Ground	Ignition switch is pushed.	 PIIB7441E



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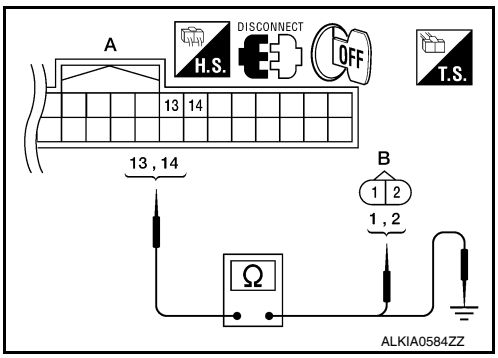
Is the inspection result normal?

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

2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and center console area antenna connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 13, 14 and center console area antenna harness connector (B) M212 terminals 1, 2.

Intelligent Key unit connector	Terminals	Center console area antenna connector	Terminals	Continuity
A: M164	13	B: M212	1	Yes
	14		2	



3. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 13, 14 and ground.

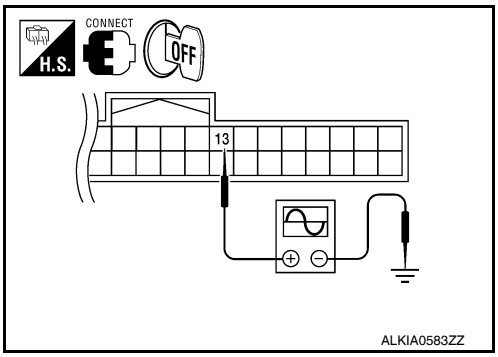
Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M164	13	Ground	No
		14		

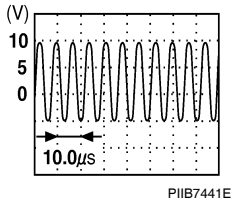
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between Intelligent Key unit and center console area antenna.

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace center console area 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)
M164	Intelligent Key unit	13	Ground	Ignition switch is pushed.	

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Is the inspection result normal?

YES >> Replace center console area antenna.
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

LUGGAGE AREA ANTENNA

Description

INFOID:0000000005259878

Detects whether Intelligent Key is inside the vehicle.

Component Function Check

INFOID:0000000005259879

1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

With CONSULT-III

1. Check “ANTENNA” in “Active Test” mode with CONSULT-III.
2. Touch “ROOM ANT2”.
3. When Intelligent Key is inside luggage area antenna detection area, hazard lamps flash.

Test Item	Condition	Possible cause
ROOM ANT2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	• Luggage area antenna • Between Intelligent Key unit and luggage area antenna

Is the inspection result normal?

YES >> luggage area antenna is OK.
NO >> Refer to DLK-51, "Diagnosis Procedure".

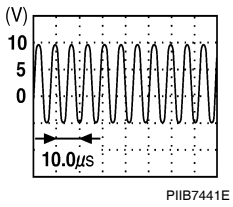
Diagnosis Procedure

INFOID:0000000005259880

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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)
M164	Intelligent Key unit	33	Ground	Ignition switch is pushed.	

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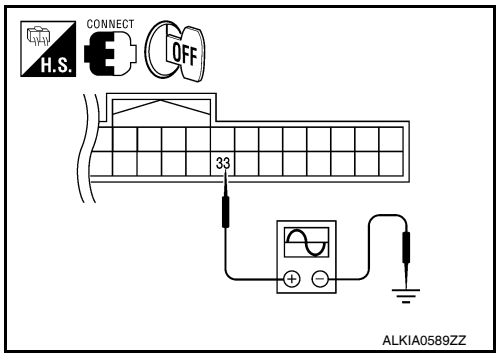

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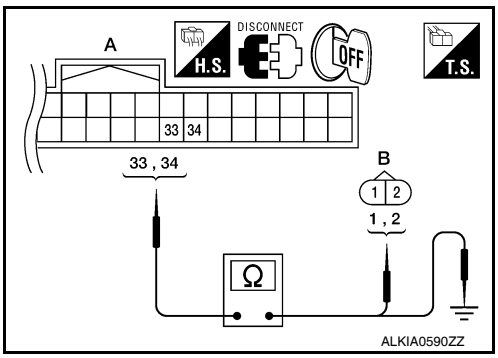
Is the inspection result normal?

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

2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and luggage area antenna connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 33, 34 and luggage area antenna harness connector (B) B129 terminals 1, 2.

Intelligent Key unit connector	Terminals	Luggage area antenna connector	Terminals	Continuity
A: M164	33	B: B129	1	Yes
	34		2	



3. Check continuity between Intelligent Key unit harness connector (A) M164 terminals 33, 34 and ground.

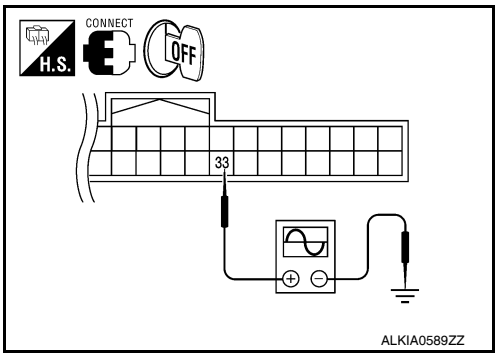
Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M164	33	Ground	No
		34		

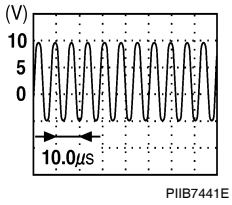
Is the inspection result normal?

YES >> GO TO 3
NO >> Repair or replace harness between Intelligent Key unit and luggage area antenna.

3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace luggage area 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)
M164	Intelligent Key unit	33	Ground	Ignition switch is pushed.	

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Is the inspection result normal?

YES >> Replace luggage area antenna.
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

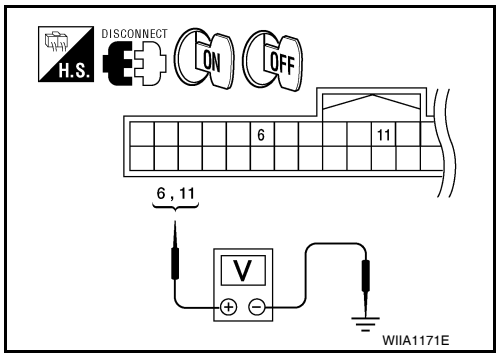
POWER SUPPLY AND GROUND CIRCUIT
INTELLIGENT KEY UNIT
INTELLIGENT KEY UNIT : Diagnosis Procedure

INFOID:0000000005259881

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK POWER SUPPLY CIRCUIT

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



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

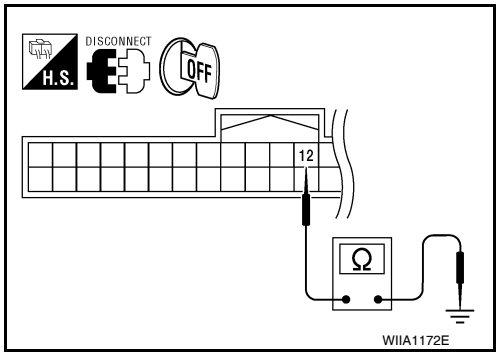
Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

12 - Ground : Continuity should exist.



Is the inspection result normal?

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

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

INFOID:0000000005484557

Regarding Wiring Diagram information, refer to BCS-50, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

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

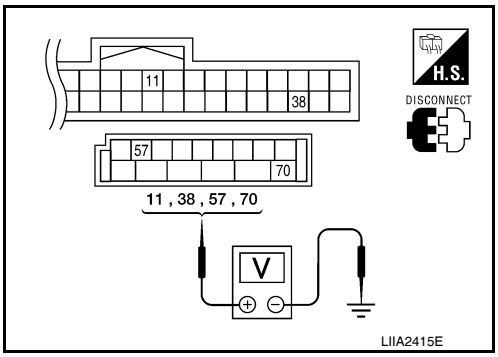
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	18 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

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.



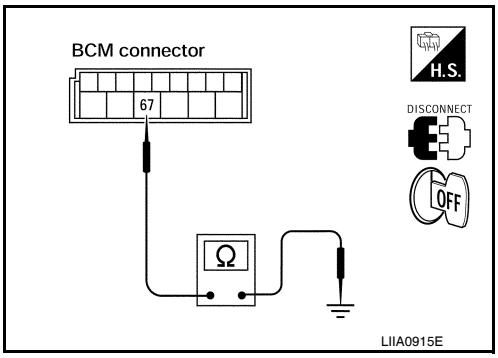
Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	70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

DOOR SWITCH

Description

INFOID:0000000005259883

Detects door open/close condition.

Component Function Check

INFOID:0000000005259884

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-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259885

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

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

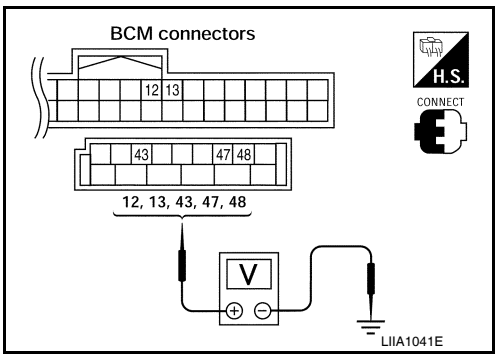
- When doors are closed:

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

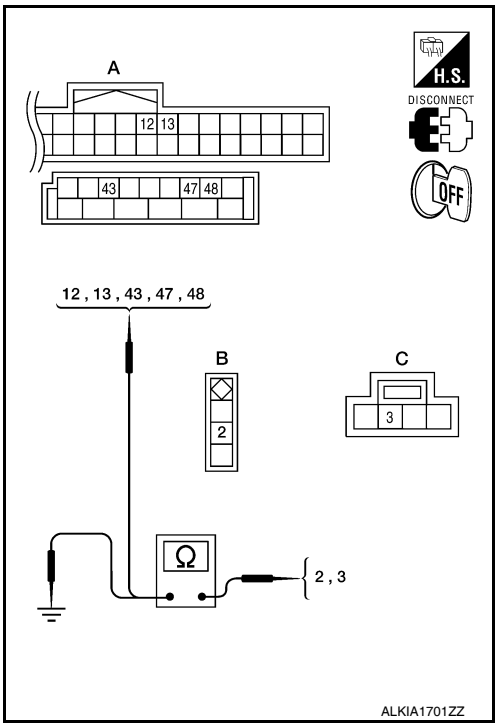
2. CHECK DOOR SWITCH CIRCUIT

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) D502 terminal 3.

2 - 47 :Continuity should exist
2 - 12 :Continuity should exist
2 - 48 :Continuity should exist
2 - 13 :Continuity should exist
3 - 43 :Continuity should exist

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) D502 terminal 7 and ground.

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



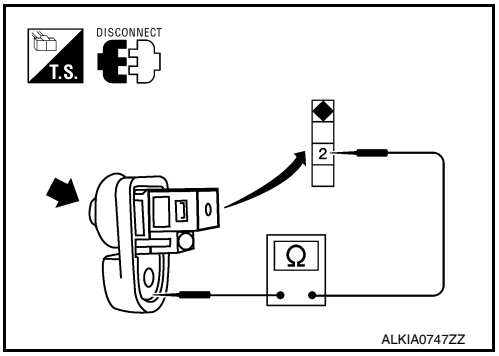
Is the inspection result normal?

YES >> (Front and rear doors) GO TO 3.
YES >> (Back door) GO TO 4.
NO >> Repair or replace harness.

3. CHECK DOOR SWITCH

- Check continuity between door switch terminals.

Switch	Terminals	Condition	Continuity
Door switch	2 – Ground	Open	Yes
		Closed	No



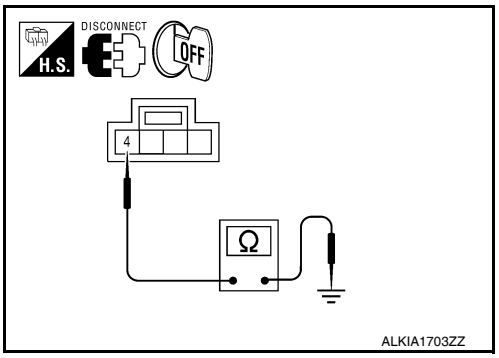
Is the inspection result normal?

YES >> Door switch circuit is OK.
NO >> Replace door switch.

4. CHECK BACK DOOR LATCH CIRCUIT

• Check continuity between back door latch connector terminal 4 and ground.

Connector	Terminals	Continuity
Back door latch	4 – Ground	Yes



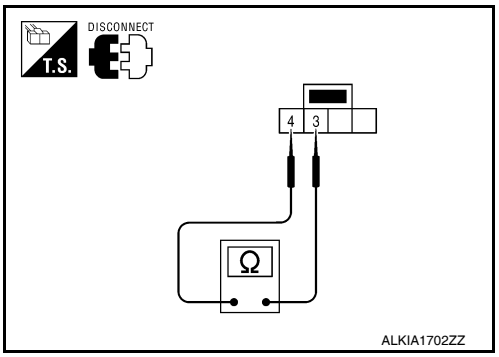
Is the inspection result normal?

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

5. CHECK BACK DOOR LATCH SWITCH

• Check continuity between back door latch switch terminals.

Switch	Terminals	Condition	Continuity
Back door latch	3 – 4	Open	Yes
		Closed	No



Is the inspection result normal?

YES >> Back door latch switch circuit is OK.
NO >> Replace back door latch.

GLASS HATCH AJAR SWITCH

Description

INFOID:0000000005259886

Detects glass hatch open/close condition.

Component Function Check

INFOID:0000000005259887

1.CHECK FUNCTION

With CONSULT-III
Check glass hatch switch in data monitor mode with CONSULT-III.

Monitor item	Condition
GLASS HATCH SW	CLOSE → OPEN: OFF → ON

Is the inspection result normal?

YES >> Glass hatch switch is OK.
NO >> Refer to DLK-58, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259888

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

With CONSULT-III
Check glass hatch ajar switch "GLASS HATCH SW" in DATA MONITOR mode with CONSULT–III.
- When glass hatch is open:

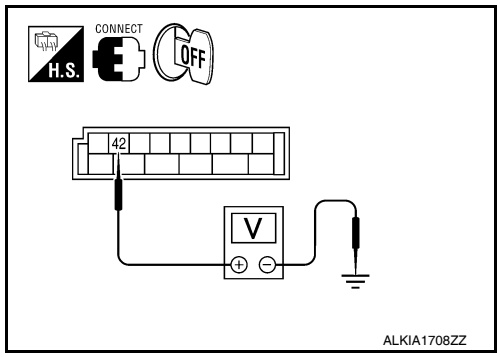
GLASS HATCH SW :ON

- When glass hatch is closed:

GLASS HATCH SW :OFF

Without CONSULT-III
Check voltage between BCM connector M19 terminals 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 >> Glass hatch ajar switch circuit is OK.
NO >> GO TO 2

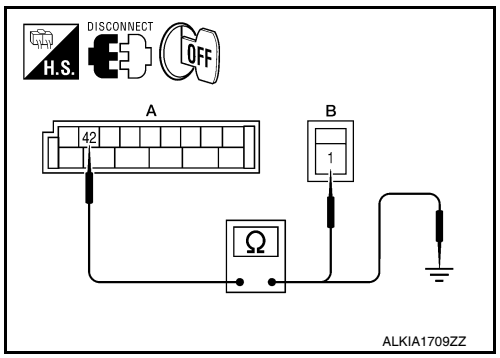
2.CHECK GLASS HATCH AJAR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect glass hatch ajar switch and BCM.
3. Check continuity between BCM connector (A) M19 terminal 42 and glass hatch ajar switch connector (B) D503 terminal 1.

42 - 1 :Continuity should exist

4. Check continuity between BCM connector (A) M19 terminal 42 and ground.

42 - Ground :Continuity should not exist



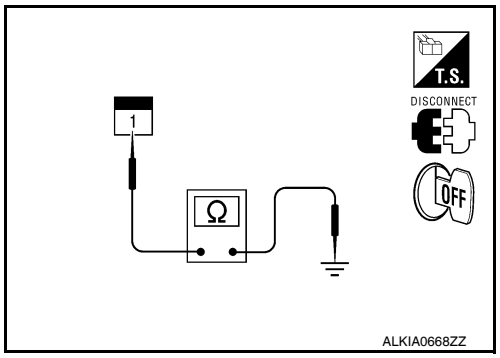
Is the inspection result normal?

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

3. CHECK GLASS HATCH AJAR SWITCH

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 >> Refer to GI-37, "Intermittent Incident".
NO >> Replace glass hatch ajar switch.

DOOR LOCK AND UNLOCK SWITCH
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005259889

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000005259890

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-60, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005259891

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

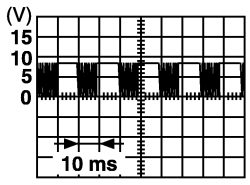
With CONSULT-III
Check main power window and door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–III.
- When main power window and door lock/unlock switch is turned to LOCK:

CDL LOCK SW :ON

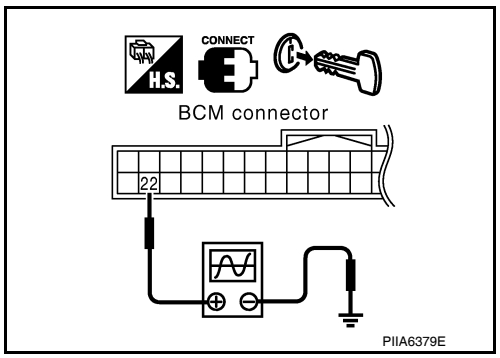
- When main power window and door lock/unlock switch is turned to UNLOCK:

CDL UNLOCK SW :ON

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

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

PIIA1297E



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.

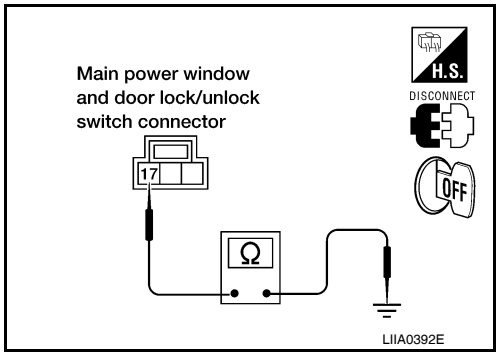
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-59, "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.



LIIA0392E

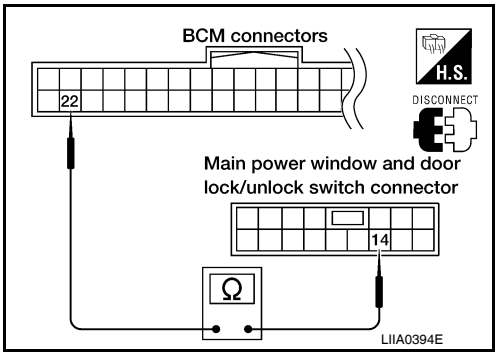
Is the inspection result normal?

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

4.CHECK POWER WINDOW SERIAL LINK CIRCUIT

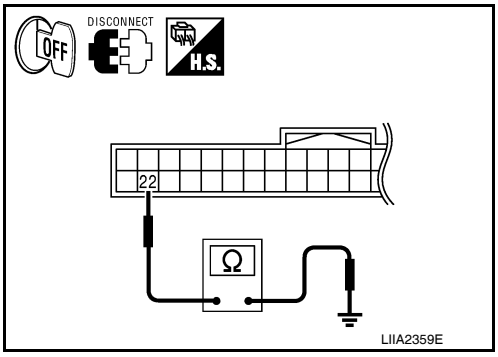
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

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:0000000005259892

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005259893

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-62, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005259894

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-III

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

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

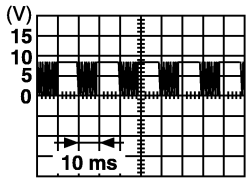
CDL LOCK SW :ON

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

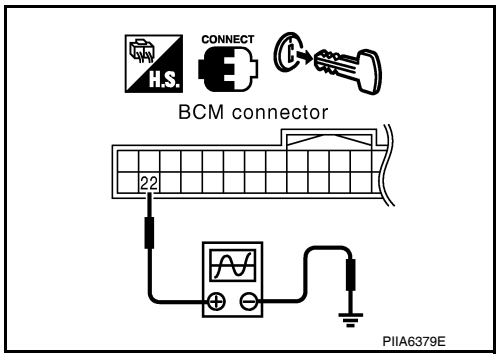
CDL UNLOCK SW :ON

Without CONSULT-III

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

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

PIIA1297E



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.

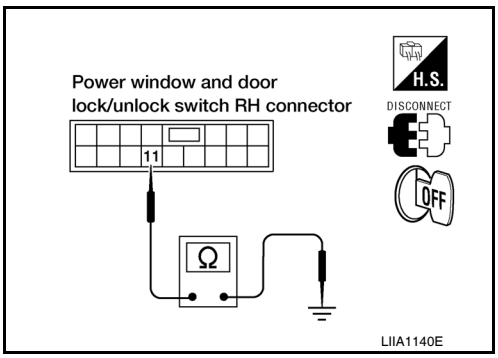
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-59, "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



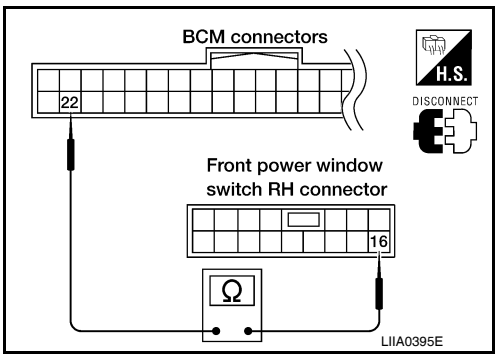
11 - Ground : Continuity should exist.

Is the inspection normal?

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

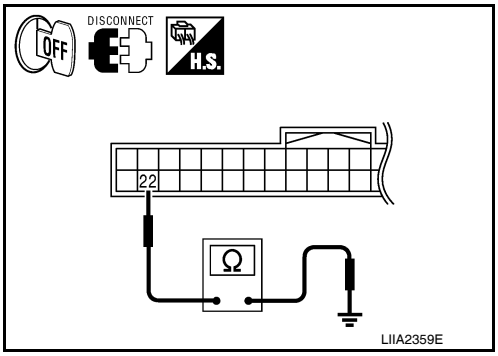
4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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.

BACK DOOR OPENER SWITCH

Diagnosis Procedure

INFOID:0000000005259895

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM — ".

1.CHECK BACK DOOR OPENER SWITCH

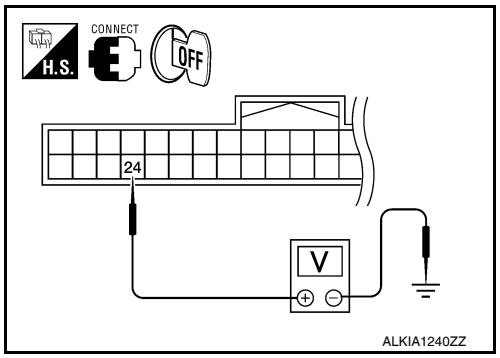
With CONSULT-III

Check back door opener switch (“BD/TR REQ SW”) in “DATA MONITOR” mode.

Monitor item	Condition
BD/TR REQ SW	Back door opener switch is pressed: ON
	Back door opener switch is released: OFF

Without CONSULT-III

1. Turn ignition switch OFF.
2. Check voltage between Intelligent Key Unit connector M164 terminal 24 and ground.



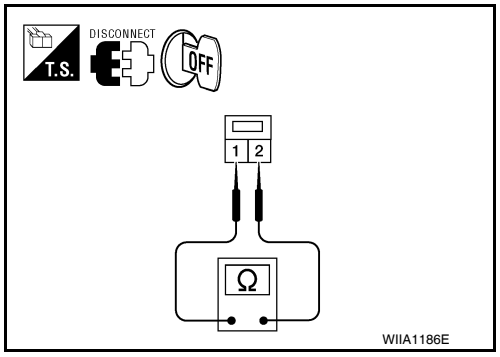
Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M164	24	Ground	Back door opener switch is pressed	0
			Back door opener switch is released	5

Is the inspection result normal?

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

2.CHECK BACK DOOR OPENER SWITCH OPERATION

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



Component	Terminals		Condition	Continuity
Back door opener switch	1	2	Back door opener switch is pressed	Yes
			Back door opener switch is released	No

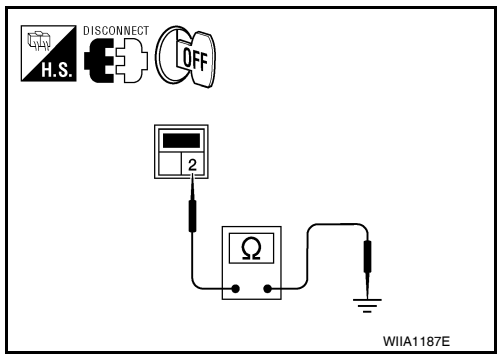
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace back door opener switch.

3.CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

Check continuity between back door opener switch harness connector D511 terminal 2 and ground.

2 - Ground : Continuity should exist.



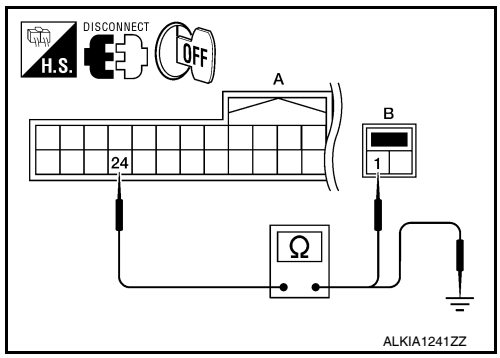
Is the inspection result normal?

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

4. CHECK BACK DOOR OPENER SWITCH CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key Unit harness connector M164 terminal 24 and back door opener switch harness connector D511 terminal 1.

24 - 1 : Continuity should exist.



3. Check continuity between Intelligent Key Unit harness connector M164 terminal 24 and ground.

24 - Ground : Continuity should not exist.

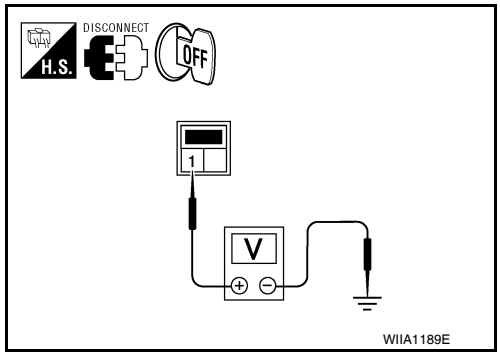
Is the inspection result normal?

YES >> GO TO 5
NO >> Repair or replace harness between Intelligent Key Unit and back door opener switch.

5. CHECK BACK DOOR OPENER SWITCH SIGNAL

1. Connect Intelligent Key Unit connector.
2. Check voltage between back door opener switch harness connector D511 terminal 1 and ground.

1 - Ground : Approx. 5v



Is the inspection result normal?

YES >> Check condition of harness and connector.
NO >> Replace Intelligent Key Unit. Refer to SEC-118, "Removal and Installation".

KEY CYLINDER SWITCH

Description

INFOID:0000000005259896

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:0000000005259897

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-67, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259898

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

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:

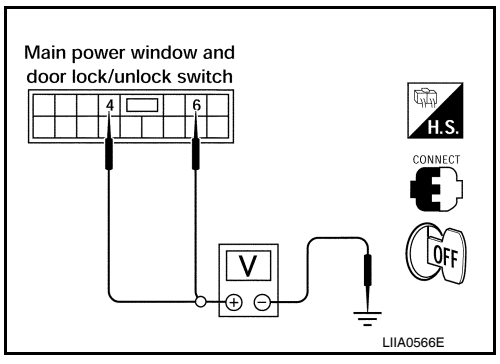
KEY CYL LK-SW : ON

- 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



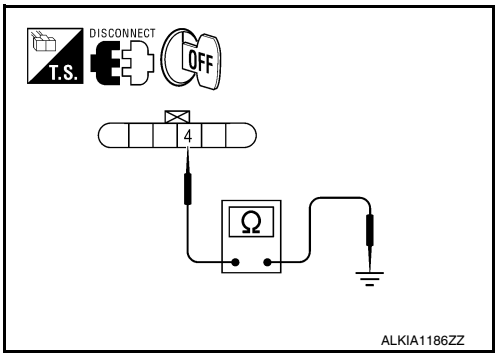
Is the inspection result normal?

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 4 and body ground.

Connector	Terminals	Continuity
D14	4 – Ground	Yes



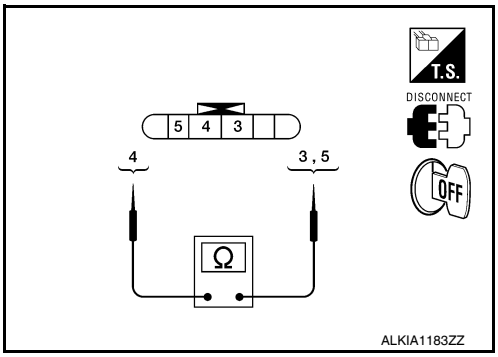
Is the inspection result normal?

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
3 – 4	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes
4 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes



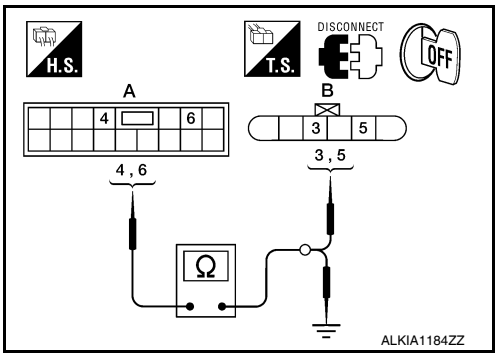
Is the inspection result normal?

YES >> GO TO 4
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-199, "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 3, 5 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)	5	Yes
	6		3	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:0000000005259899

Detects door lock condition of driver door.

Component Function Check

INFOID:0000000005259900

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-69, "Diagnosis Procedure".

Diagnosis Procedure

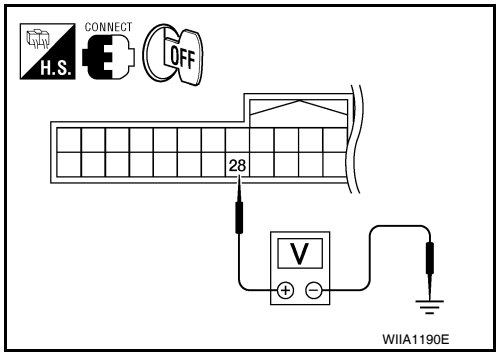
INFOID:0000000005259901

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK UNLOCK SENSOR POWER SUPPLY

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

Connector	Terminals (+)	Terminals (-)	Condition	Voltage (V) (Approx.)
M164	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

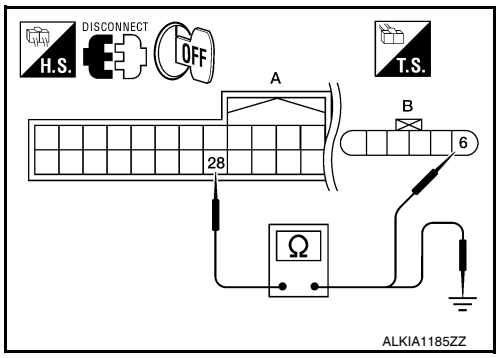
2.CHECK UNLOCK SENSOR CIRCUIT

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) M164 terminal 28 and front door lock assembly LH (door unlock sensor) harness connector (B) D14 terminal 6.

28 – 6 : Continuity should exist.

4. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 28 and ground.

28 – Ground : Continuity should not exist.



Is the inspection result normal?

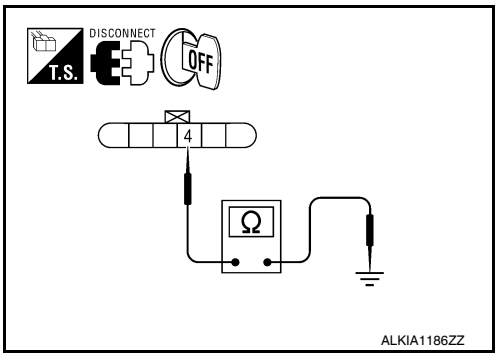
YES >> GO TO 3

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 4 and ground.

4 – Ground : Continuity should exist.



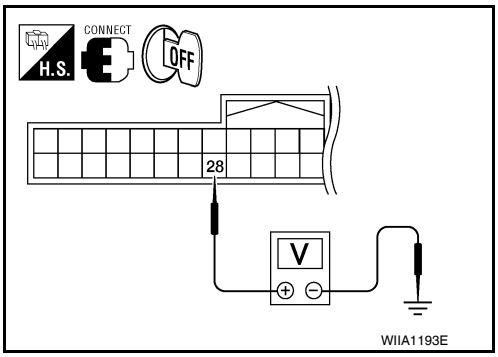
Is the inspection result normal?

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 M164 terminal 28 and ground.

28 – Ground : Approx. 5V



Is the inspection result normal?

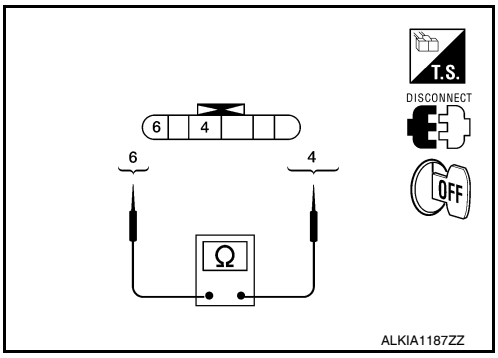
YES >> Refer to DLK-70, "Component Inspection".
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

Component Inspection

INFOID:0000000005259902

1.CHECK DOOR UNLOCK SENSOR

Check door unlock sensor.



Terminal		Front door lock assembly LH condition	Continuity
Front door lock assembly LH			
4	6	Unlock	Yes
		Lock	No

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace front lock assembly LH (door unlock sensor). Refer to DLK-199, "Removal and Installation".

DOOR REQUEST SWITCH
FRONT DOOR REQUEST SWITCH

FRONT DOOR REQUEST SWITCH : Description

INFOID:0000000005259903

Transmits lock/unlock operation to Intelligent Key unit.

FRONT DOOR REQUEST SWITCH : Component Function Check

INFOID:0000000005259904

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-71, "FRONT DOOR REQUEST SWITCH : Diagnosis Procedure".

FRONT DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000005259905

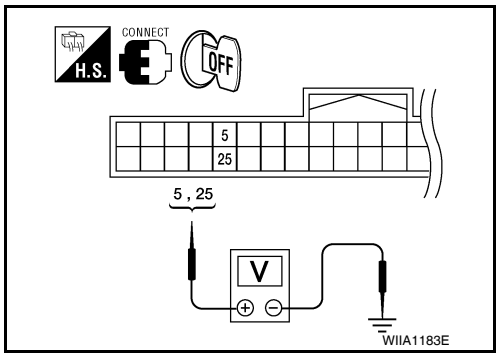
Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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?

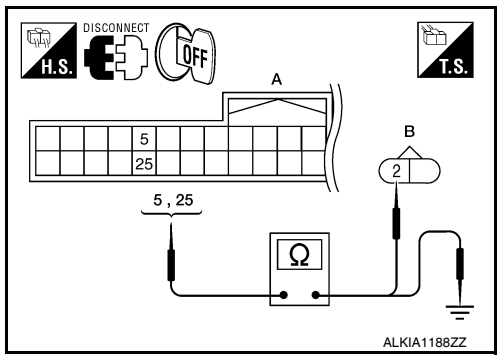
YES >> Front door request switch is OK.
NO >> GO TO 2

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 2.

Driver side 5 - 2 : Continuity should exist.
Passenger side 25 - 2 : 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.

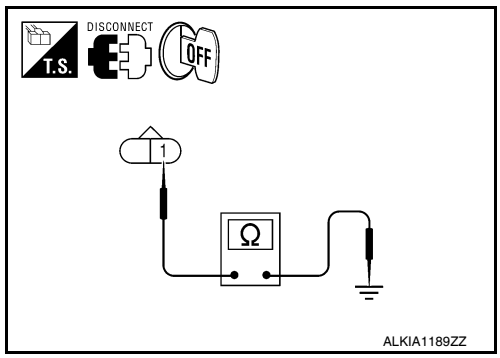
Is the inspection result normal?

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 1 and ground.

1 - 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-73, "FRONT DOOR REQUEST SWITCH : Component Inspection".

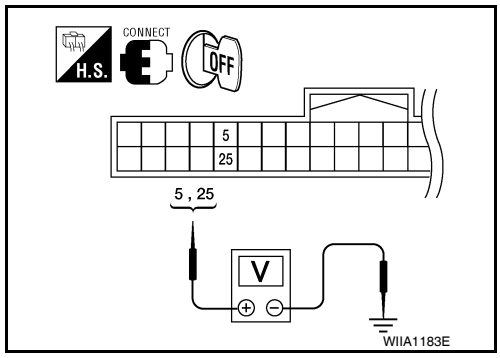
Is the inspection result normal?

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?

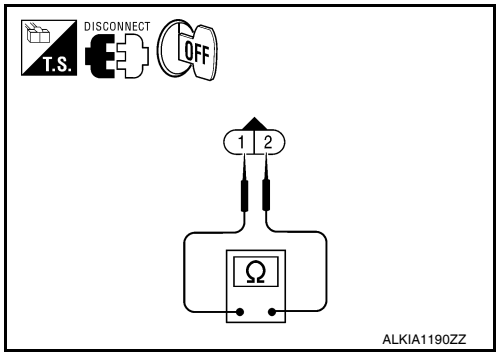
YES >> Refer to GI-37, "Intermittent Incident".
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

FRONT DOOR REQUEST SWITCH : Component Inspection

INFOID:0000000005259906

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.

BACK DOOR REQUEST SWITCH

BACK DOOR REQUEST SWITCH : Description

INFOID:0000000005259907

Transmits lock/unlock operation to Intelligent Key unit.

BACK DOOR REQUEST SWITCH : Component Function Check

INFOID:0000000005259908

1.CHECK FUNCTION

With CONSULT-III

Check door request switch "BD/TR REQ SW" in DATA MONITOR mode.

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

Is the inspection result normal?

YES >> Back door request switch is OK.
NO >> Refer to DLK-73, "BACK DOOR REQUEST SWITCH : Diagnosis Procedure".

BACK DOOR REQUEST SWITCH : Diagnosis Procedure

INFOID:0000000005259909

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM — ".

1.CHECK BACK DOOR REQUEST SWITCH

With CONSULT-III

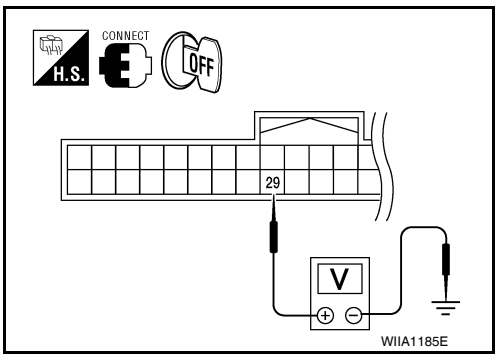
Check back door request switch “BD/TR REQ SW” in “DATA MONITOR” mode.

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

Without CONSULT-III

1. Turn ignition switch OFF.

2. Check voltage between Intelligent Key unit harness connector M164 terminal 29 and ground.



Connector	Item	Terminals (+)	Terminals (–)	Condition	Voltage (V) (Approx.)
M164	Back door request switch	29	Ground	Back door request switch is pressed ↓ Back door request switch is released	0 ↓ 5

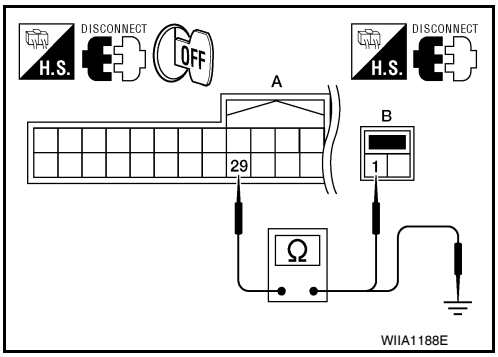
Is the inspection result normal?

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

2.CHECK BACK DOOR REQUEST SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit and back door request switch connectors.
3. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 29 and back door request switch harness connector (B) D552 terminal 1.

29 - 1 : Continuity should exist.



4. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 29 and ground.

29 - Ground : Continuity should not exist.

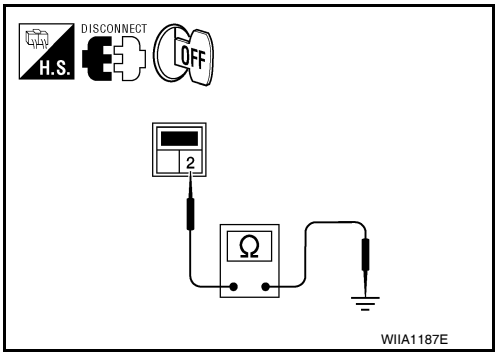
Is the inspection result normal?

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

3.CHECK BACK DOOR REQUEST SWITCH GROUND CIRCUIT

Check continuity between back door request switch harness connector D552 terminal 2 and ground.

2 - Ground : Continuity should exist.



Is the inspection result normal?

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

4.CHECK BACK DOOR REQUEST SWITCH OPERATION

Refer to DLK-75, "BACK DOOR REQUEST SWITCH : Component Inspection".

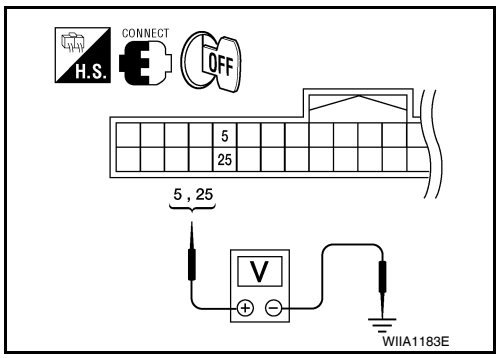
Is the inspection result normal?

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

5.CHECK BACK DOOR REQUEST SWITCH SIGNAL

1. Connect Intelligent Key unit connector.

2. Check voltage between Intelligent Key unit harness connector M164 terminal 29 and ground.



Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(–)		
M164	back door request switch	29	Ground	Back door request switch is pressed ↓ Back door request switch is released	0 ↓ 5

Is the inspection result normal?

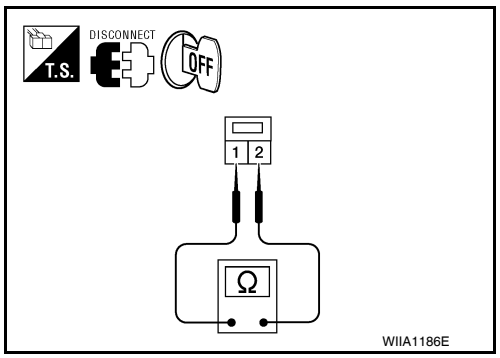
YES >> Refer to GI-37, "Intermittent Incident".
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

BACK DOOR REQUEST SWITCH : Component Inspection

INFOID:0000000005259910

1. CHECK BACK DOOR REQUEST SWITCH OPERATION

1. Turn ignition switch OFF.
2. Disconnect back door request switch connector.
3. Check continuity between back door request switch terminals 1 and 2.



Component	Terminals		Condition	Continuity
Back door request switch	1	2	Back door request switch is pressed	Yes
			Back door request switch is released	No

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace back door request switch.

DOOR LOCK ACTUATOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005259911

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000005259912

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-76, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

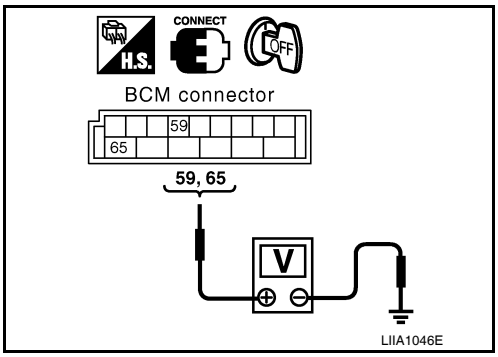
INFOID:0000000005259913

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



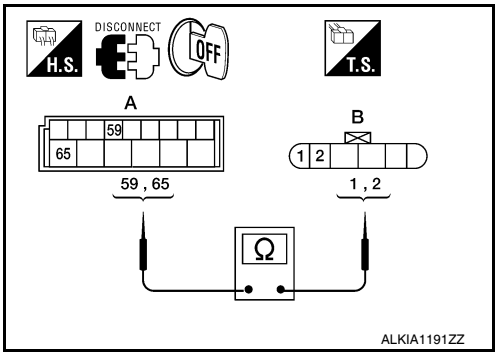
Is the inspection result normal?

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 1, 2.

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
	65		1	



Is the inspection result normal?

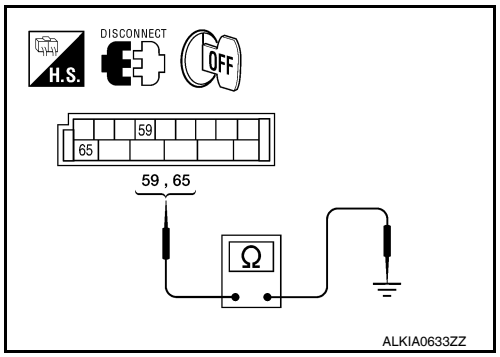
YES >> Replace front door lock assembly LH (actuator).

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		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005259914

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005259915

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-77, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

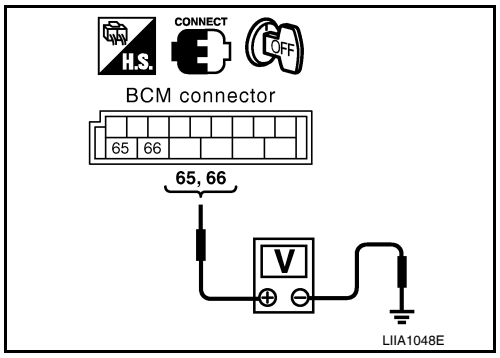
INFOID:0000000005259916

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

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



Is the inspection result normal?

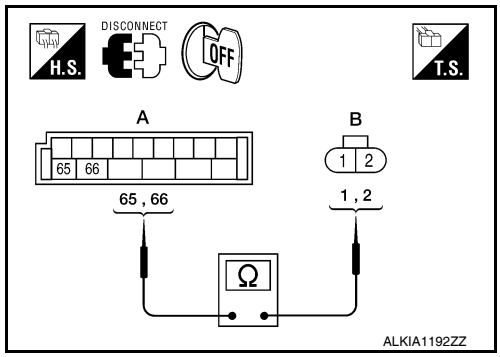
YES >> GO TO 2

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 1, 2.

Terminal		Continuity
65	2	Yes
66	1	



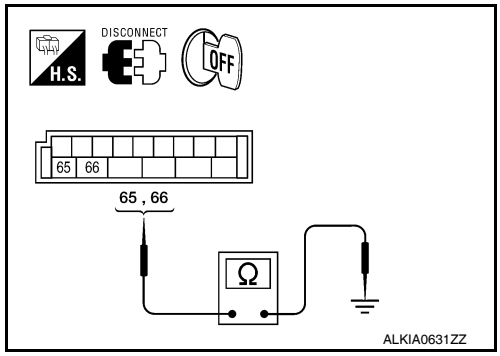
Is the inspection result normal?

YES >> Replace front door lock actuator RH. Refer to DLK-199, "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		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

REAR LH

REAR LH : Description

INFOID:0000000005259917

Locks/unlocks the door with the signal from BCM.

REAR LH : Component Function Check

INFOID:0000000005259918

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-78, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

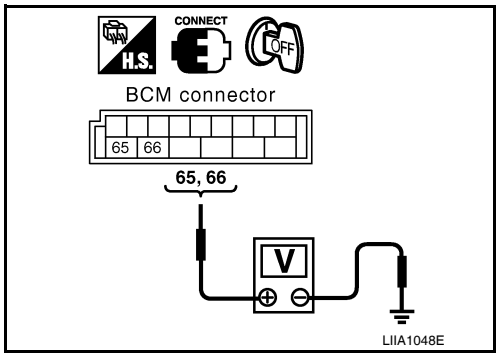
INFOID:0000000005259919

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals (+)	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	



Is the inspection result normal?

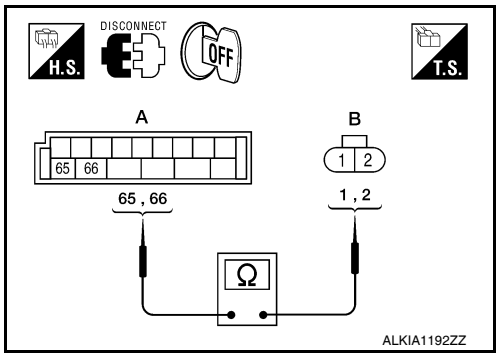
YES >> GO TO 2
NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

NOTE:
The passenger select unlock relay must remain connected during this test.

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 1, 2.

Terminals		Continuity
65	2	Yes
66	1	



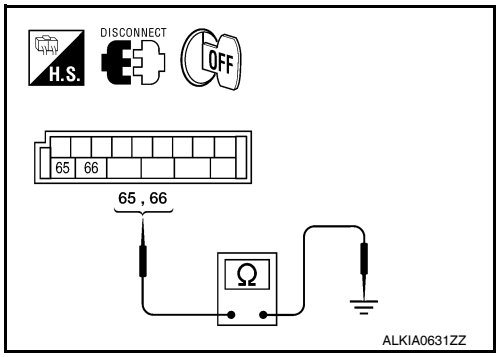
Is the inspection result normal?

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-59, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

REAR RH

REAR RH : Description

INFOID:0000000005259920

Locks/unlocks the door with the signal from BCM.

REAR RH : Component Function Check

INFOID:0000000005259921

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-80, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

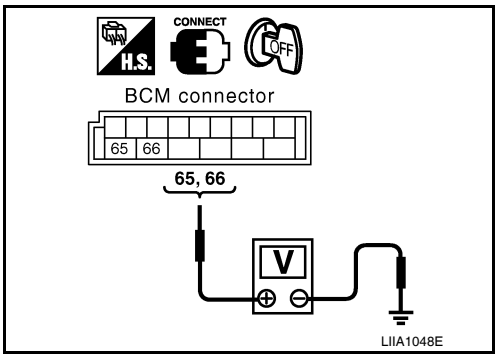
INFOID:0000000005259922

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals (+)	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	



Is the inspection result normal?

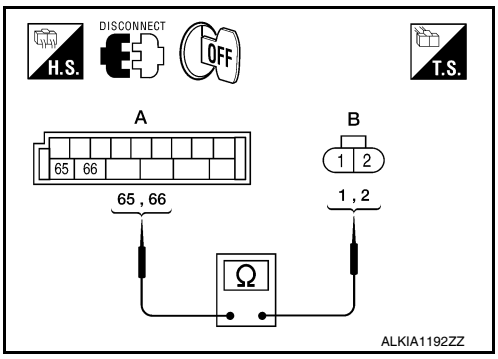
YES >> GO TO 2
NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

NOTE:
The passenger select unlock relay must remain connected during this test.

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 1, 2.

Terminals		Continuity
65	2	Yes
66	1	



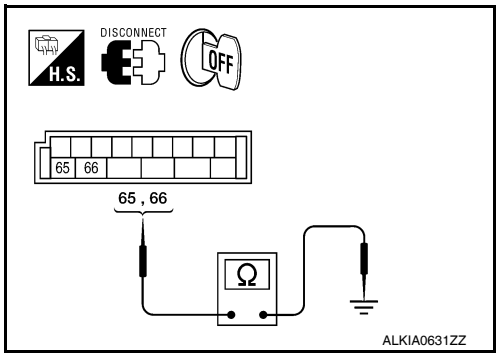
Is the inspection result normal?

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		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

BACK DOOR LATCH

BACK DOOR LATCH : Description

INFOID:0000000005259923

Locks/unlocks the door with the signal from BCM.

BACK DOOR LATCH : Diagnosis Procedure

INFOID:0000000005259924

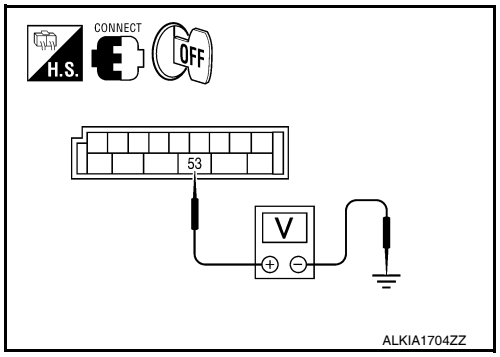
Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK BACK DOOR LATCH SIGNAL

NOTE:
Ensure back door opener switch is operating properly before proceeding.

1. Turn ignition switch OFF.
2. Unlock all doors using main power window and door lock/unlock switch.
3. While pressing the back door opener switch, check voltage between BCM connector M19 terminal 53 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	53	Ground	Back door opener switch is pressed	0 → Battery voltage for 300 ms



Is the inspection result normal?

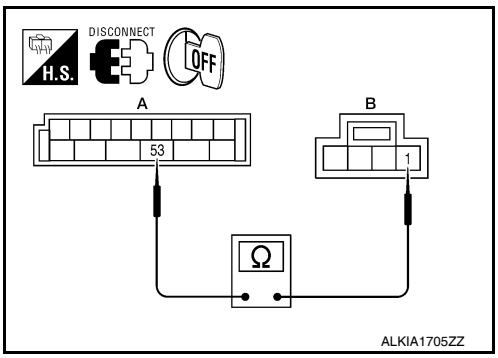
YES >> GO TO 2
NO >> GO TO 4

2.CHECK BACK DOOR LATCH HARNESS FOR OPEN

1. Disconnect BCM and back door latch.

2. Check continuity between BCM connector (A) M19 terminals 53 and back door latch connector (B) D502 terminal 1.

Terminals		Continuity
53	1	Yes



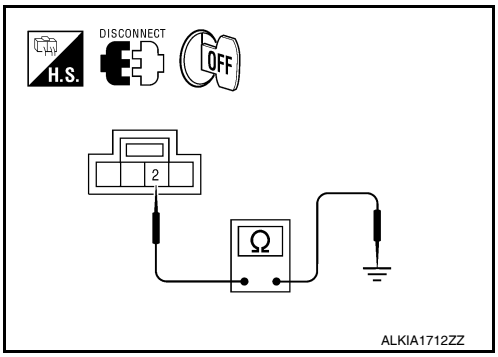
Is the inspection result normal?

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

3. CHECK BACK DOOR LATCH GROUND

Check continuity between back door latch connector D502 terminal 2 and ground.

Terminals		Continuity
2	Ground	Yes



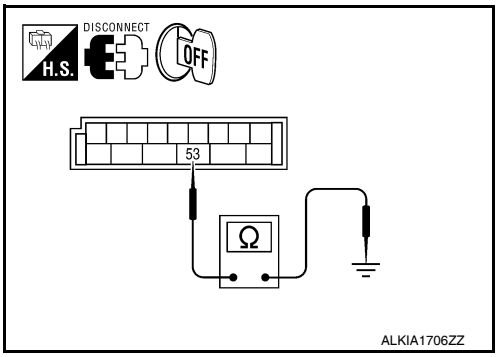
Is the inspection result normal?

YES >> Replace back door latch.
NO >> Repair or replace harness.

4. CHECK BACK DOOR LATCH HARNESS FOR SHORT

1. Disconnect BCM and back door latch.
2. Check continuity between BCM connector M19 terminal 53 and ground.

Terminals		Continuity
53	Ground	No



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

GLASS HATCH LOCK ACTUATOR

Description

INFOID:0000000005259925

Locks/unlocks the glass hatch with the signal from BCM.

Component Function Check

INFOID:0000000005259926

1.CHECK FUNCTION

1. Use CONSULT-III to perform Active Test DOOR LOCK.
2. Touch “ALL LOCK” and operate glass hatch lever to ensure it is locked.
3. Touch “ALL UNLOCK” and operate glass hatch lever to ensure it is unlocked.

Is the inspection result normal?

YES >> Glass hatch lock actuator is OK.
NO >> Ensure glass hatch mechanical linkage is OK. Refer to DLK-83, "Diagnosis Procedure".

Diagnosis Procedure

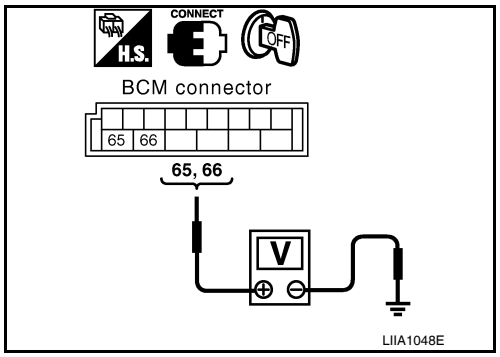
INFOID:0000000005259927

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK GLASS HATCH 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	



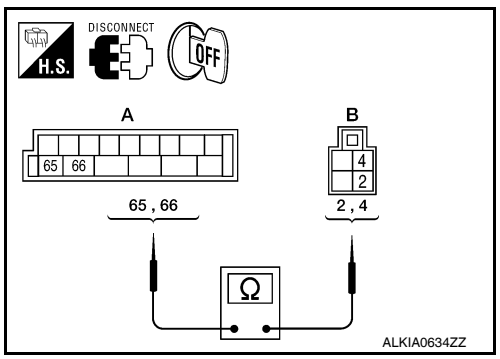
Is the inspection result normal?

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

2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

1. Disconnect BCM and glass hatch lock actuator.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and glass hatch lock actuator connector (B) D508 terminals 2, 4.

Terminals		Continuity
65	4	Yes
66	2	



Is the inspection result normal?

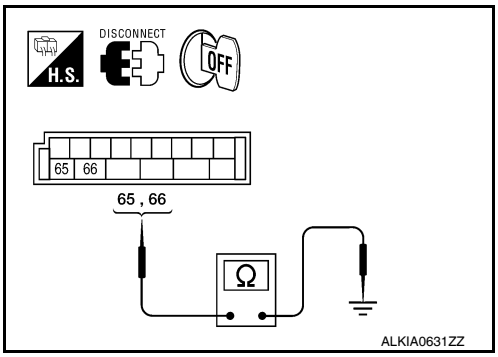
YES >> Replace glass hatch lock actuator.

NO >> Repair or replace harness.

3. CHECK GLASS HATCH LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SELECT UNLOCK RELAY

Description

INFOID:0000000005259928

Controls the operation of both rear door lock actuators, back door latch and glass hatch lock actuators.

Component Function Check

INFOID:0000000005259929

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, back door latch and glass hatch lock actuators work normally.

Is the inspection result normal?

YES >> Passenger select unlock relay is OK.
NO >> Refer to DLK-85, "Diagnosis Procedure".

Diagnosis Procedure

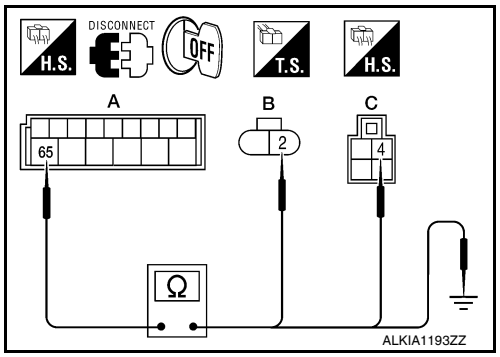
INFOID:0000000005259930

Regarding Wiring Diagram information, refer to DLK-131, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK PASSENGER SELECT UNLOCK RELAY CIRCUIT

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

1. Turn ignition switch OFF.
2. Disconnect BCM and inoperative back or rear door lock actuator.
3. Check continuity between BCM connector (A) M20 terminal 65 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (B) D305 Terminal 2 or glass hatch lock actuator (C) D508 terminal 4.



65 - 2 : Continuity should exist.
65 - 4 : Continuity should exist.

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

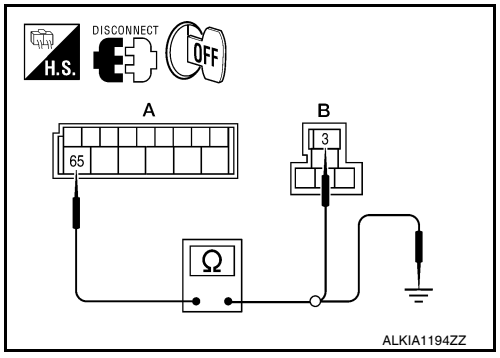
65 - Ground : Continuity should not exist.

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 65 and passenger select unlock relay connector (B) M11 terminal 3.



65 - 3 : Continuity should exist.

3. Check continuity between BCM connector (A) M20 terminal 65 and body ground.

65 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3

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

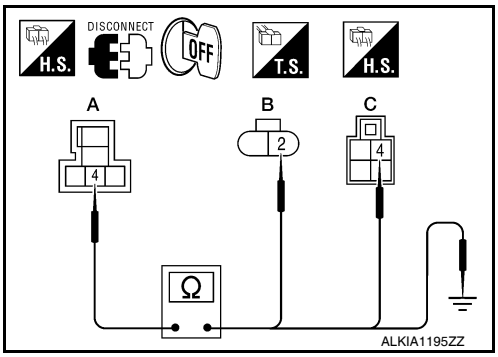
3. CHECK PASSENGER SELECT UNLOCK RELAY OUTPUT

1. Disconnect inoperative rear door or glass hatch lock actuator.
2. Check continuity between passenger select unlock relay connector (A) M11 terminal 4 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (B) D305 terminal 2 or glass hatch lock actuator connector (C) D508 terminal 4.

4 - 2 : Continuity should exist.
4 - 4 : Continuity should exist.

3. Check continuity between passenger select unlock relay connector (A) M11 terminal 4 and ground.

4 - Ground : Continuity should not exist.



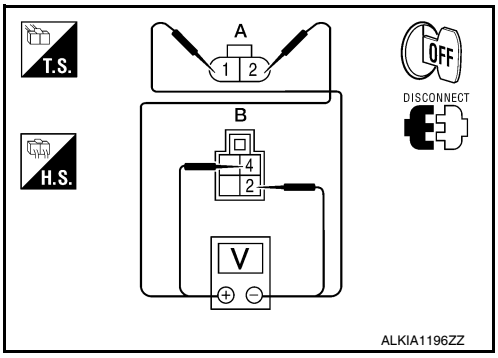
Is the inspection result normal?

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

4. CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

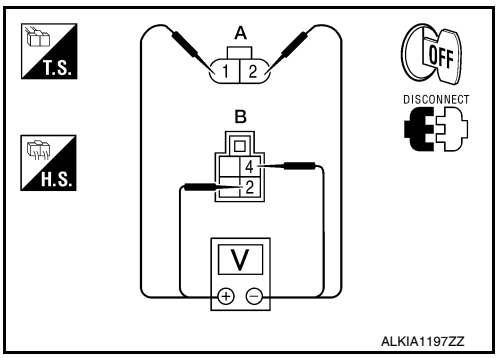
1. Reconnect BCM.
2. Check voltage between rear door lock actuator connector LH (A) D205 terminals 1 and 2 or rear door lock actuator connector RH (A) D305 terminals 1 and 2 or glass hatch lock actuator (B) D508 terminals 2 and 4.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH) A: D305 (RH)	2	1	Main power window and door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 msec.
B: D508	4	2		



3. Check voltage between rear door lock actuator connector LH (A) D205 terminals 1 and 2 or rear door lock actuator connector RH (A) D305 terminals 1 and 2 or glass hatch lock actuator (B) D508 terminals 2 and 4.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH) A: D305 (RH)	1	2	Main power window and door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 msec.
B: D508	2	4		



Is the inspection result normal?

YES >> Replace rear or glass hatch lock actuator.
NO >> Repair or replace harness between actuator and splice.

INTELLIGENT KEY WARNING BUZZER

Description

INFOID:0000000005259931

Answers back and warns for an inappropriate operation.

Component Function Check

INFOID:0000000005259932

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-87, "Diagnosis Procedure".

Diagnosis Procedure

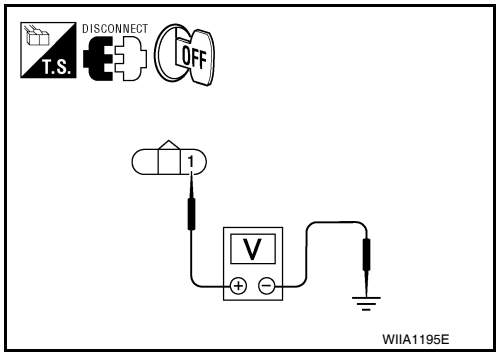
INFOID:0000000005259933

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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 E60 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.

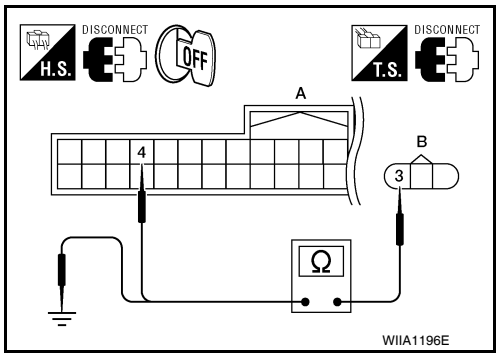
2.CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 4 and Intelligent Key warning buzzer (engine room) harness connector E60 terminal 3.

4 - 3 : Continuity should exist.

3. Check continuity between Intelligent Key warning buzzer (engine room) harness connector E60 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-88, "Component Inspection".

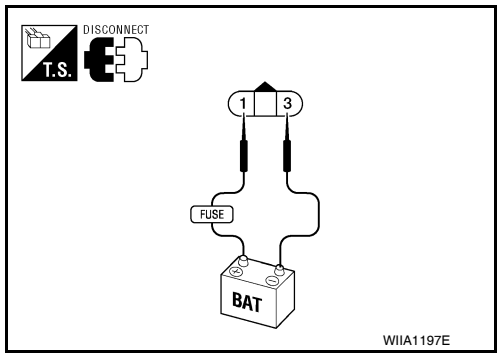
>> Inspection end.

Component Inspection

INFOID:0000000005259934

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.

INTELLIGENT KEY WARNING CHIME (COMBINATION METER)

Description

INFOID:0000000005259935

Answers back and warns for an inappropriate operation.

Diagnosis Procedure

INFOID:0000000005259936

1.CHECK INTELLIGENT KEY WARNING CHIME (COMBINATION METER) OPERATION

With CONSULT-III

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

Is the inspection result normal?

YES >> Intelligent Key warning chime (combination meter) is OK.
NO >> Refer to MWI-3, "Work Flow".

WARNING LAMP

KEY (GREEN)

KEY (GREEN) : Description

INFOID:0000000005259937

Illuminates when the ignition knob is pushed with the presence of the Intelligent Key indicating normal operation.

KEY (GREEN) : "KEY" Warning Lamp (GREEN) Check

INFOID:0000000005259938

1.CHECK WARNING LAMP OPERATION

With CONSULT-III

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-III.
- Select “BLUE ON”.

“KEY” warning lamp (green) should illuminate.

Without CONSULT-III

1. Turn ignition switch OFF.
2. Ensure Intelligent Key is in your possession inside the vehicle.
3. While monitoring the combination meter warning lamps, push the ignition knob switch.
4. The "KEY" warning lamp (green) should illuminate indicating that the Intelligent Key is nearby.

Is the inspection result normal?

YES >> Inspection End.
NO >> Check combination meter. Refer to MWI-3, "Work Flow".

KEY (RED)

KEY (RED) : Description

INFOID:0000000005259939

Illuminates when the ignition knob is pushed without the presence of the Intelligent Key indicating inappropriate operation.

KEY (RED) : "KEY" Warning Lamp (RED) Check

INFOID:0000000005259940

1.CHECK WARNING LAMP OPERATION

With CONSULT-III

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-III.
- Select “RED ON”.

“KEY” warning lamp (red) should illuminate.

Without CONSULT-III

1. Turn ignition switch OFF.
2. Ensure Intelligent Key is outside and away from the vehicle.
3. While monitoring the combination meter warning lamps, push the ignition knob switch.
4. The "KEY" warning lamp (red) should illuminate indicating that the Intelligent Key is not nearby.

Is the inspection result normal?

YES >> Inspection End.
NO >> Check combination meter. Refer to MWI-3, "Work Flow".

WARNING LAMP

WARNING LAMP : Description P-SHIFT

INFOID:0000000005259941

Illuminates when the ignition knob is turned from ON to OFF with the shift lever out-of-park indicating inappropriate operation.

WARNING LAMP : "P-SHIFT" Warning Lamp Check

INFOID:0000000005259942

1. CHECK WARNING LAMP OPERATION

With CONSULT-III

- Check “INDICATOR” in “ACTIVE TEST” mode with CONSULT-III.
- Select “KNOB ON”.

“P-SHIFT” warning lamp should illuminate.

Without CONSULT-III

1. Turn ignition switch OFF.
2. While monitoring the combination meter warning lamps, turn ignition switch ON. "P-SHIFT" warning lamp should illuminate for 1 second to perform a bulb check.

Is the inspection result normal?

YES >> Inspection End.
NO >> Check combination meter. Refer to MWI-3, "Work Flow".

OUTSIDE KEY ANTENNA

Description

INFOID:0000000005259943

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 locking and unlocking of door locks when the Intelligent Key is present.

Component Function Check

INFOID:0000000005259944

1.CHECK DOOR REQUEST SWITCH

Check that door request switches operate normally.

Is the inspection result normal?

YES >> GO TO 2
NO >> Inspect door request switches. Refer to DLK-71, "FRONT DOOR REQUEST SWITCH : Component Function Check".

2.CHECK FRONT ANTENNAS FUNCTION

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

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

YES >> Outside key antenna is OK.
NO >> Refer to DLK-92, "Diagnosis Procedure".

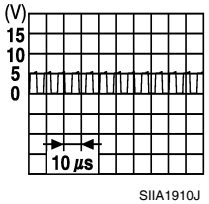
Diagnosis Procedure

INFOID:0000000005259945

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM — ".

1.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector M164 terminals 17, 19, 37 and ground with an oscilloscope.

Connector	Item	Terminals (+)	Terminals (-)	Condition	Signal (Reference value)
M164	Rear bumper antenna	17	Ground	Request switch is pushed	
	Front outside antenna LH	19			
	Front outside antenna RH	37			

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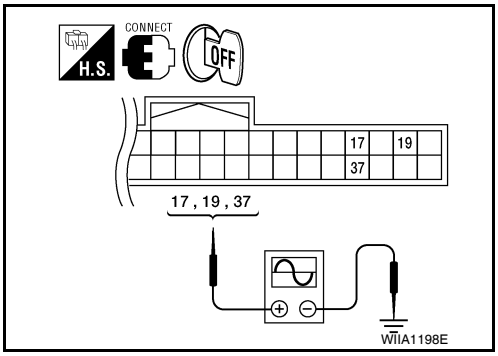

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Is the inspection result normal?

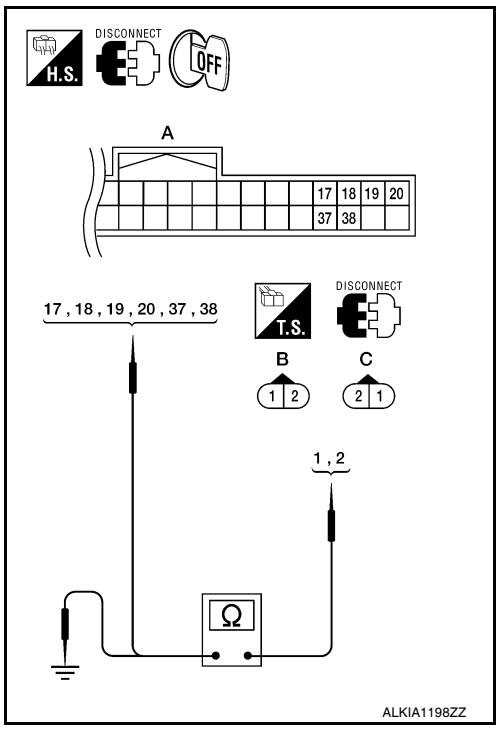
YES >> Outside key antenna is OK.
NO >> GO TO 2

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) C127 terminals 1, 2 and Intelligent Key unit harness connector (A) M164 terminals 17, 18, 19, 20, 37, and 38.

Item	Connector	Terminal	Connector	Terminal	Continuity
Rear bumper antenna	C: C127	1	A: M164	17	Yes
		2		18	
Front outside antenna LH	B: D15	2		19	
		1		20	
Front outside antenna RH	B: D115	2		37	
		1		38	



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

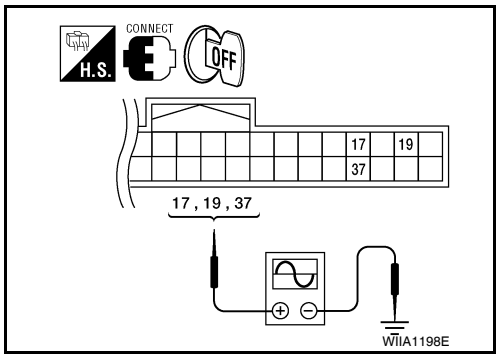
Item	Connector		Terminal	Continuity
Rear bumper antenna	C: C127	1	Ground	No
		2		
Front outside antenna LH	B: D15	1		
		2		
Front outside antenna RH	B: D115	1		
		2		

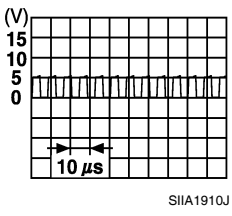
Is the inspection result normal?

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 M164 terminals 17, 19, 37 and ground with an oscilloscope.



Connector	Item	Terminals (+)	Terminals (-)	Condition	Signal (Reference value)
M164	Rear bumper	17	Ground	Request switch is pushed	
	Front outside antenna LH	19			
	Front outside antenna RH	37			

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Is the inspection result normal?

YES >> Replace outside key antenna.
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

STEERING LOCK SOLENOID

Diagnosis Procedure

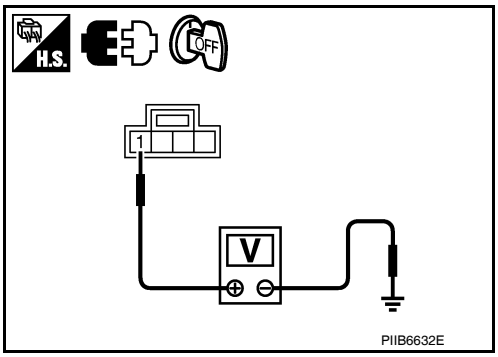
INFOID:0000000005259946

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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 M65 terminal 1 and ground.

1 - Ground : Battery voltage



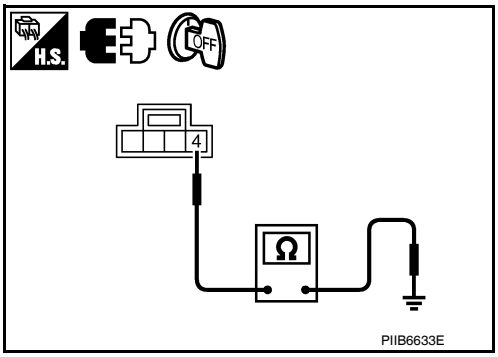
Is the inspection result normal?

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 M65 terminal 4 and ground.

4 - Ground : Continuity should exist.



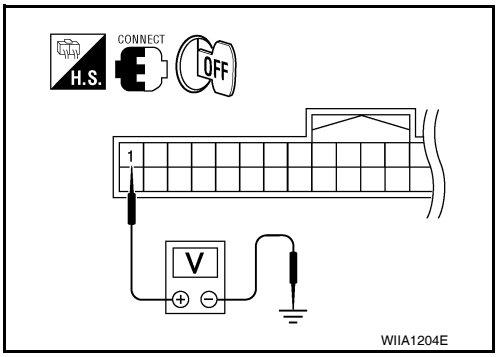
Is the inspection result normal?

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 M164 terminal 1 and ground.

1 - Ground : Approx. 5V

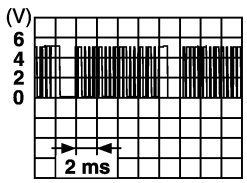


Is the inspection result normal?

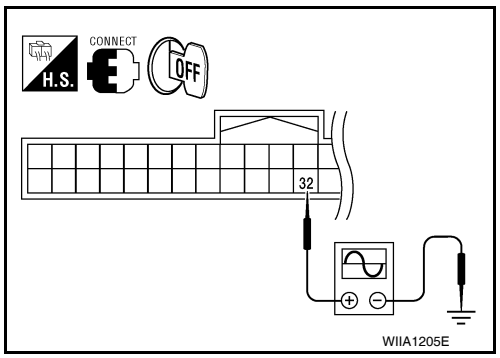
YES >> GO TO 4
NO >> GO TO 6

4.CHECK STEERING LOCK COMMUNICATION SIGNAL

Check signal between Intelligent Key unit connector M164 terminal 32 and ground with oscilloscope.

Connector	Terminals (+)	Terminals (–)	Condition	Signal (V) (Reference value)
M164	32	Ground	Ignition switch is pushed	

SIIA1911J



WIIA1205E

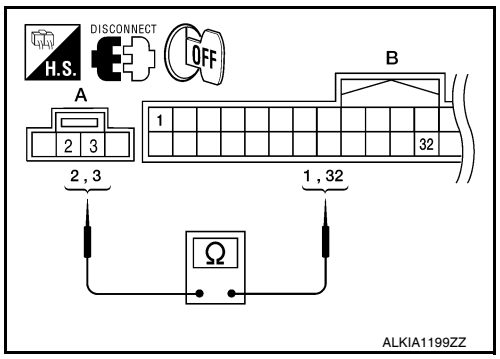
Is the inspection result normal?

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) M164 terminals 1, 32 and steering lock solenoid connector (A) M65 terminals 2, 3.

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



ALKIA1199ZZ

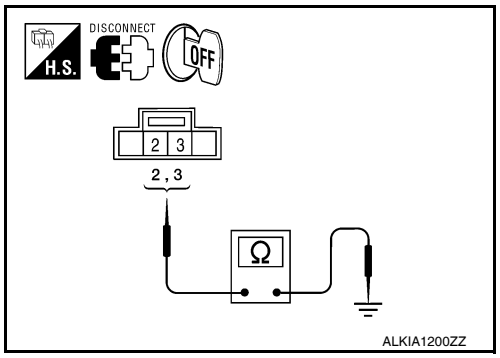
Is the inspection result normal?

YES >> • Replace steering lock solenoid.
• After replacing steering lock solenoid, perform registration procedure. Refer to CONSULT-III Operation Manual.
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 M65 terminals 2, 3 and ground.

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



ALKIA1200ZZ

Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to SEC-118, "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

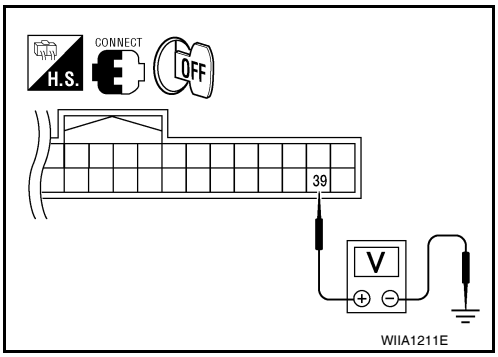
INFOID:0000000005259947

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

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 M164 terminal 39 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M164	39	Ground	Selector lever is in "P" position	Battery voltage
			Other than above	0



Is the inspection result normal?

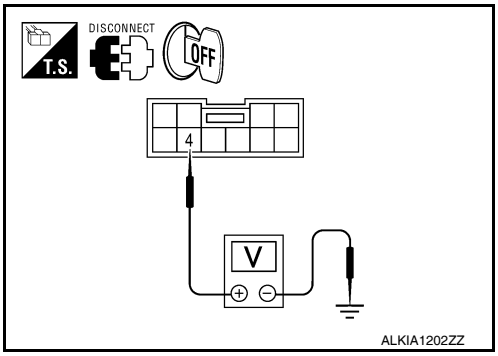
YES >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

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 M158 terminal 4 and ground.

4 – Ground : Battery voltage.



Is the inspection result normal?

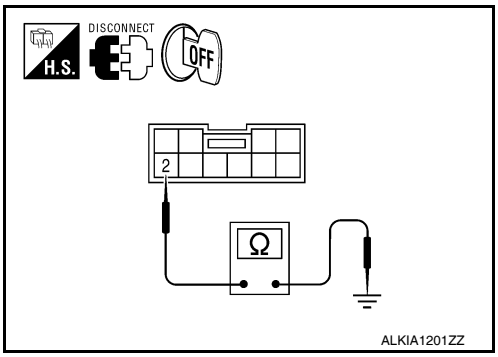
YES >> GO TO 3

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

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

Check continuity between A/T shift selector (park position switch) terminal 2 and ground.

2 – Ground : Continuity should exist.



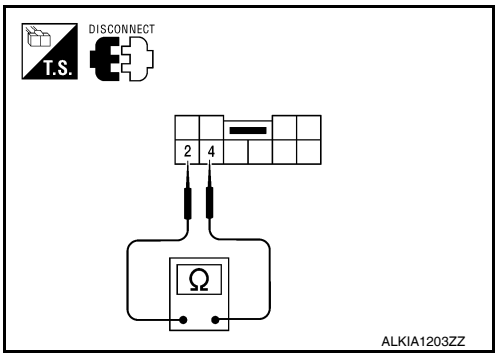
Is the inspection result normal?

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

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

Check continuity between A/T shift selector (park position switch) terminals 2 and 4.

Component	Terminals		Condition	Continuity
A/T shift selector (park position switch)	2	4	Selector lever is in "P" position	Yes
			Other than above	No



Is the inspection result normal?

YES >> GO TO 5
NO >> Replace A/T shift selector (park position switch).

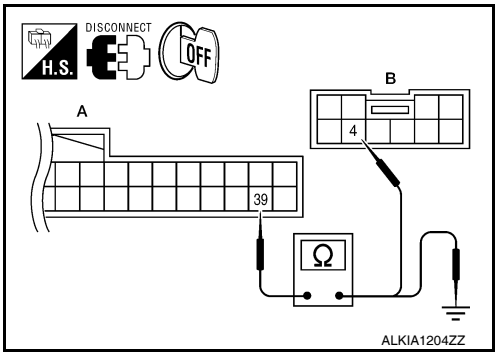
5. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) CIRCUIT

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 39 and A/T shift selector (park position switch) harness connector (B) M158 terminal 4.

39 – 4 : Continuity should exist.

3. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 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:0000000005259948

Receives Intelligent Key operation and transmits to Intelligent Key unit.

Component Function Check

INFOID:0000000005259949

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-98, "Diagnosis Procedure".

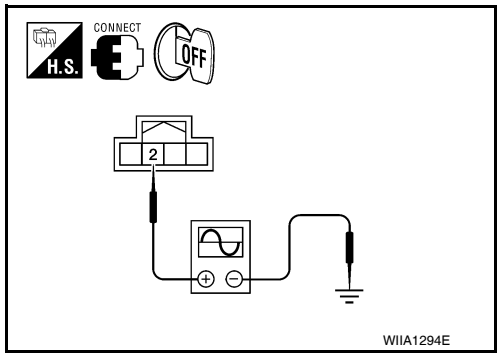
Diagnosis Procedure

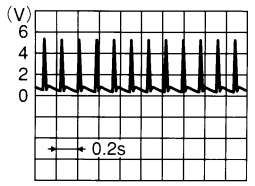
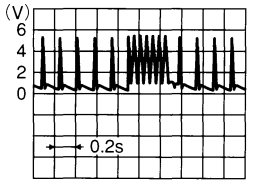
INFOID:0000000005259950

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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



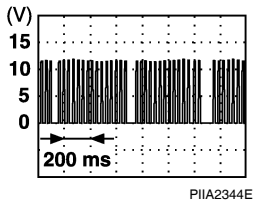
Terminals (+) Remote keyless entry receiver connector	Terminals (+) Terminal	Terminals (–)	Keyfob condition	Signal (Reference value)
M67	2	Ground	No function	 OCC3879D
			Any button is pressed	 OCC3880D

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 M67 terminal 3 and ground using an oscilloscope.

Terminals			Signal (Reference value)
(+)		(–)	
Remote keyless entry receiver connector	Terminal		
M67	3	Ground	

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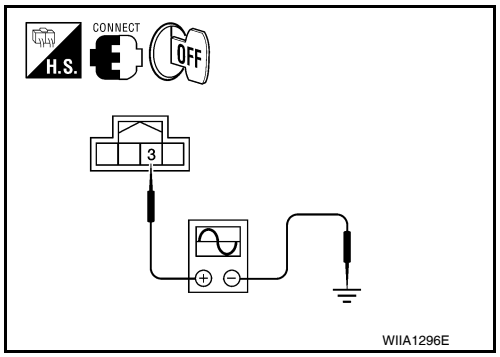


WIIA1296E

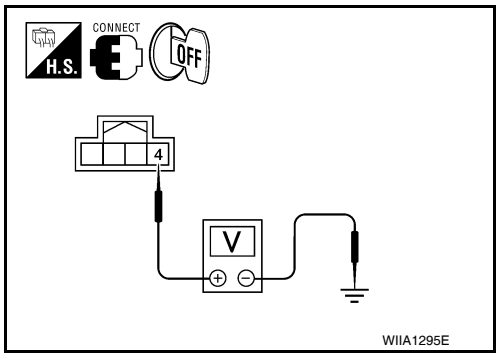
Is the inspection result normal?

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 M67 terminal 4 and ground.

4 - Ground : Approx. 5 volt.



WIIA1295E

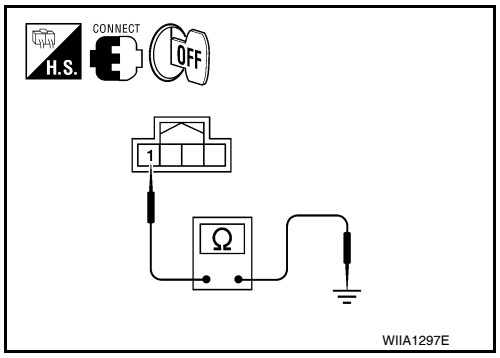
Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 5

4. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

Check continuity between remote keyless entry receiver connector M67 terminal 1 and ground.

1 - Ground : Continuity should exist.



WIIA1297E

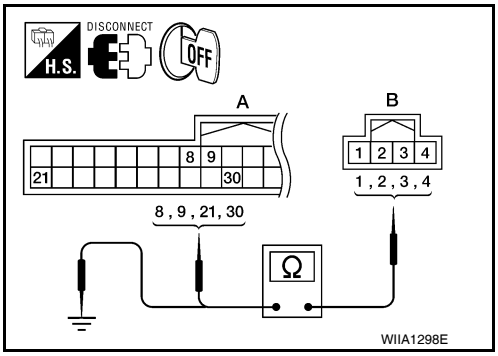
Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to SEC-119, "Removal and Installation".
NO >> GO TO 5

5. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

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

2. Check continuity between Intelligent Key unit connector (A) M164 terminals 8, 9, 21, 30 and remote keyless entry receiver connector (B) M67 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) M67 terminals 1, 2, 3, 4 and ground.

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

Is the inspection result normal?

YES >> Remote keyless entry receiver circuits are OK.
NO >> Repair or replace the harness between the remote keyless entry receiver and Intelligent Key unit.

INTELLIGENT KEY BATTERY AND FUNCTION

Description

INFOID:0000000005259951

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:0000000005259952

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?

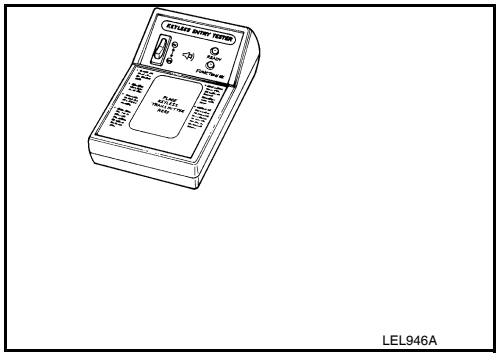
YES >> Intelligent Key is OK.
NO >> Refer to DLK-101, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259953

1.CHECK INTELLIGENT KEY FUNCTION

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

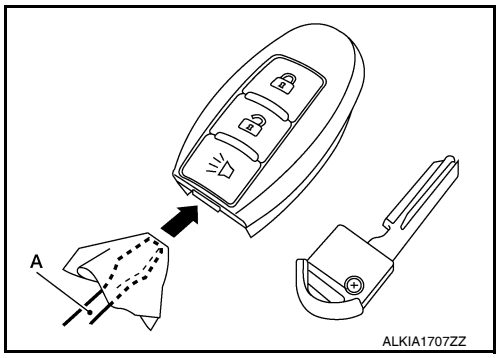


Does the test pass?

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.

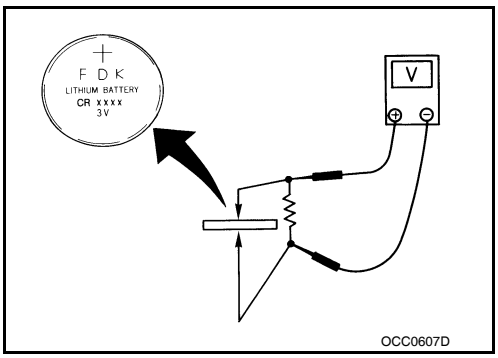


Is the inspection result normal?

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-98, "Component Function Check".

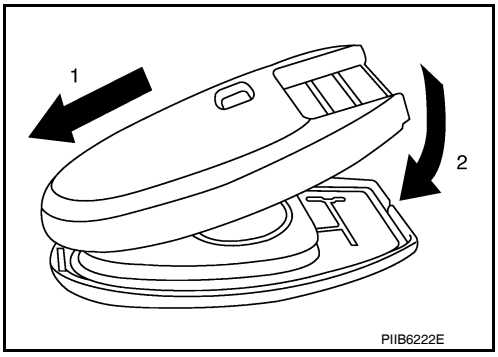
NO >> GO TO 4

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-98, "Component Function Check".

HORN FUNCTION

Description

INFOID:0000000005259954

Perform answer-back for each operation with horn.

Component Function Check

INFOID:0000000005259955

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 >> Refer to DLK-103, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259956

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK HORN FUNCTION

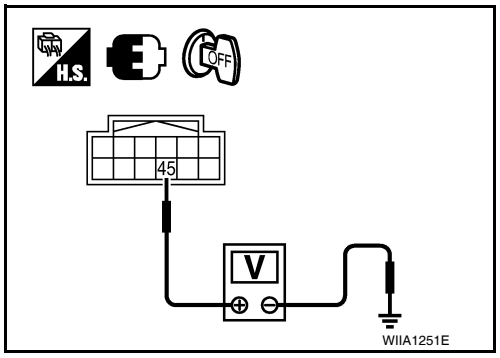
Check horn function with horn switch.

Does the horn sound?

YES >> GO TO 2.
NO >> Refer 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 IPDM E/R connector E122 terminal 45 and ground.



IPDM E/R		Ground	Test item		Voltage (V) (Approx.)
Connector	Terminal				
E122	45	Ground	HORN	OFF → ON → OFF	Battery voltage → 0 → Battery voltage
				Other than above	Battery voltage

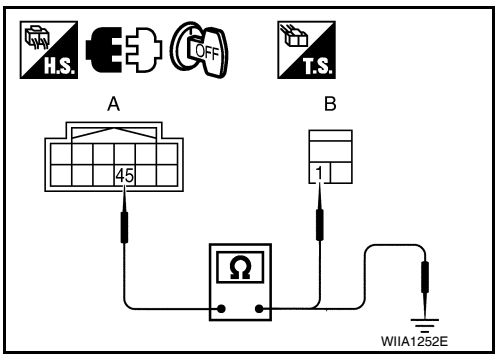
Is the inspection result normal?

YES >> Repair harness for open between IPDM E/R and horn relay.
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	
A: E122	45	B: 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-37, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-33, "Removal and Installation of IPDM E/R".
NO >> Repair or replace the malfunctioning part.

COMBINATION METER DISPLAY FUNCTION

Description

INFOID:0000000005259957

Displays each operation method guide and warning for system malfunction.

Component Function Check

INFOID:0000000005259958

1.CHECK FUNCTION

1. Turn ignition switch ON.
2. Using Consult-III, activate "P-SHIFT" and "KEY" warning lamp indicators in "ACTIVE TEST" mode.

Do the warning lamps illuminate?

YES >> Combination meter warning lamp indicators are OK.
NO >> Refer to DLK-105, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259959

1.CHECK COMBINATION METER

Refer to MWI-60, "DTC Index".

Is the inspection result normal?

YES >> GO TO 2
NO >> Check combination meter. Refer to MWI-3, "Work Flow".

2.CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

>> Inspection End.

WARNING CHIME FUNCTION

Description

INFOID:0000000005259960

Performs operation method guide and warning with buzzer.

Component Function Check

INFOID:0000000005259961

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-106, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259962

1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to MWI-96, "Removal and Installation".

>> Inspection End.

HAZARD FUNCTION

Description

INFOID:0000000005259963

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

Component Function Check

INFOID:0000000005259964

1.CHECK FUNCTION

Check hazard warning lamp "FLASHER" in ACTIVE TEST mode.

Is the inspection result normal?

YES >> Hazard warning lamp circuit is OK.
NO >> Refer to DLK-107, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005259965

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-59, "Removal and Installation".
NO >> Repair or replace hazard warning switch circuit. Refer to EXL-77, "Wiring Diagram".

KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

Diagnosis Procedure

INFOID:0000000005259966

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK KEY SWITCH

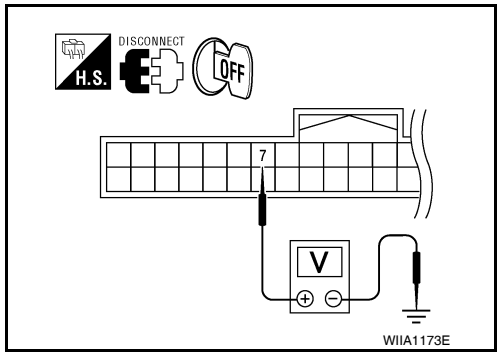
With CONSULT-III

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 M164 terminal 7 and ground.



Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M164	7	Ground	Insert mechanical key into ignition switch	Battery voltage
			Remove mechanical key from ignition switch	0

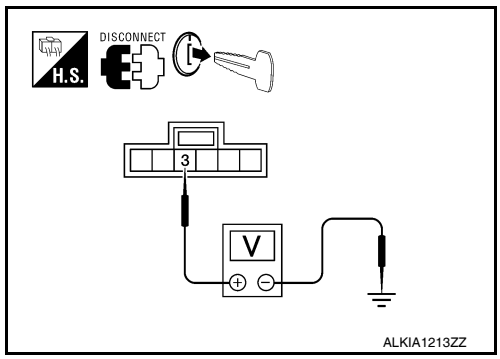
Is the inspection result normal?

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 M66 terminal 3 and ground.

3 - Ground : Battery voltage



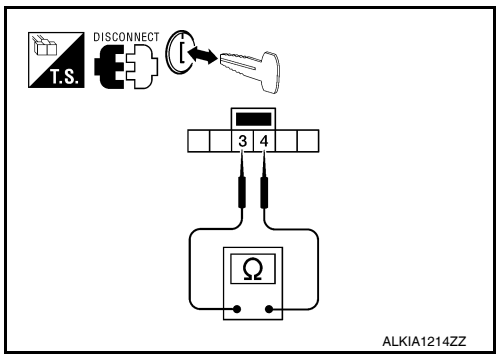
Is the inspection result normal?

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).

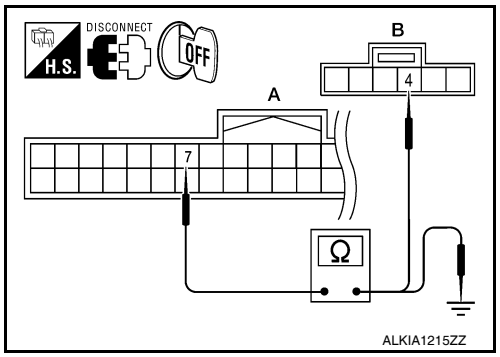
4. CHECK KEY SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 7 and key switch and ignition knob switch harness connector (B) M66 terminal 4.

7 - 4 : Continuity should exist.

2. Check continuity between Intelligent Key unit harness connector (A) M164 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

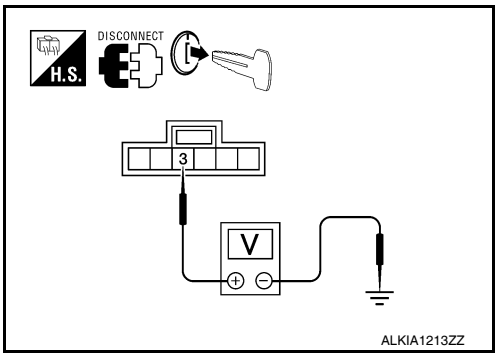
INFOID:0000000005259967

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM —".

1.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M66 terminal 3 and ground.

3 – Ground : Battery voltage.



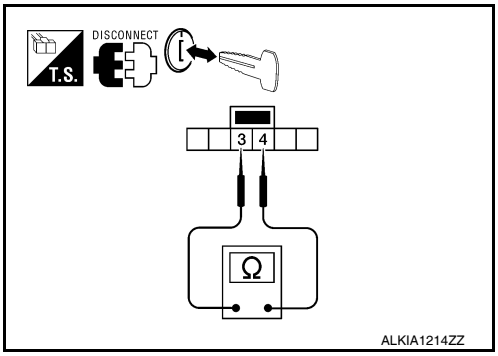
Is the inspection result normal?

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).

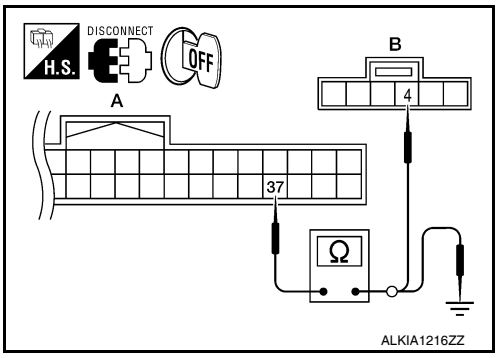
3.CHECK KEY SWITCH SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch and ignition knob switch harness connector M66 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

Diagnosis Procedure

INFOID:0000000005259968

Regarding Wiring Diagram information, refer to DLK-149, "Wiring Diagram — INTELLIGENT KEY SYSTEM — ".

1.CHECK IGNITION KNOB SWITCH

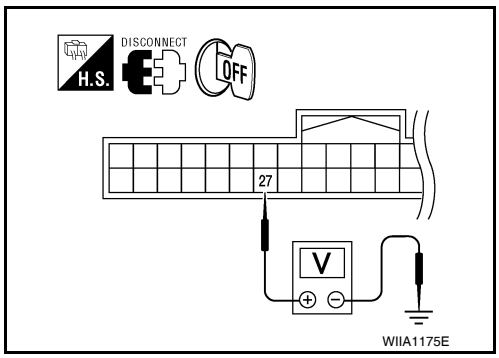
With CONSULT-III

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 M164 terminal 27 and ground.



Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M164	27	Ground	Ignition switch is pushed	Battery voltage
			Ignition switch is released	0

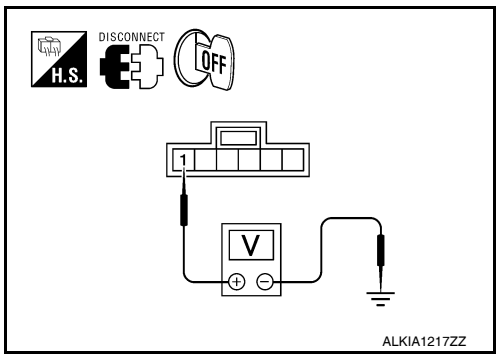
Is the inspection result normal?

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 M66 terminal 1 and ground.

1 - Ground : Battery voltage



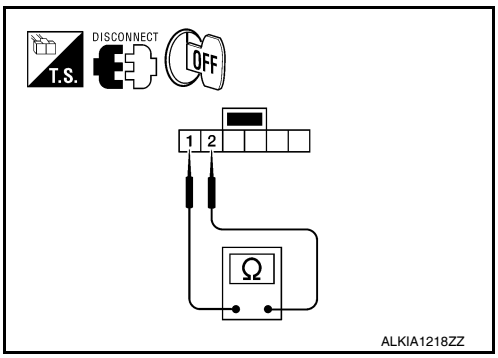
Is the inspection result normal?

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.

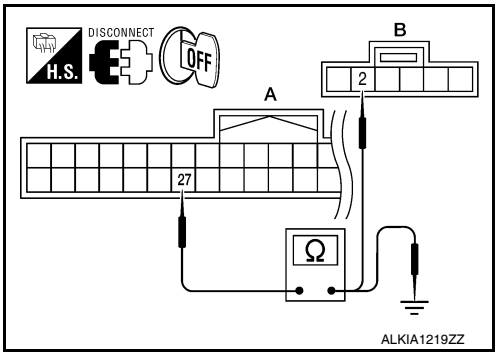
4. CHECK IGNITION KNOB SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector (A) M164 terminal 27 and key switch and ignition knob switch harness connector (B) M66 terminal 2.

27 - 2 : Continuity should exist.

2. Check continuity between Intelligent Key unit harness connector M164 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:0000000005259969

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:0000000005259970

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:0000000005259971

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.**

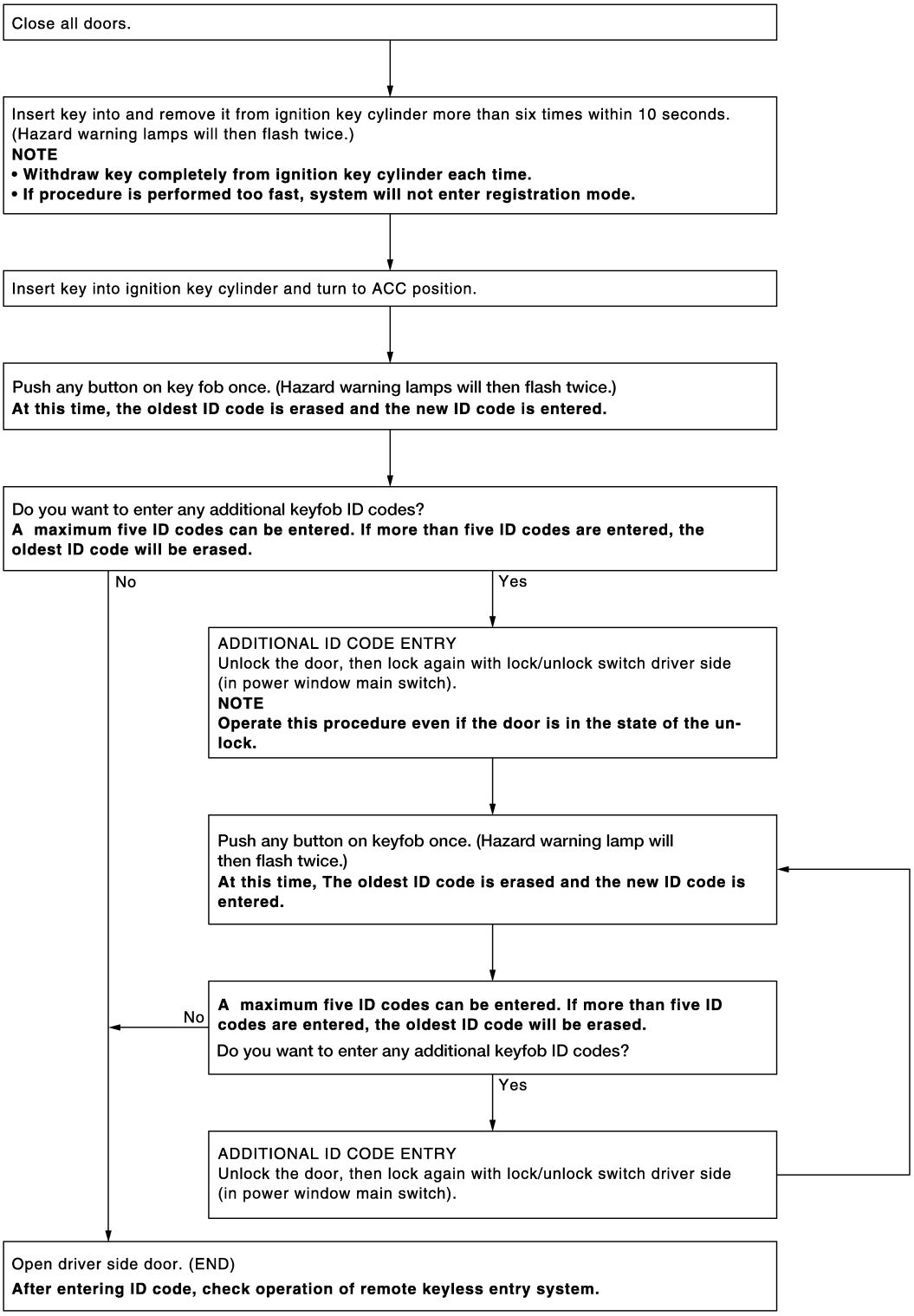
1. Turn ignition switch ON.
2. Select “BCM”.
3. Select “MULTI REMOTE ENT”.
4. Select “WORK SUPPORT”.
5. You can register, erase or confirm a keyfob ID code. To register a new code, select the following option and follow CONSULT-III instructions:
   - “REMO CONT ID REGIST”
     Use this mode to register 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:0000000005259972

KEYFOB ID SET UP WITHOUT CONSULT-III



LIIA1670E

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-

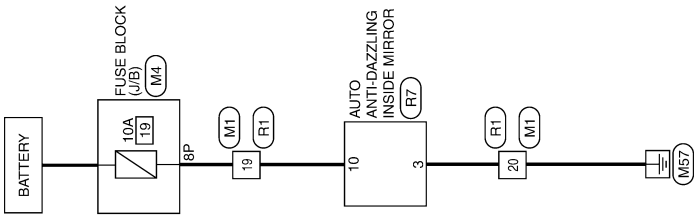
ler ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
To erase all ID codes in memory, register one ID code (keyfob) five times. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.

- 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.

HOMELINK UNIVERSAL TRANSCEIVER

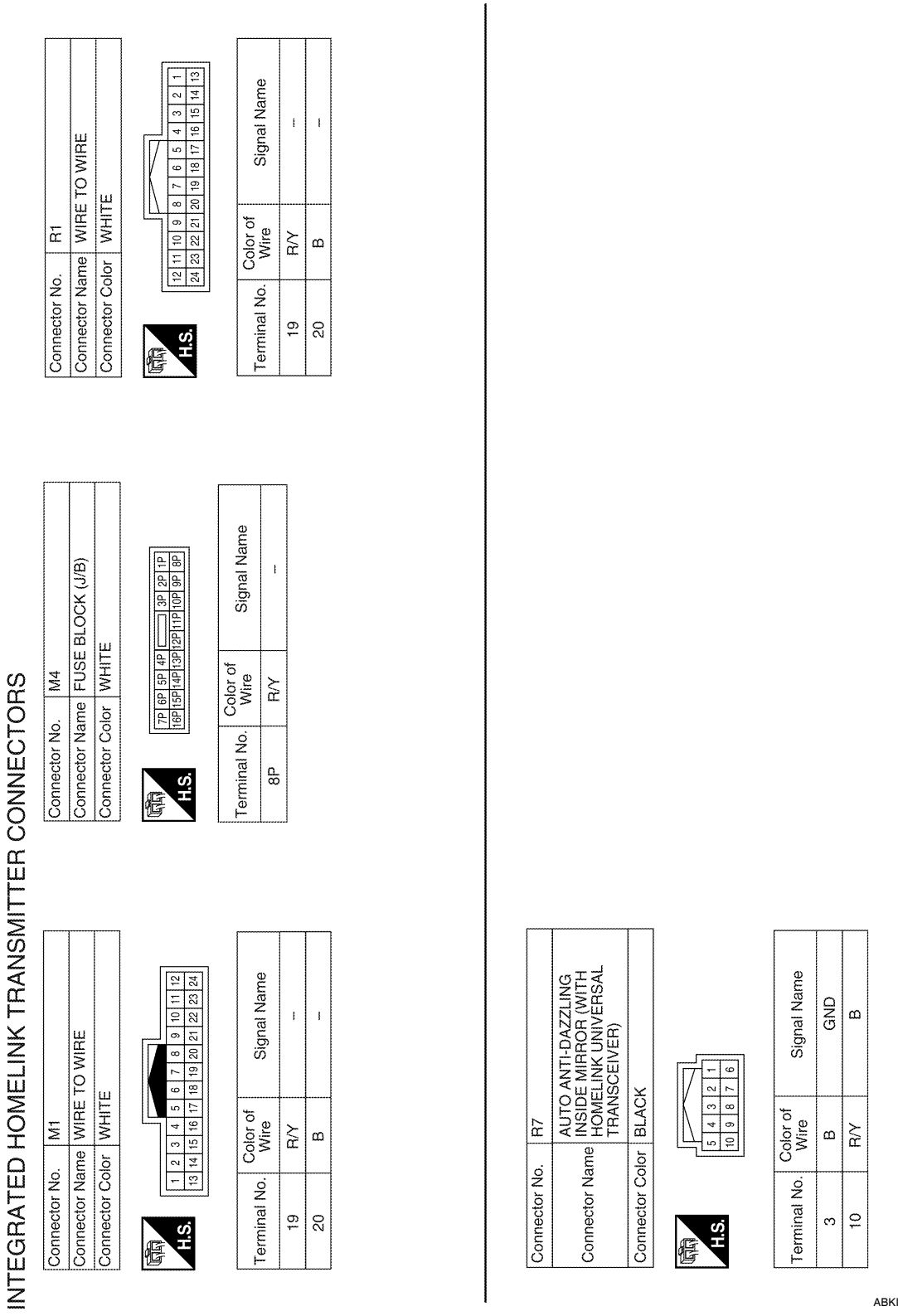
Wiring Diagram

INFOID:0000000005259973



INTEGRATED HOMELINK TRANSMITTER

AWKWA0054GB



Description

INFOID:0000000005259974

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:0000000005259975

1.CHECK FUNCTION

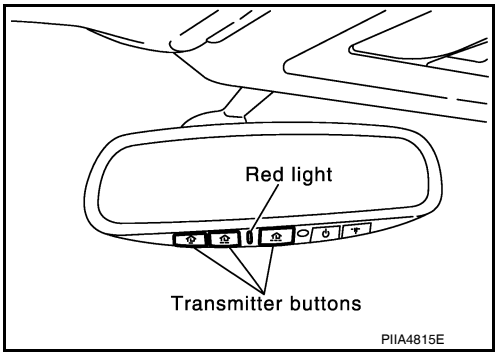
Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

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-120, "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).

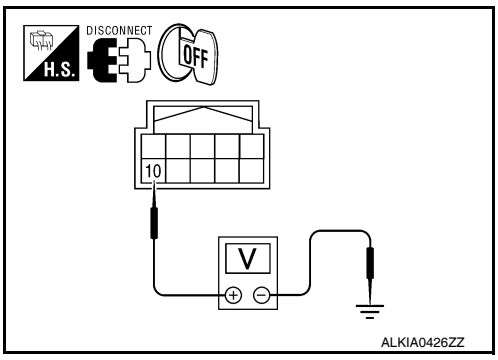
Diagnosis Procedure

INFOID:0000000005259976

Regarding Wiring Diagram information, refer to DLK-118, "Wiring Diagram".

1.CHECK POWER SUPPLY

1. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
2. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



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

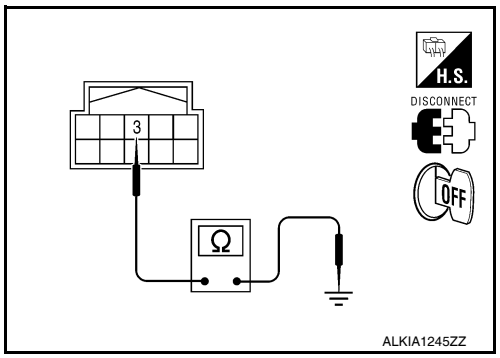
Is the inspection result normal?

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	3		Yes

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

>> Inspection End.

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005483723

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
HEAD LAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEAD LAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK[1]	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK[1]	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
KEYLESS LOCK[2]	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK[2]	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	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
PUSH SW[1]	Return to ignition switch to LOCK position	OFF
	Press ignition switch	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	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

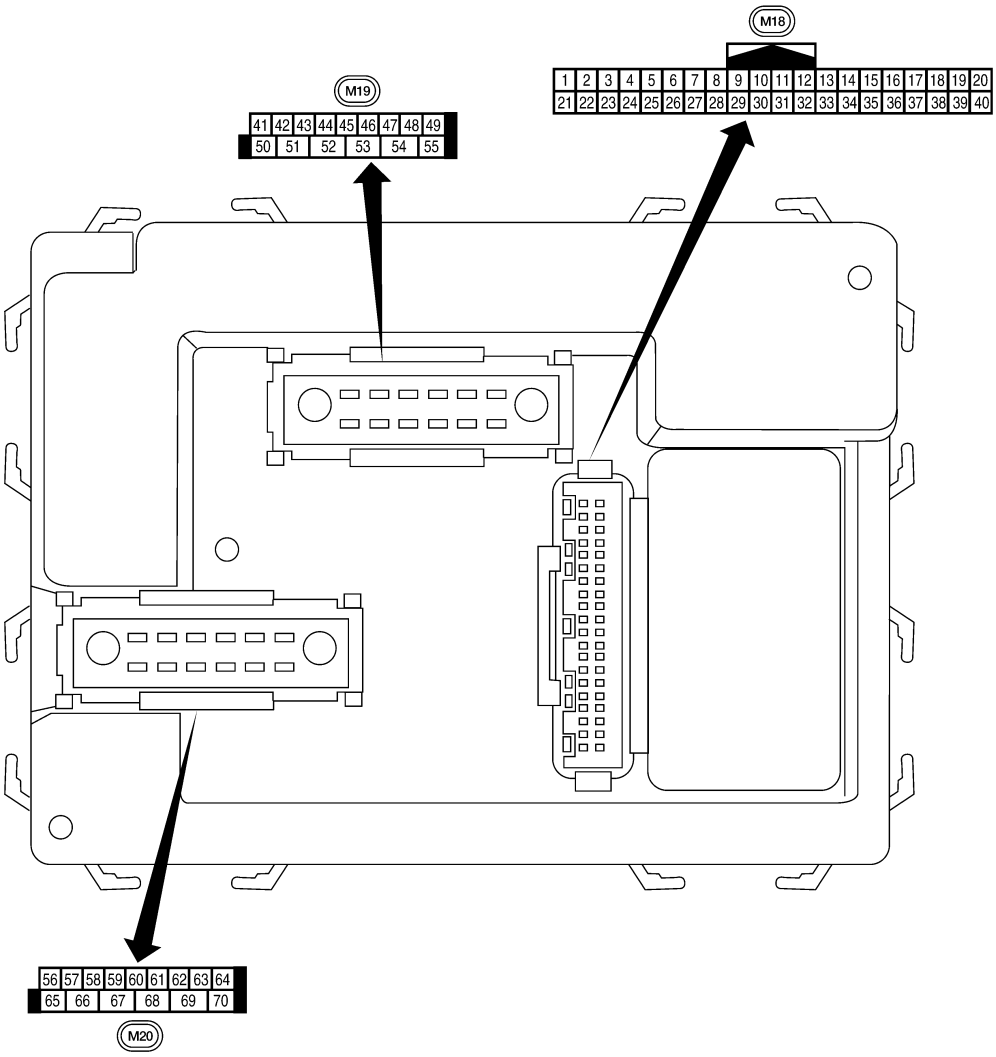
Monitor Item	Condition	Value/Status
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

1: With Intelligent Key

2: With remote keyless entry system

Terminal Layout

INFOID:0000000005483724



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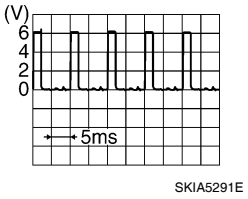
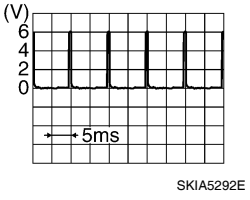
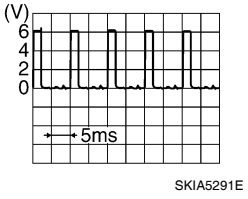
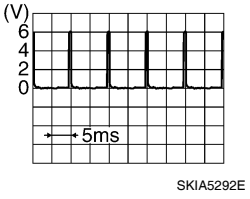
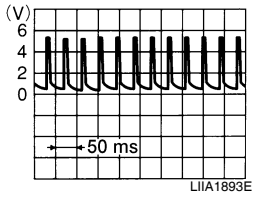
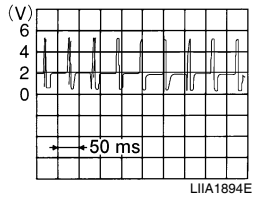
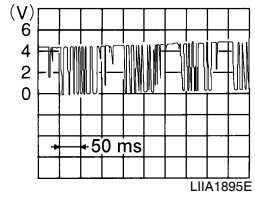
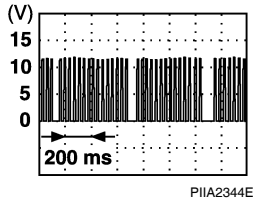
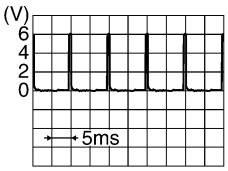
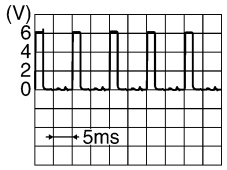
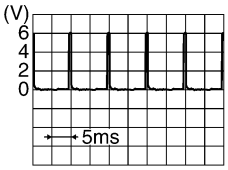
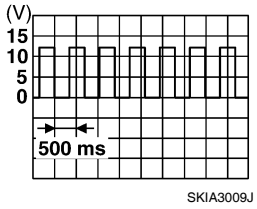
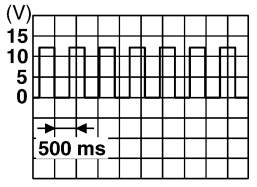
Physical Values

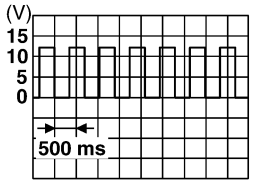
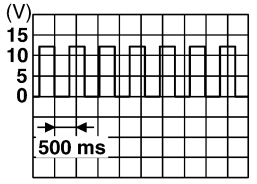
INFOID:0000000005483725

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	R	Combination switch input 1				
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	L	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	—	5V
18	BR	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	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LIIA1893E
20	G	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	GR	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	V	BUS	—	—	Ignition switch ON or power window timer operates	 PIIA2344E
23	G	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.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	LG	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
30[1]	G	Back door opener switch	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
30[2]	SB	Back door opener 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	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	LG	Combination switch output 1				
37[1]	B	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key inserted	0V
37[2]	B	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	LG	Glass hatch ajar switch	Input	ON	Glass hatch open	0V
					Glass hatch closed	Battery voltage
43	P	Back door latch 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	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	GR	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	P	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	O	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
53	L	Back door latch actuator	Output	OFF	OFF	0
					ON	Battery voltage
55	W	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	R/Y	Battery power supply	Input	OFF	—	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value or waveform (Approx.)
				Ignition switch	Operation or condition		
60	LG	Turn signal (left)	Output	ON	Turn left ON		 SKIA3009J
61	G	Turn signal (right)	Output	ON	Turn right ON		 SKIA3009J
63	BR	Interior room/map lamp	Output	OFF	Any door switch	ON (open)	0V
						OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)		0V
					ON (lock)		Battery voltage
66	L	Front door lock actuator RH, rear door lock actuators LH/RH and glass hatch lock actuator (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
67	B	Ground	Input	ON	—		0V
68	O	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	L	Power window power supply	Output	—	—		Battery voltage
70	W	Battery power supply	Input	OFF	—		Battery voltage

1: With remote keyless entry system

2: With Intelligent Key system

Wiring Diagram — POWER DOOR LOCK SYSTEM —

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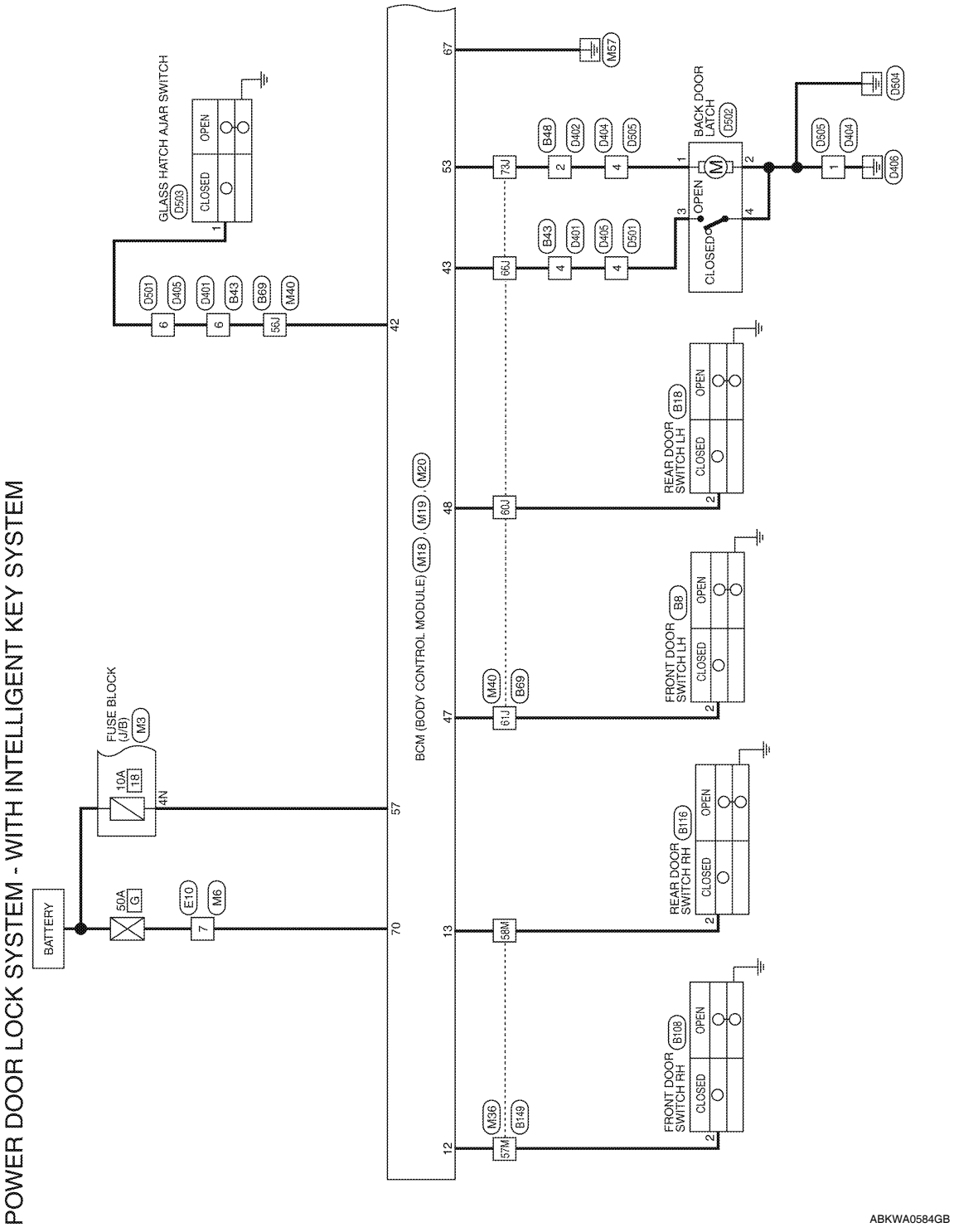
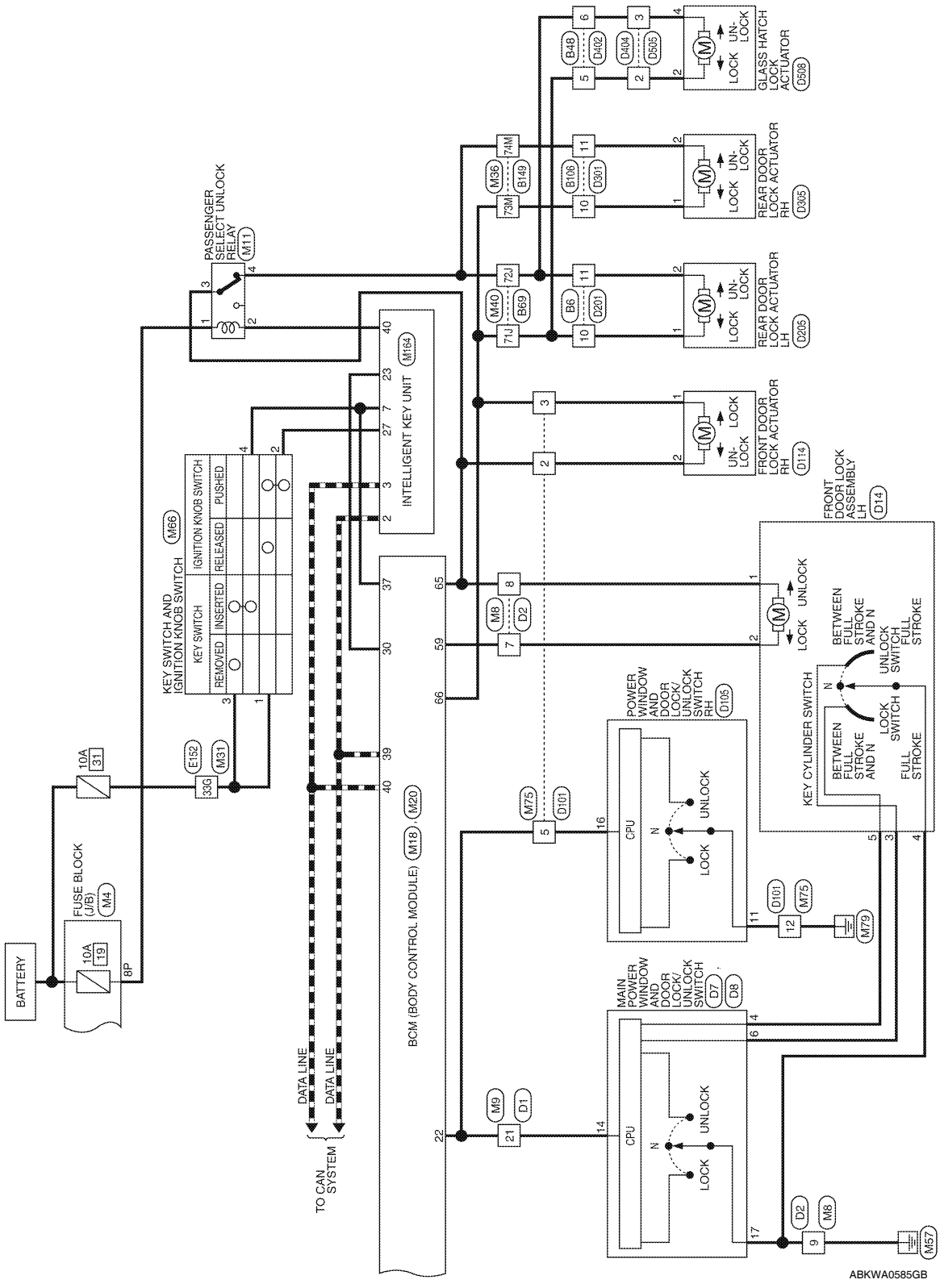



BATTERY
FUSE BLOCK (J/B) M4
10A 19
8P
10A 31
E152
33G
M31
KEY SWITCH AND IGNITION KNOB SWITCH M66
KEY SWITCH
IGNITION KNOB SWITCH
REMOVED
INSERTED
RELEASED
PUSHED
PASSENGER SELECT UNLOCK RELAY M11
INTELLIGENT KEY UNIT M164
BCM (BODY CONTROL MODULE) M18 M20
DATA LINE
TO CAN SYSTEM
GLASS HATCH LOCK ACTUATOR D508
REAR DOOR LOCK ACTUATOR RH D305
REAR DOOR LOCK ACTUATOR LH D205
FRONT DOOR LOCK ACTUATOR RH D114
FRONT DOOR DOOR LOCK ASSEMBLY LH D14
KEY CYLINDER SWITCH
BETWEEN FULL STROKE AND N
UNLOCK SWITCH FULL STROKE
LOCK SWITCH FULL STROKE
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7 D8
CPU
LOCK
UNLOCK
M57
M79
ABKWA0585GB

POWER DOOR LOCK SYSTEM CONNECTORS - WITH INTELLIGENT KEY SYSTEM

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8P	R/Y	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	W	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	GR	–
8	V	–
9	B	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
21	V	–

Connector No.	M11
Connector Name	PASSENGER SELECT UNLOCK RELAY
Connector Color	BLACK

H.S.

3		5
2	4	1

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

ABKIA0395GB

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
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
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
22	V	ANTI-PINCH SERIAL LINK (RX,TX)

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
42	LG	GLASS HATCH SW
43	P	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
53	L	LIFTGATE OPENER OUTPUT

Terminal No.	Color of Wire	Signal Name
30	SB	BACK DOOR AUTO CLOSURE
37	B	KEY SW
39	L	CAN-H
40	P	CAN-L

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

H.S.

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

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
33G	R/B	–

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

H.S.

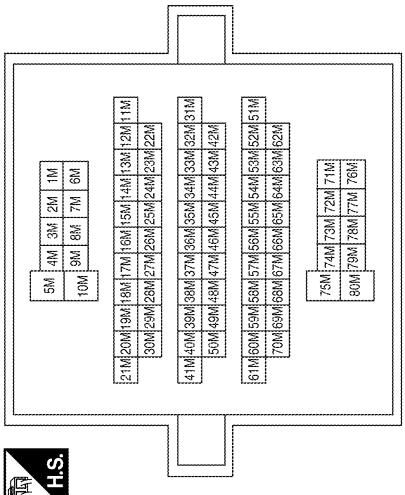
56	57	58	59	60	61	62	63	64
65		66		67		68		69	70

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

ABKIA1721GB

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

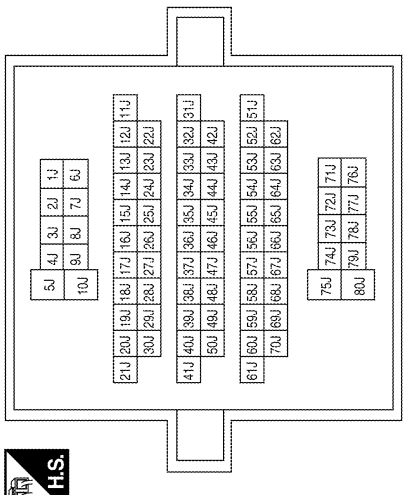
H.S.



Terminal No.	Color of Wire	Signal Name
57M	LG	--
58M	L	--
73M	SB	--
74M	V	--

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

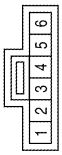
H.S.



Terminal No.	Color of Wire	Signal Name
56J	LG	--
60J	P	--
61J	GR	--
66J	P	--
71J	L	--
72J	V	--
73J	L	--

Connector No.	M66
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY

H.S.



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

ABKIA1775GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	--
3	L	--
5	V	--
12	B	--

Connector No.	M164
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	SB	KEY SW INPUT
23	SB	BACK DOOR AUTO CLOSURE
27	G	PUSH SW INPUT
40	R	RLY CTRL LOCK AS

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
7	W	--

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	L	--
11	V	--

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
33G	R/B	--

ABKIA1748GB

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

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	P	–
6	LG	–

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	P	–

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	GR	–

Terminal No.	Color of Wire	Signal Name
56J	LG	–
60J	P	–
61J	GR	–
66J	P	–
71J	L	–
72J	V	–
73J	L	–

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

Connector No.	B48
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	–
5	V	–
6	G	–

ABKIA1776GB

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	SB	--
11	V	--

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	LG	--

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	L	--

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
57M	LG	--
58M	L	--
73M	SB	--
74M	V	--

Connector No.	D1
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
21	V	--

ABKIA1777GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	G	--
8	V	--
9	B	--

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	SB	KEY CYL LOCK SW
6	R/W	KEY CYL UNLOCK SW
14	V	POWER WINDOW SERIAL LINK

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.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

6	5	4	3	2	1

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

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

H.S.

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

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

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	V	POWER WINDOW SERIAL LINK

ABKIA1778GB

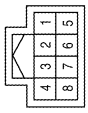
Connector No.	D205
Connector Name	REAR DOOR LOCK ACTUATOR LH
Connector Color	WHITE

H.S.

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

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

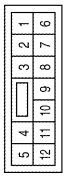
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–
6	LG	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
10	G	–
11	V	–

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

H.S.

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

Connector No.	D114
Connector Name	FRONT DOOR LOCK ACTUATOR RH
Connector Color	WHITE

H.S.

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

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

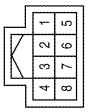
H.S.

Terminal No.	Color of Wire	Signal Name
10	G	–
11	V	–

ABKIA1722GB

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

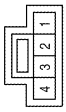
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–
6	LG	–

Connector No.	D404
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
2	V	–
3	G	–
4	L	–

Connector No.	D402
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–
5	V	–
6	G	–

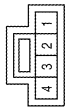
Connector No.	D503
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–

Connector No.	D502
Connector Name	BACK DOOR LATCH
Connector Color	WHITE

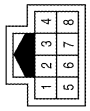
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–
3	P	–
4	BR	–

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

H.S.



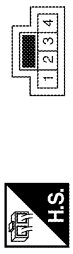
Terminal No.	Color of Wire	Signal Name
4	P	–
6	LG	–

ABKIA1779GB

Connector No.	D508
Connector Name	GLASS HATCH LOCK ACTUATOR
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
2	V	–
4	G	–

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	B	–
2	V	–
3	G	–
4	L	–

ABKIA1723GB

Fail Safe

INFOID:0000000005483726

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID:0000000005483727

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
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:0000000005483728

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.

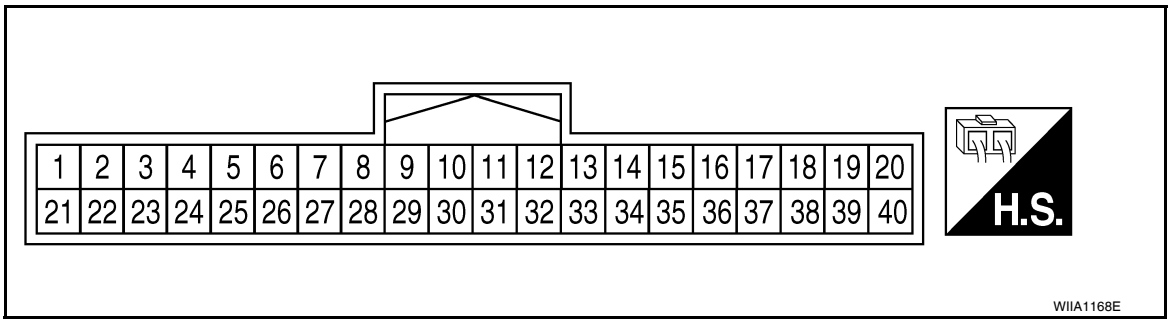
CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	—	—	—	BCS-33
B2013: STRG COMM 1	—	—	—	SEC-29
B2190: NATS ANTENNA AMP	—	—	—	SEC-32 (with I-Key), SEC-136 (without I-Key)
B2191: DIFFERENCE OF KEY	—	—	—	SEC-35 (with I-Key), SEC-139 (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-36 (with I-Key), SEC-140 (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-38 (with I-Key), SEC-142 (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	SEC-40
B2590: NATS MALFUNCTION	—	—	—	SEC-41
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 SWITCH	—	—	—	—

INTELLIGENT KEY UNIT

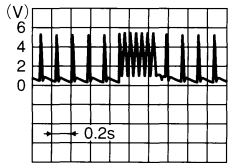
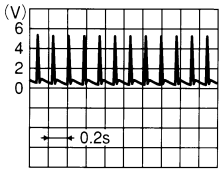
Reference Value - Intelligent Key Unit

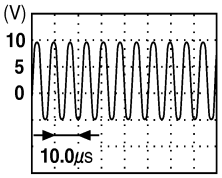
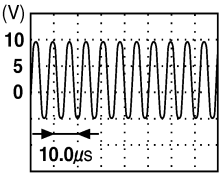
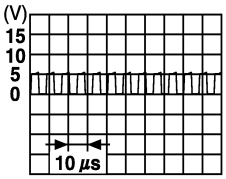
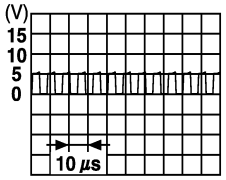
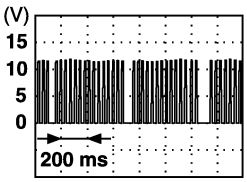
INFOID:0000000005259984

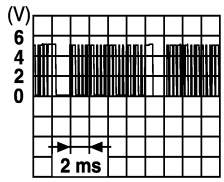
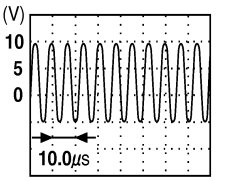
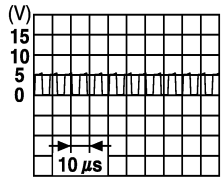
TERMINAL LAYOUT



PHYSICAL VALUES

Terminal	Wire Color	Item	Condition			Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions		
1	O	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	LG	Front door request switch LH	—	Press front door request switch LH.		0
				Other than above		Battery voltage
6	W/G	Ignition switch (ON)	ON	—		Battery voltage
7	SB	Key switch	LOCK	Insert mechanical key into ignition key cylinder.		Battery voltage
				Remove mechanical key from ignition key cylinder.		0
8	O	Remote keyless entry receiver ground	—	—		0
9	R	Remote keyless entry receiver signal	—	When remote keyless entry receiver receives signal from keyfob.		
				Stand-by		
11	R/B	Power source (Fuse)	—	—		Battery voltage
12	B	Ground	—	—		0

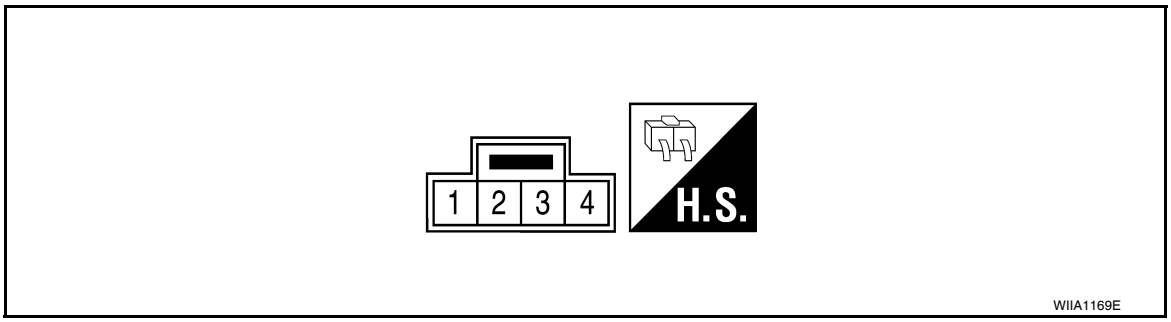
Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
13	W	Luggage area antenna (+) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	 PIIB7441E
14	BR	Luggage area antenna (-) signal			
15	V	Instrument panel area antenna (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
16	LG	Instrument panel area antenna (-) signal			
17	R	Rear bumper antenna (+) signal	LOCK	Press back door request switch.	 SIIA1910J
18	L	Rear bumper antenna (-) signal			
19	Y	Front outside antenna LH (+) signal	LOCK	Press front door request switch LH.	 SIIA1910J
20	W	Front outside antenna LH (-) signal			
21	BR	Remote keyless entry receiver RSSI signal	—	—	 PIIA2344E
23	SB	Back door control unit signal	—	Back door release switch ON.	0
				Back door release switch OFF.	Battery voltage
24	W	Back door opener switch input	—	Back door opener switch ON.	0
				Back door opener switch OFF.	5
25	R	Front door request switch RH	—	Press front door request switch RH.	0
				Other than above	Battery voltage
27	G	Ignition knob switch	—	Press ignition switch.	Battery voltage
				Return ignition switch to LOCK position.	0
28	P	Unlock sensor (driver side)	—	Door (driver side) is locked.	5
				Door (driver side) is unlocked.	0

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
29	GR	Back door request switch	—	Back door request switch ON.	0
				Back door request switch OFF.	5
30	W	Remote keyless entry receiver power supply	—	—	5
32	V	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
				Other than above	5
33	G	Center console area antenna (+) signal	LOCK	Any door open → all doors closed	 PIIB7441E
34	R	Center console area antenna (-) signal			
37	P	Front outside antenna (+) signal RH	LOCK	Press front door request switch RH.	 SIIA1910J
38	V	Front outside antenna (-) signal RH			
39	SB	P range switch	—	Selector lever is in “P” position.	0
				Other than above	Battery voltage
40	R	AS select unlock output	—	UNLOCK with rear door locks disabled.	0
				Other than above	Battery voltage

Reference Value - Steering Lock Solenoid

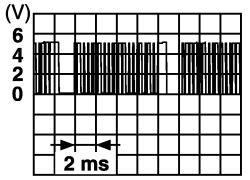
INFOID:0000000005259985

TERMINAL LAYOUT



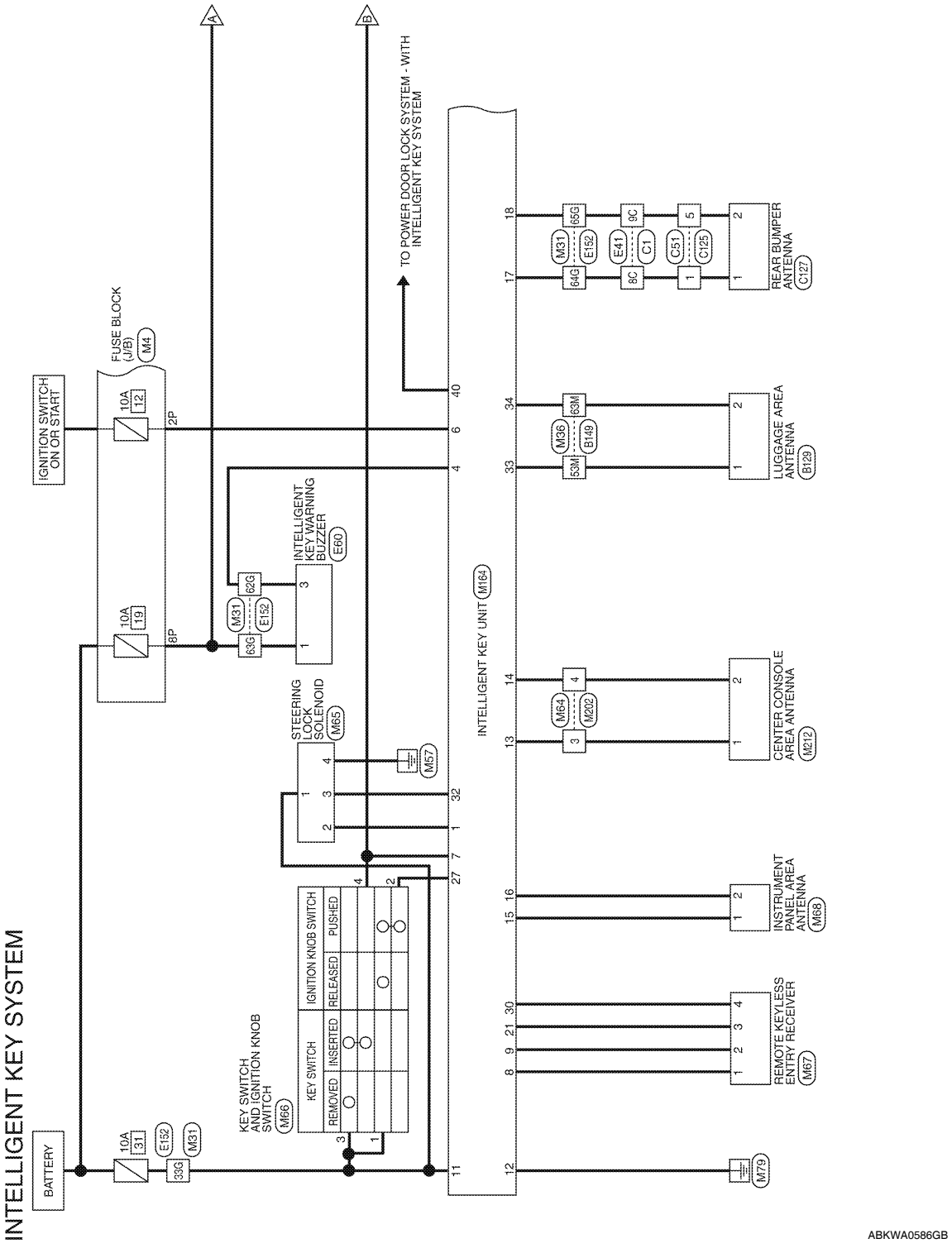
WIIA1169E

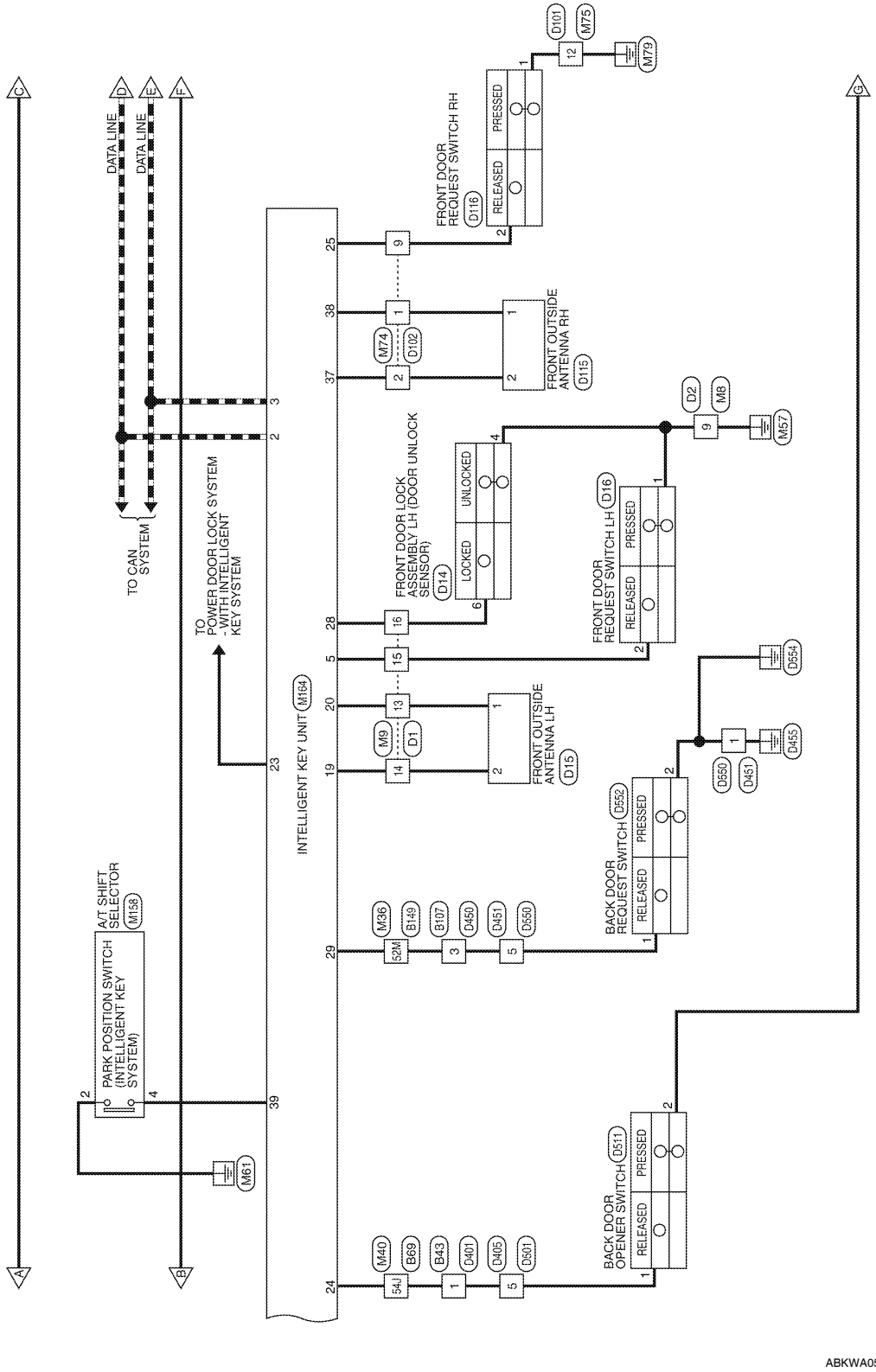
PHYSICAL VALUES

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

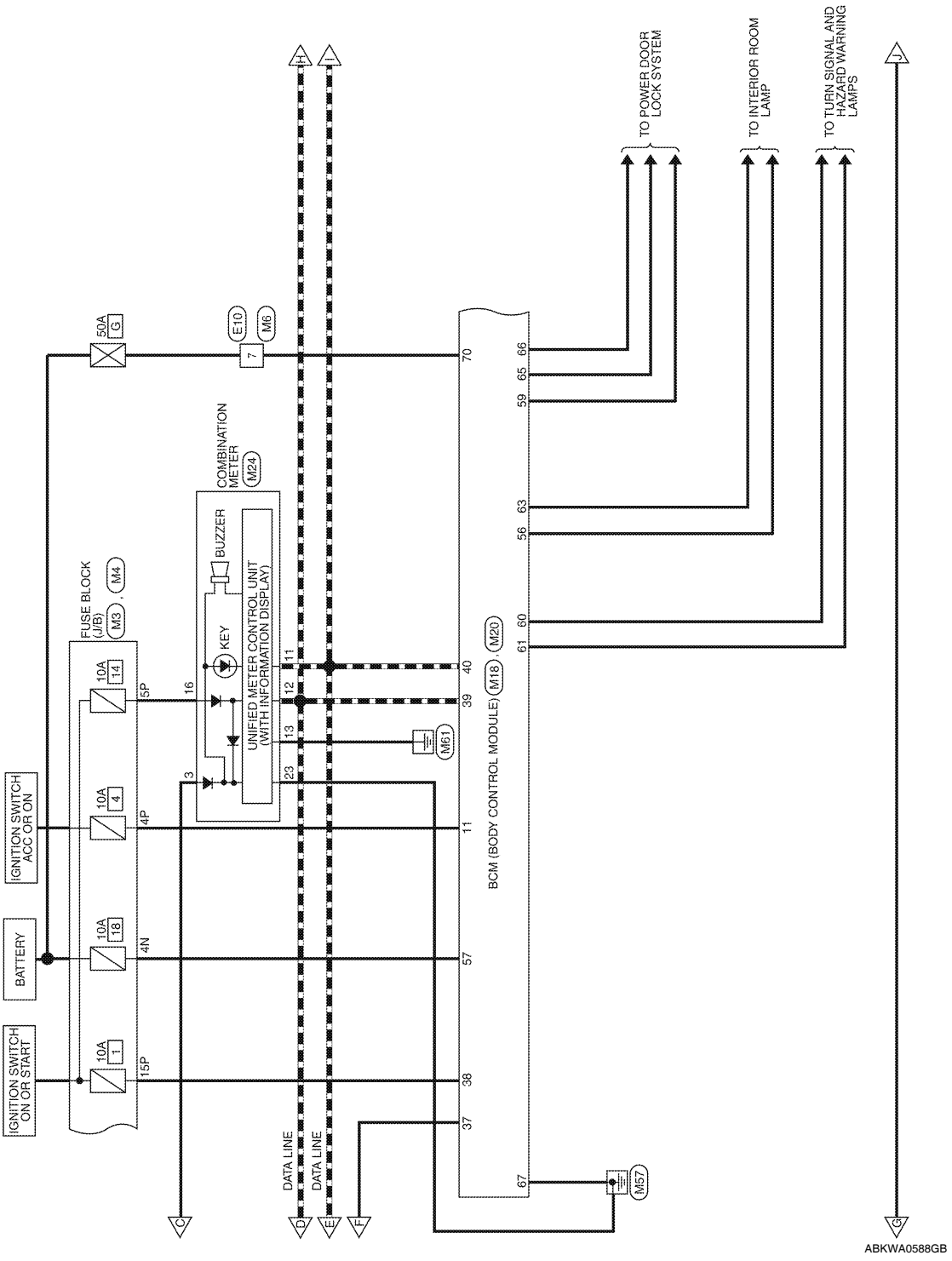
Wiring Diagram — INTELLIGENT KEY SYSTEM —

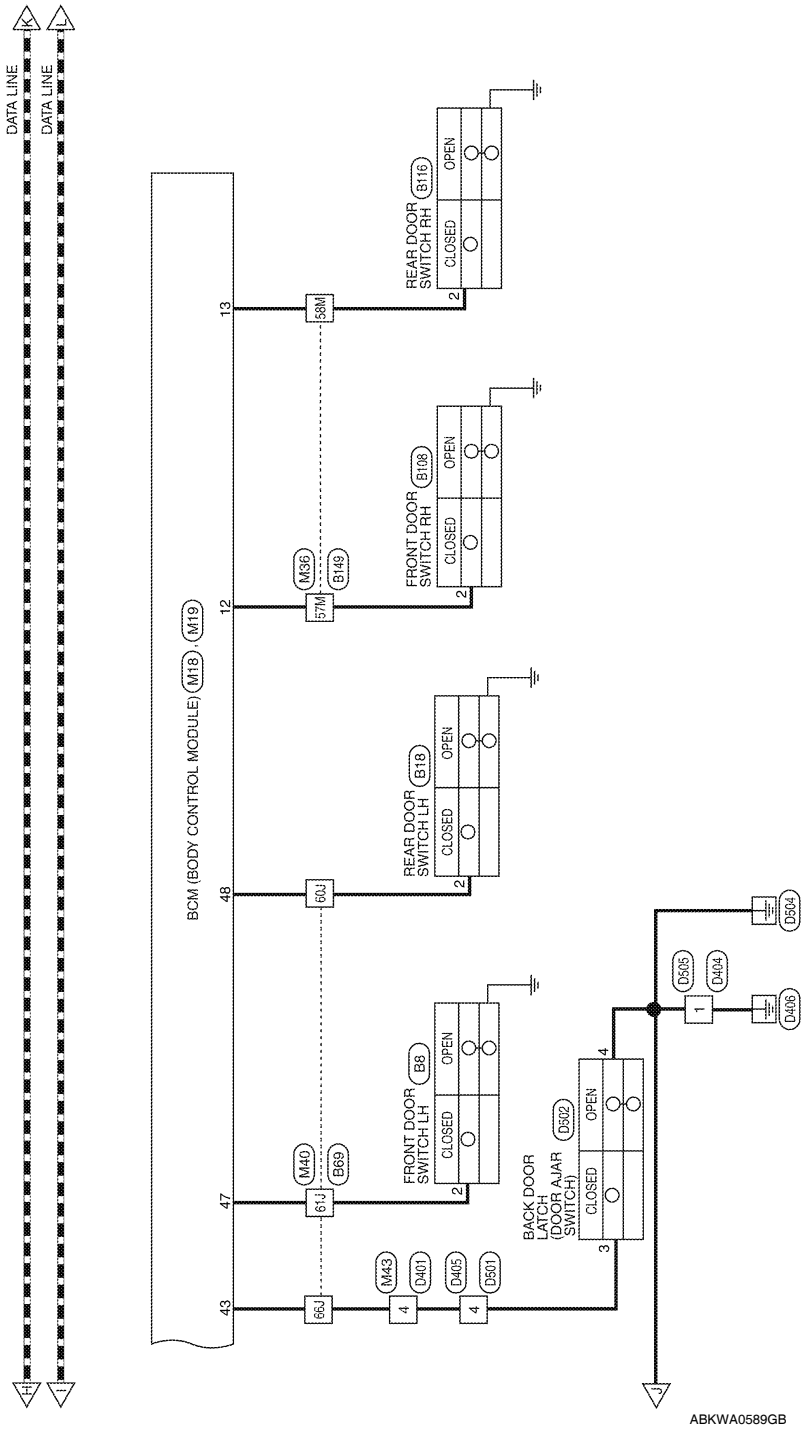
INFOID:0000000005259986

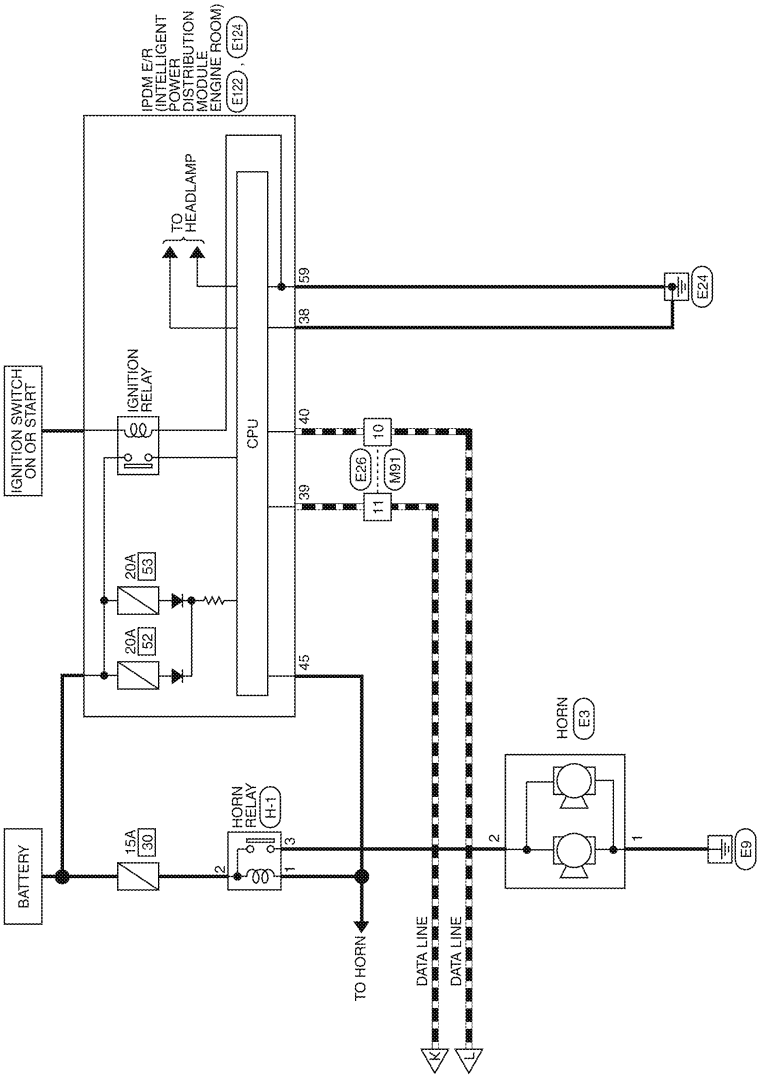




ABKWA0587GB


TO POWER DOOR LOCK SYSTEM
TO INTERIOR ROOM LAMP
TO TURN SIGNAL AND HAZARD WARNING LAMPS
50A G
E10
M6
7
70
66
65
59
63
56
60
61
COMBINATION METER M24
BUZZER
KEY
UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY)
11
12
13
23
3
16
FUSE BLOCK (J/B) M3, M4
10A 14
10A 4
10A 18
10A 1
5P
4P
4N
15P
IGNITION SWITCH ACC OR ON
BATTERY
IGNITION SWITCH ON OR START
BCM (BODY CONTROL MODULE) M18, M20
40
39
11
57
38
37
67
M61
M57
DATA LINE
DATA LINE
C
D
E
F
G
H
I
ABKWA0588GB


DATA LINE
DATA LINE
BCM (BODY CONTROL MODULE) M18, M19
13
12
48
47
43
58M
57M
60J
61J
66J
REAR DOOR SWITCH RH B116
FRONT DOOR SWITCH RH B108
REAR DOOR SWITCH LH B18
FRONT DOOR SWITCH LH B8
BACK DOOR LATCH (DOOR AJAR SWITCH) D502
M36
B149
M40
B69
M43
D401
D405
D501
D504
D505
D404
D406
CLOSED
OPEN
ABKWA0589GB



ABKWA0590GB

INTELLIGENT KEY SYSTEM CONNECTORS

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
2P	W/G	--
4P	G/B	--
5P	W/G	--
8P	R/Y	--
15P	W/R	--

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	W	--

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

H.S.

Terminal No.	Color of Wire	Signal Name
9	B	--

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
13	W	--
14	Y	--
15	LG	--
16	P	--

ABKIA1724GB

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
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
11	G/B	ACC SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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	P	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

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/Y	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
59	GR	DOOR UNLOCK OUTPUT (DR)
60	LG	FLASHER OUTPUT (LEFT)

Terminal No.	Color of Wire	Signal Name
61	G	FLASHER OUTPUT (RIGHT)
63	BR	ROOM LAMP
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W	BAT (F/L)

ABKIA1725GB

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
3	R/Y	BATTERY
11	P	CAN-L
12	L	CAN-H
13	GR	GROUND
16	W/G	RUN START
23	B	POWER GND

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
33G	R/B	–
62G	GR	–
63G	R/B	–
64G	R	–
65G	L	–

ABKIA0376GB

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
52M	GR	–
53M	G	–
57M	LG	–
58M	L	–
63M	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
	80J	79J	78J	77J	76J

Terminal No.	Color of Wire	Signal Name
54J	W	–
60J	P	–
61J	GR	–
66J	P	–

Connector No.	M64
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
3	W	–
4	BR	–

ABKIA0377GB

Connector No.	M65
Connector Name	STEERING LOCK SOLENOID
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/B	+B
2	O	+5V
3	V	SIG
4	SB	GND

Connector No.	M66
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY

H.S.

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

Connector No.	M67
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	O	–
2	R	–
3	BR	–
4	W	–

Connector No.	M68
Connector Name	INSTRUMENT PANEL AREA ANTENNA
Connector Color	GRAY

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
12	B	–

ABKIA1726GB

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
10	P	–
11	L	–

Connector No.	M158
Connector Name	A/T SHIFT SELECTOR (WITH MANUAL MODE SWITCH AND INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

1	3		7	9
2	4	5	6	8	10

Terminal No.	Color of Wire	Signal Name
2	B	–
4	SB	–

Connector No.	M164
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	O	5V OUTPUT
2	L	CAN-H
3	P	CAN-L
4	GR	BUZZER DR OUTPUT
5	LG	DR REQUEST SW
6	W/G	IGN SW INPUT
7	SB	KEY SW INPUT
8	O	GND
9	R	SIGNAL
10	–	–
11	R/B	BAT
12	B	GND
13	W	ANT2 (+)
14	BR	ANT2 (-)
15	V	ANT1 (+)
16	LG	ANT1 (-)
17	R	REAR BUMPER ANT (+)
18	L	REAR BUMPER ANT (-)
19	Y	DR ANTENNA (+)
20	W	DR ANTENNA (-)
21	BR	RSSI
22	–	–
23	SB	BACK DOOR AUTO CLOSURE
24	W	BACK DOOR OP SW
25	R	AS REQUEST SW
26	–	–
27	G	PUSH SW INPUT
28	P	DR STATUS SW INPUT
29	GR	BACK DOOR REQ SW
30	W	5V
31	–	–
32	V	STRG LOCK SIG
33	G	3RD ROW ANT (+)
34	R	3RD ROW ANT (-)
35	–	–
36	–	–
37	P	AS ANTENNA (+)
38	V	AS ANTENNA (-)
39	SB	P RANGE SW
40	R	RLY CTRL LOCK AS

ABKIA1727GB

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK

H.S.

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

Connector No.	M212
Connector Name	CENTER CONSOLE AREA ANTENNA
Connector Color	GRAY

H.S.

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

Connector No.	M202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	W	–
4	BR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
8C	R	–
9C	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	W	–

ABKIA1728GB

Connector No.	E60
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN

H.S.

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

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	LG	ANT 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)

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

H.S.

Terminal No.	Color of Wire	Signal Name
33G	R/B	–
62G	GR	–
63G	R/B	–
64G	R	–
65G	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
8C	R	–
9C	L	–

ABKIA1729GB

Connector No.	C51
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	C125
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	C127
Connector Name	REAR BUMPER ANTENNA
Connector Color	GRAY

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–

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

H.S.

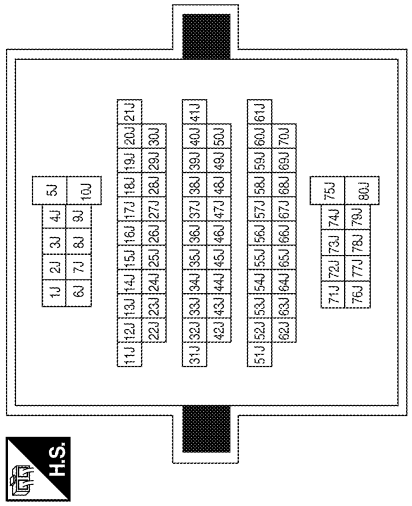
Terminal No.	Color of Wire	Signal Name
1	W	–
4	P	–

ABKIA1730GB

Terminal No.	Color of Wire	Signal Name
54J	W	–
60J	P	–
61J	GR	–
66J	P	–

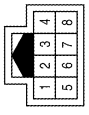
Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

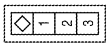
H.S.



Terminal No.	Color of Wire	Signal Name
3	GR	–

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

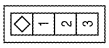
H.S.



Terminal No.	Color of Wire	Signal Name
2	LG	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
2	L	–

ABKIA1731GB

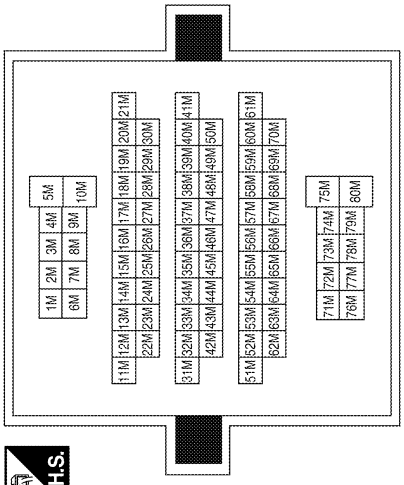
Connector No.	B129
Connector Name	LUGGAGE AREA ANTENNA
Connector Color	GRAY

H.S.

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

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

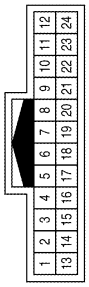
H.S.



Terminal No.	Color of Wire	Signal Name
52M	GR	–
53M	G	–
57M	LG	–
58M	L	–
63M	R	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

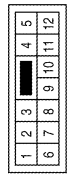
H.S.



Terminal No.	Color of Wire	Signal Name
13	W	–
14	Y	–
15	LG	–
16	P	–

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

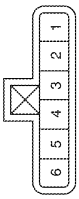
H.S.



Terminal No.	Color of Wire	Signal Name
9	B	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
4	B	–
6	P	–

ABKIA1732GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
12	B	--

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	W	--
2	Y	--

Connector No.	D116
Connector Name	FRONT DOOR REQUEST SWITCH RH
Connector Color	GRAY

H.S.

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

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

H.S.

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

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

H.S.

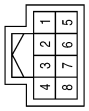
1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
1	V	--
2	P	--
9	R	--

ABKIA1733GB

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

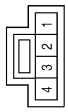
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–
5	W	–

Connector No.	D404
Connector Name	WIRE TO WIRE
Connector Color	WHITE

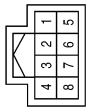
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–

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

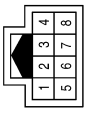
H.S.



Terminal No.	Color of Wire	Signal Name
1	W	–
4	P	–

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

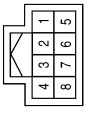
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–
5	W	–

Connector No.	D451
Connector Name	WIRE TO WIRE
Connector Color	WHITE

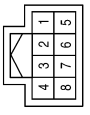
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
5	GR	–

Connector No.	D450
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

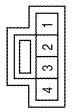


Terminal No.	Color of Wire	Signal Name
3	GR	–

ABKIA0384GB

Connector No.	D502
Connector Name	BACK DOOR LATCH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3	P	–
4	BR	–

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

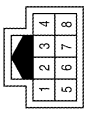
Connector No.	D511
Connector Name	BACK DOOR OPENER SWITCH (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BROWN

H.S.

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

Connector No.	D550
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–
5	GR	–

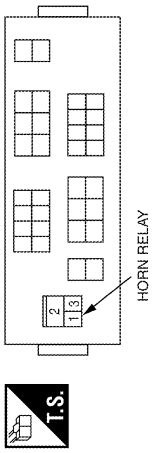
Connector No.	D552
Connector Name	BACK DOOR REQUEST SWITCH
Connector Color	GRAY

H.S.

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

ABKIA1734GB

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX (HORN RELAY)
Connector Color	–



Terminal No.	Color of Wire	Signal Name
1	BR	–
2	O	–
3	G	–

ABKIA1735GB

Fail Safe

INFOID:0000000005259987

Fail-safe operation

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

SYMPTOM DIAGNOSIS

INTELLIGENT KEY SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000005259988

ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-7, "Work Flow".
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- “ENGINE START BY I-KEY” and “LOCK/UNLOCK BY I-KEY” are ON when setting on CONSULT-III.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
All doors and ignition switch do not respond to Intelligent Key comand.	1. Check Intelligent Key function and battery inspection.	DLK-101
	2. Check Intelligent Key unit power supply and ground circuit.	DLK-53
	3. Check remote keyless entry receiver.	DLK-98
	4. Check BCM power supply and ground circuit.	DLK-53
	5. Replace Intelligent Key unit.	DLK-101

DOOR LOCK FUNCTION SYMPTOMS
DOOR LOCK AND UNLOCK SWITCH
DOOR LOCK AND UNLOCK SWITCH : Symptom Table

INFOID:0000000005259989

DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-7, "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-34
	2. Check door lock and unlock switch.	DLK-60
	3. Check door lock actuator (driver side)	DLK-76
	4. Check Intermittent Incident.	GI-37
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-67
	2. Replace power window main switch.	PWC-95
Specific door lock actuator does not operate.	1a. Check driver side door lock actuator.	DLK-76
	1b. Check passenger side door lock actuator.	DLK-77
	1c. Check rear LH side door lock actuator.	DLK-78
	1d. Check rear RH side door lock actuator.	DLK-80
	1e. Check back door lock actuator.	DLK-81
	1f. Check glass hatch lock actuator.	DLK-83
	2. Check Intermittent Incident.	GI-37
Back door does not operate using back door opener switch (door locks are open).	1. Check back door opener switch.	DLK-65
	2. Check back door lock actuator.	DLK-81
Glass hatch does not open using glass hatch ajar switch (door locks are open).	1. Check glass hatch ajar switch.	DLK-58
	2. Check glass hatch lock actuator.	DLK-83
Door lock/unlock do not operate by request switch.	1. Door switch check.	DLK-55
	2. Ignition knob switch check.	DLK-111
	3. Replace Intelligent Key unit.	SEC-118
Door lock/unlock does not operate by request switch (LH side).	1. Front door request switch LH check.	DLK-71
	2. Front outside antenna LH check.	DLK-92
	3. Replace Intelligent Key unit.	SEC-118
Door lock/unlock does not operate by request switch (RH side).	1. Front door request switch RH check.	DLK-71
	2. Front outside antenna RH check.	DLK-92
	3. Replace Intelligent Key unit.	SEC-118
Door lock/unlock does not operate by request switch (back door).	1. Back door request switch check.	DLK-73
	2. Rear bumper antenna check.	DLK-92
	3. Replace Intelligent Key unit.	SEC-118

Symptom	Diagnosis/service procedure	Reference page
Rear, back door and glass hatch lock actuators do not operate.	1. Passenger select unlock relay check.	DLK-85
	2. Check Intermittent Incident.	GI-37
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-41
	2. Replace Intelligent Key unit.	SEC-118
Auto lock function does not operate properly.	1. Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	DLK-41
	2. Key switch check (BCM).	DLK-110
	3. Ignition knob switch check.	DLK-111
	4. Door switch check.	DLK-55
	5. Check glass hatch ajar switch.	DLK-58
	6. Replace Intelligent Key unit.	SEC-118
Key reminder function does not operate properly.	1. Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	DLK-41
	2. Door switch check.	DLK-55
	3. Check glass hatch ajar switch.	DLK-58
	4a. Instrument panel area antenna check.	DLK-47
	4b. Center console area antenna check.	DLK-49
	4c. Luggage area antenna check.	DLK-51
	5. Front door lock actuator LH (door unlock sensor) check.	DLK-69
	6. Intelligent Key battery and function inspection.	DLK-101
	7. Replace Intelligent Key unit.	SEC-118
Vehicle speed sensing auto LOCK operation does not operate.	1. Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-41
	2. Check combination meter vehicle speed signal.	MWI-28
	3. Check intermittent incident.	GI-37
Ignition OFF interlock door UNLOCK function does not operate.	1. Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-41
	2. Check BCM for DTCs.	DLK-143
	3. Check intermittent incident.	GI-37

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:0000000005259990

REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to DLK-7, "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-101
	2.	Remote Keyless Entry function check.	DLK-98
	3.	Replace Intelligent Key unit.	SEC-118
Selective unlock function does not operate by Intelligent Key remote control button.	1.	Check “SELECT UNLOCK FUNCTION” setting in “WORK SUPPORT”.	DLK-41
	2.	Intelligent Key battery inspection.	DLK-101
	3.	Replace Intelligent Key unit.	SEC-118
Auto lock function does not operate properly.	1.	Check “AUTO RELOCK TIMER” setting in “WORK SUPPORT”.	DLK-41
	2.	Key switch check (BCM).	DLK-110
	3.	Glass hatch ajar switch check.	DLK-58
	4.	Ignition knob switch check.	DLK-111
	5.	Door switch check.	DLK-55
	6.	Replace Intelligent Key unit.	SEC-118
Key reminder function does not operate properly.	1.	Check “ANTI KEY LOCK IN FUNCTION” setting in “WORK SUPPORT”.	DLK-41
	2.	Door switch check.	DLK-55
	3.	Glass hatch ajar switch check.	DLK-58
	4a.	Instrument panel area antenna check.	DLK-47
	4b.	Center console area antenna check.	DLK-49
	4c.	Luggage area antenna check.	DLK-51
	5.	Front door lock actuator LH (door unlock sensor) check.	DLK-69
	6.	Intelligent Key battery inspection.	DLK-101
	7.	Replace Intelligent Key unit.	SEC-118
Panic alarm function does not operate properly.	1.	Check “PANIC ALARM DELAY” setting in “WORK SUPPORT”.	DLK-41
	2.	Theft warning operation check.	SEC-19
	3.	Intelligent Key battery inspection.	DLK-101
	4.	Key switch check (BCM).	DLK-110
	5.	Ignition knob switch check.	DLK-111
	6.	Replace Intelligent Key unit.	SEC-118
Power window down function does not operate.	1.	Check “PW DOWN SET” setting in “WORK SUPPORT”.	DLK-41
	2.	Intelligent Key battery inspection.	DLK-101

KEY WARNING LAMP (GREEN) ILLUMINATES

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to DLK-7, "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 “Diagnoses/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn ON with Intelligent Key. [KEY warning lamp (green) illuminates].	1. Steering lock solenoid check.	DLK-94
	2. Replace Intelligent Key unit.	SEC-118

KEY WARNING LAMP (RED) ILLUMINATES

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to DLK-7, "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 “Diagnoses/service procedure” column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn ON with Intelligent Key. [KEY warning lamp (red) illuminates].	1a. Instrument panel area antenna check.	DLK-47
	1b. Center console area antenna check.	DLK-49
	1c. Luggage area antenna check.	DLK-51
	2. Replace Intelligent Key unit.	SEC-118

KEY WARNING LAMP DOES NOT ILLUMINATE

NOTE:

- Before performing the diagnosis in the following table, check “Trouble Diagnosis Procedure”. Refer to DLK-7, "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 “Diagnoses/service procedure” column in this order.
- Check if ignition switch turns using mechanical key. If it turns, check if “ENGINE START BY I-KEY” in “WORK SUPPORT” mode is ON.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is registered.
- Key is not inserted in ignition switch.
- One or more registered Intelligent Keys are in the vehicle.

Symptom	Diagnosis/service procedure	Reference page
Ignition switch does not turn ON with Intelligent Key. [KEY warning lamp does not illuminate].	1. Intelligent Key unit power supply and ground circuit check.	DLK-53
	2. Ignition knob switch check.	DLK-111
	3. Key switch check.	DLK-108
	4. Replace Intelligent Key unit.	SEC-118

WARNING FUNCTION SYMPTOMS

Symptom Table

INFOID:0000000005259991

WARNING FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to DLK-7, "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-111
		2. Check door switch.	DLK-55
		3. Check warning chime function.	DLK-106
		4. Check Intermittent Incident.	GI-37
	For external	1. Check ignition knob switch.	DLK-111
		2. Check door switch.	DLK-55
		3. Check Intelligent Key warning buzzer.	DLK-87
		4. Check Intermittent Incident.	GI-37
P position warning does not operate.		1. Check Park position switch.	DLK-96
		2. Check door switch.	DLK-55
		3. Check Intelligent Key warning buzzer.	DLK-87
		4. Check warning chime function.	DLK-106
		5. Check combination meter display function.	DLK-105
		6. Check Intermittent Incident.	GI-37
ACC warning does not operate		1. Check ignition knob switch.	DLK-111
		2. Check warning chime function.	DLK-106
		3. Check combination meter display function.	DLK-105
		4. Check Intermittent Incident.	GI-37

Symptom		Diagnosis/service procedure		Reference page
Take away warning does not operate.	Door open to close	1. Check door switch.		DLK-55
		2. Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
		3. Check Intelligent Key warning buzzer.		DLK-87
		4. Check warning chime function.		DLK-106
		5. Check ignition knob switch.		DLK-111
		6. Check combination meter display function.		DLK-105
		7. Check Intermittent Incident.		GI-37
	Push-button ignition switch operation	1. Check ignition knob switch.		DLK-111
		2. Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
		3. Check warning chime function.		DLK-106
		4. Check combination meter display function.		DLK-105
		5. Check Intermittent Incident.		GI-37
	Door is open	1. Check ignition knob switch.		DLK-111
		2. Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
		3. Check combination meter display function.		DLK-105
		4. Check Intermittent Incident.		GI-37
	Take away through window	1. Check “TAKE OUT FROM WIN WARN” setting in “WORK SUPPORT”.		DLK-41
		2. Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
		3. Check warning chime function.		DLK-106
		4. Check ignition knob switch.		DLK-111
		5. Check combination meter display function.		DLK-105
		6. Check Intermittent Incident.		GI-37
Key warning chime does not operate.		1. Check door switch.		DLK-55
		2. Check warning chime function.		DLK-106
		3. Check ignition knob switch.		DLK-111
		4. Check combination meter display function.		DLK-105
		5. Check Intermittent Incident.		GI-37
Door lock operation warning chime does not operate.		1. Check door switch.		DLK-55
		2. Check ignition knob switch.		DLK-111
		3. Check Intelligent Key warning buzzer.		DLK-87
		4. Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
		5. Check Intermittent Incident.		GI-37

KEY REMINDER FUNCTION SYMPTOMS

Symptom Table

INFOID:0000000005259992

KEY REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-7, "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-41
	2. Check door switch.		DLK-55
	3. Check inside key antennas	Instrument panel area	DLK-47
		Center console area	DLK-49
		Luggage area	DLK-51
	4. Check unlock sensor.		DLK-69
	5. Check Intelligent Key battery inspection.		DLK-101
	6. Check Intermittent Incident.		GI-37

HAZARD FUNCTION

Symptom Table

INFOID:0000000005259993

HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-7, "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-41
	2. Check hazard function.	DLK-107
	3. Check Intermittent incident.	GI-37
Hazard reminder does not operate by Intelligent Key. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-41
	2. Check hazard function.	DLK-107
	3. Check Intelligent Key battery inspection.	DLK-101
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-41
	2. Check Intelligent Key warning buzzer.	DLK-87
	3. Check Intermittent incident.	GI-37

HORN FUNCTION

Symptom Table

INFOID:0000000005259994

HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-7, "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-41
	2. Check hazard function.	DLK-107
	3. Check Intermittent Incident.	GI-37
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	DLK-41
	2. Check hazard function.	DLK-107
	3. Check Intelligent Key battery inspection.	DLK-101
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-41
	2. Check Intelligent Key warning buzzer.	DLK-87
	3. Check Intermittent Incident.	GI-37
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1. Check “HORN WITH KEYLESS LOCK” setting in “WORK SUPPORT”.	DLK-41
	2. Check horn function.	DLK-103
	3. Check Intermittent Incident.	GI-37

HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

INFOID:0000000005259995

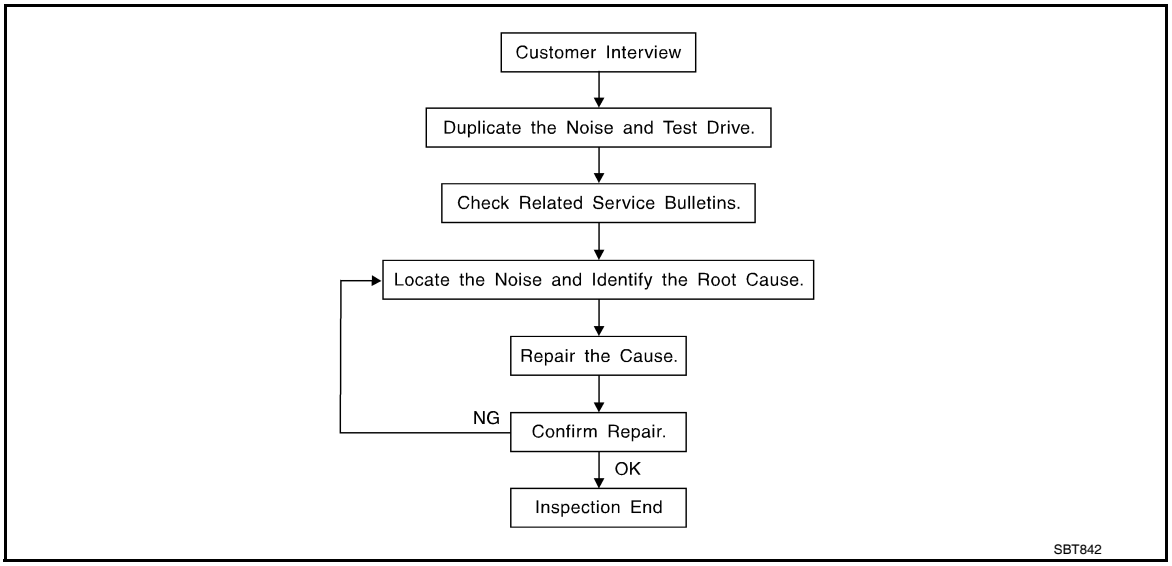
HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	DLK-120
	2. Check Intermittent Incident.	GI-37

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000005259996



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-184, "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-182, "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:0000000005259997

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 bumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

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.

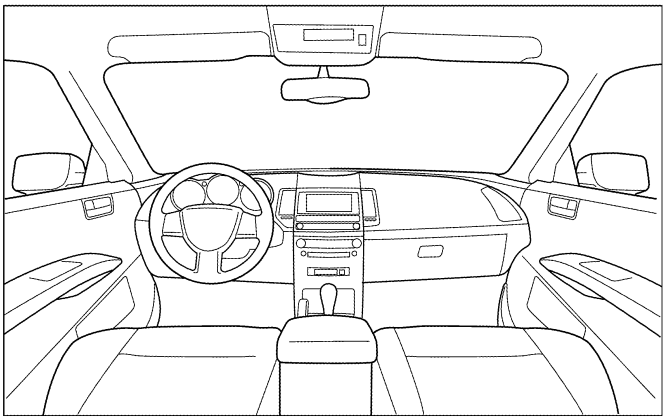
Diagnostic Worksheet

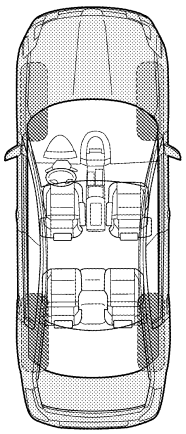
INFOID:0000000005259998

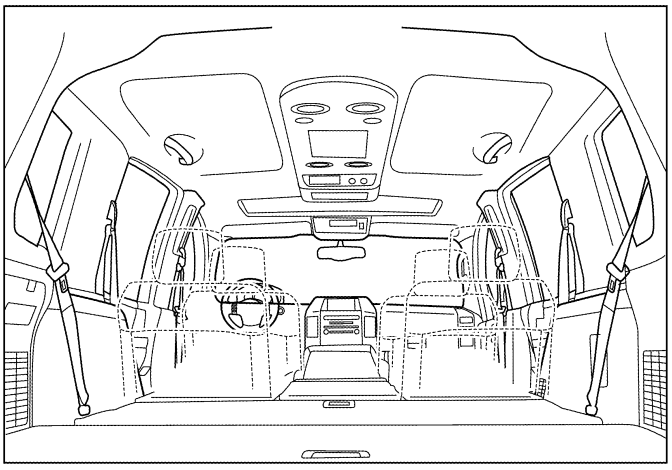
Dear Customer:
We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service advisor or technician to ensure we confirm the noise you are hearing.

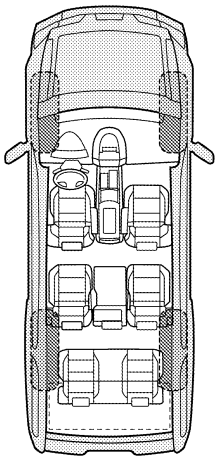
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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.

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:0000000005503159

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:0000000005260000

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:0000000005260001

- 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.

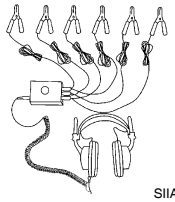
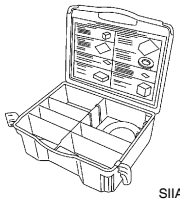
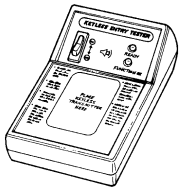
PREPARATION

PREPARATION

Special Service Tool

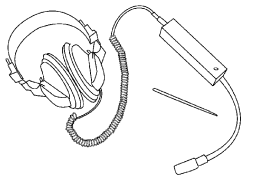
INFOID:0000000005260002

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:0000000005260003

(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

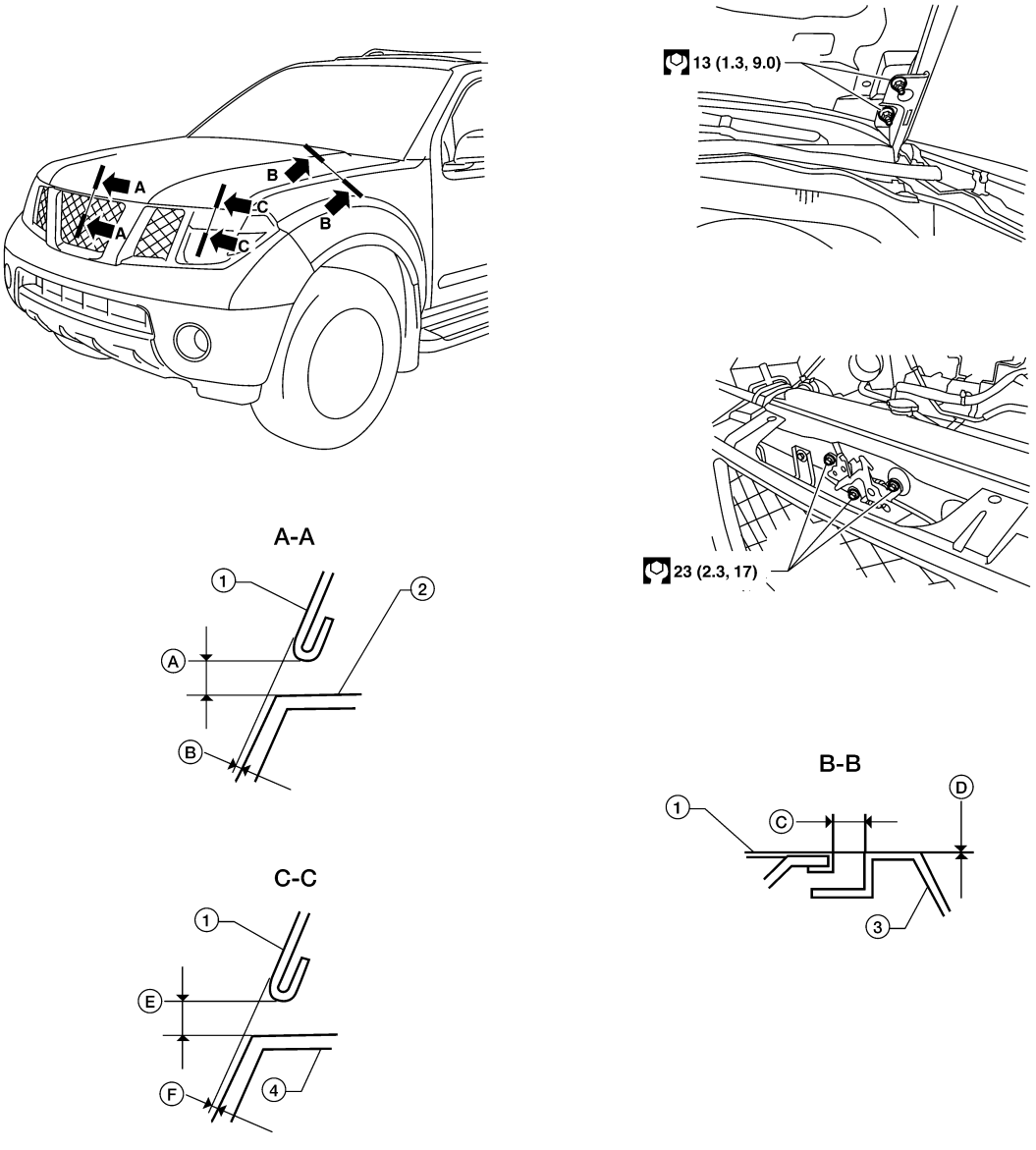
ON-VEHICLE REPAIR

HOOD

Fitting Adjustment

INFOID:0000000005260004

SEC.650



WIIA0774E

1. Hood
2. Front grille
3. Front fender
4. Headlamp assembly
A. 6.0 mm (0.24 in)
B. 0.7 mm (0.03 in)
C. 4.5 mm (0.18 in)
D. 0.0 mm (0.0 in)
E. 6.0 mm (0.24 in)
F. 0.7 mm (0.03 in)

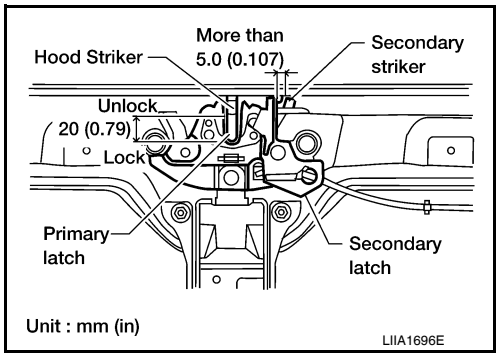
CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Loosen the hood lock assembly and adjust the rubber bumpers until the surface height of the hood becomes 1 mm (0.04 in) lower than the fender.
3. Engage the hood striker and temporarily tighten.
4. Check the lock and striker for looseness.

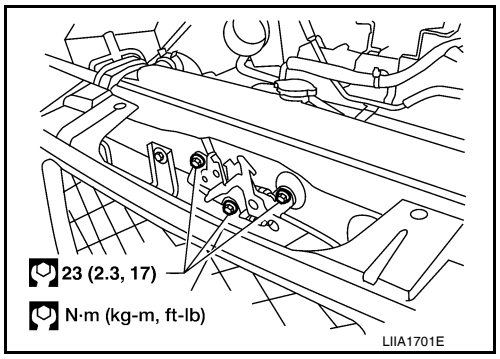
5. Tighten the bolts to specification.
6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
7. Install the front grille. Refer to EXT-18, "Removal and Installation".

HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).
   CAUTION:
   Do not drop the hood from 300 mm (11.81 in) height or higher.



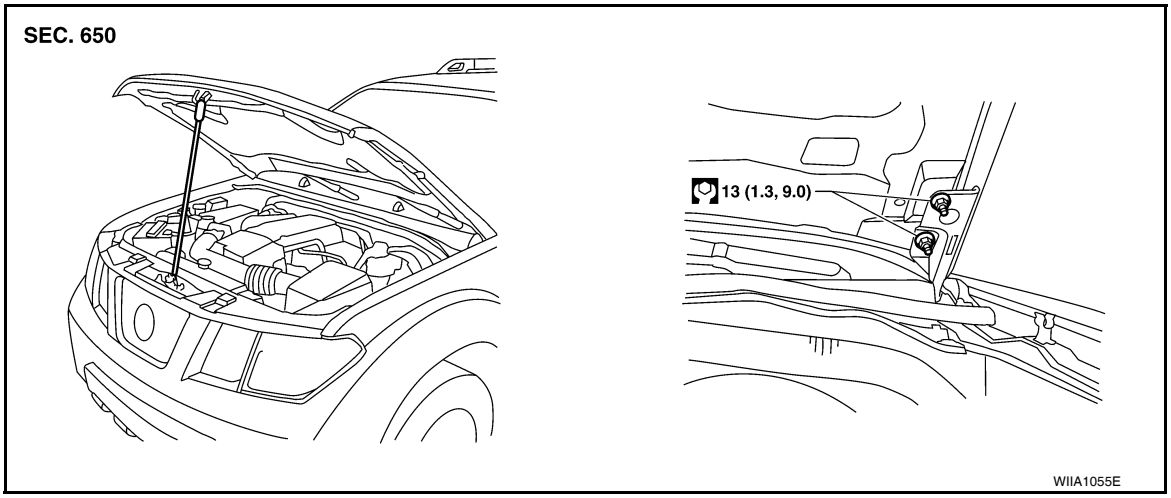
4. After adjusting hood lock, tighten the lock bolts to the specified torque.



5. Install the front grille. Refer to EXT-18, "Removal and Installation".

Removal and Installation of Hood Assembly

INFOID:0000000005260005

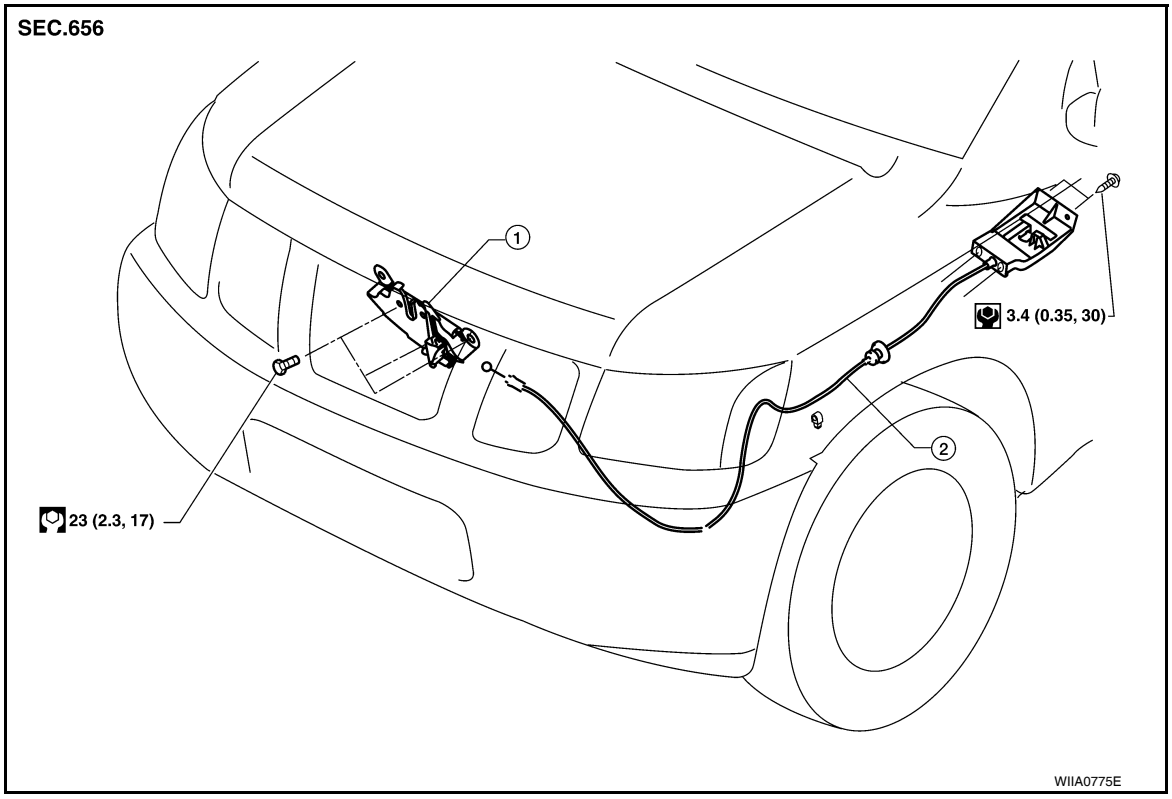


1. Support the hood striker with suitable tool to prevent it from falling.
2. Remove the hinge nuts from the hood to remove the hood assembly.

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:0000000005260006



1. Hood lock assembly
2. Hood lock cable

REMOVAL

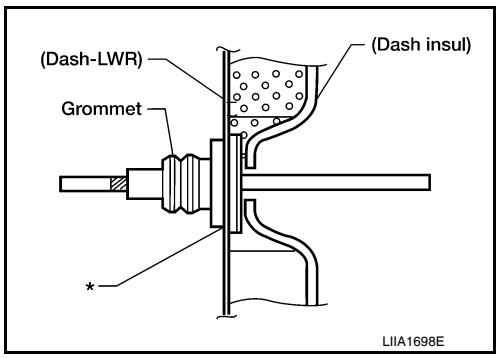
1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Remove the front fender protector (LH). Refer to EXT-23, "Removal and Installation of Front Fender Protector".
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolts, and the hood release handle.
5. Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.
   CAUTION:
   While pulling, be careful not to damage the outside of the hood lock cable.

INSTALLATION

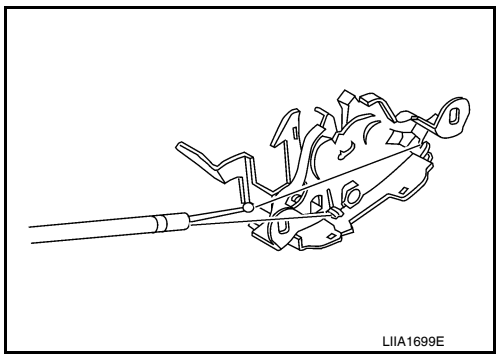
1. Pull the hood lock cable through the lower dash panel hole into the engine room.

Be careful not to bend the cable too much, keep the radius 100mm (3.94 in) or more.

2. Make sure the cable is not offset from the grommet, and push the grommet into the lower dash panel hole securely.
3. Apply sealant around the grommet at * mark.



4. Install the cable securely to the lock.
5. Adjust the hood lock. Refer to DLK-192, "Removal and Installation of Hood Lock Control".



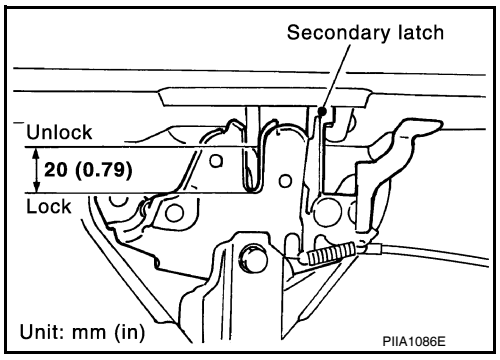
6. Install the front grille. Refer to EXT-18, "Removal and Installation".

Hood Lock Control Inspection

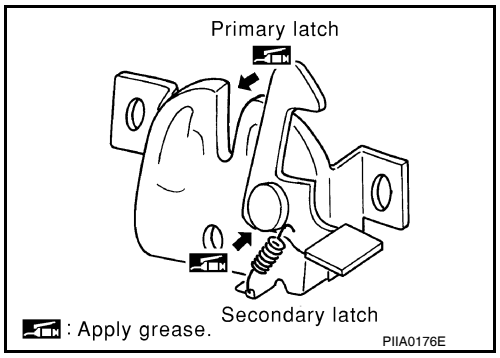
INFOID:0000000005260007

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

1. Remove the front grille. Refer to EXT-18, "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.

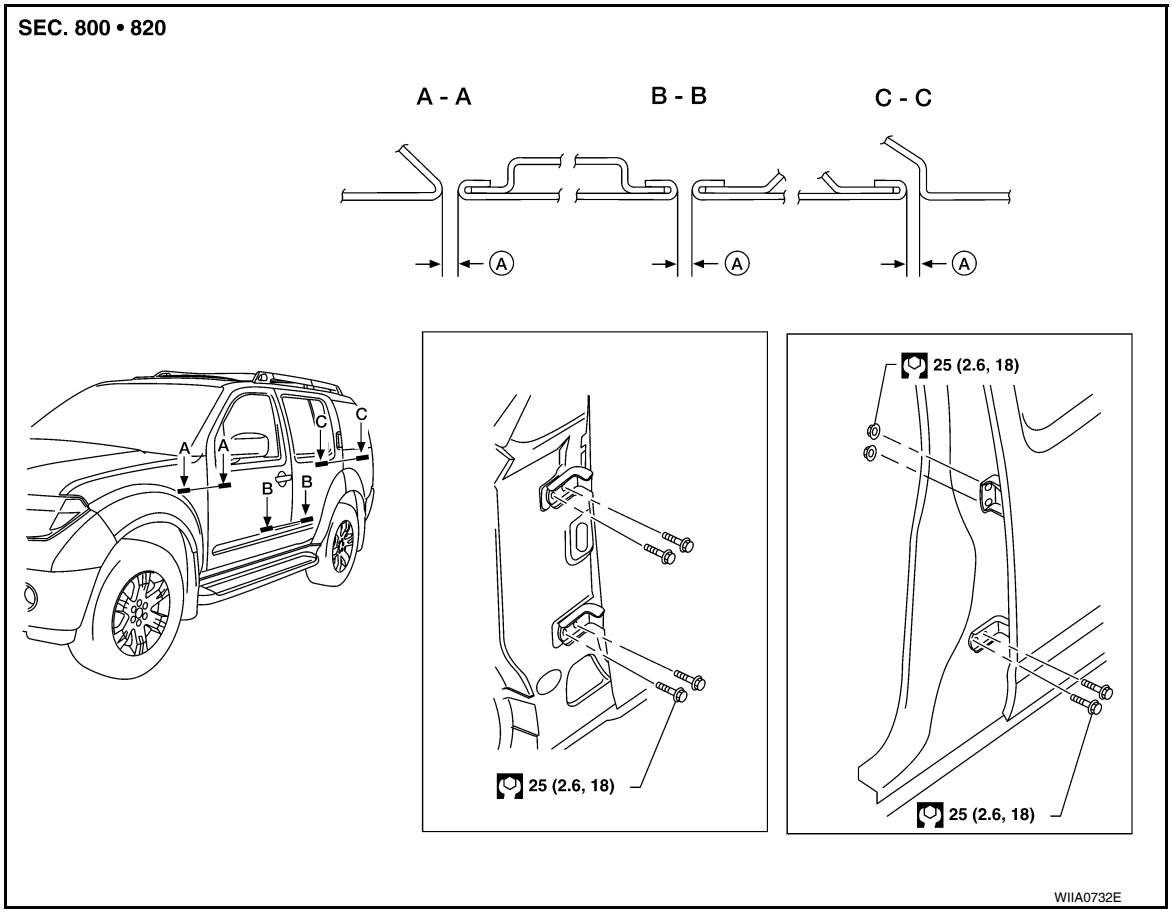


5. Install the front grille. Refer to EXT-18, "Removal and Installation".

DOOR

Fitting Adjustment

INFOID:0000000005260008



A. 4.5 ± 1.0 mm (0.177 ± 0.039 in)

Front door

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to EXT-20, "Removal and Installation".
2. Loosen the hinge bolts. Raise or lower the front door at rear end to adjust.
3. Install the fender. Refer to EXT-20, "Removal and Installation".

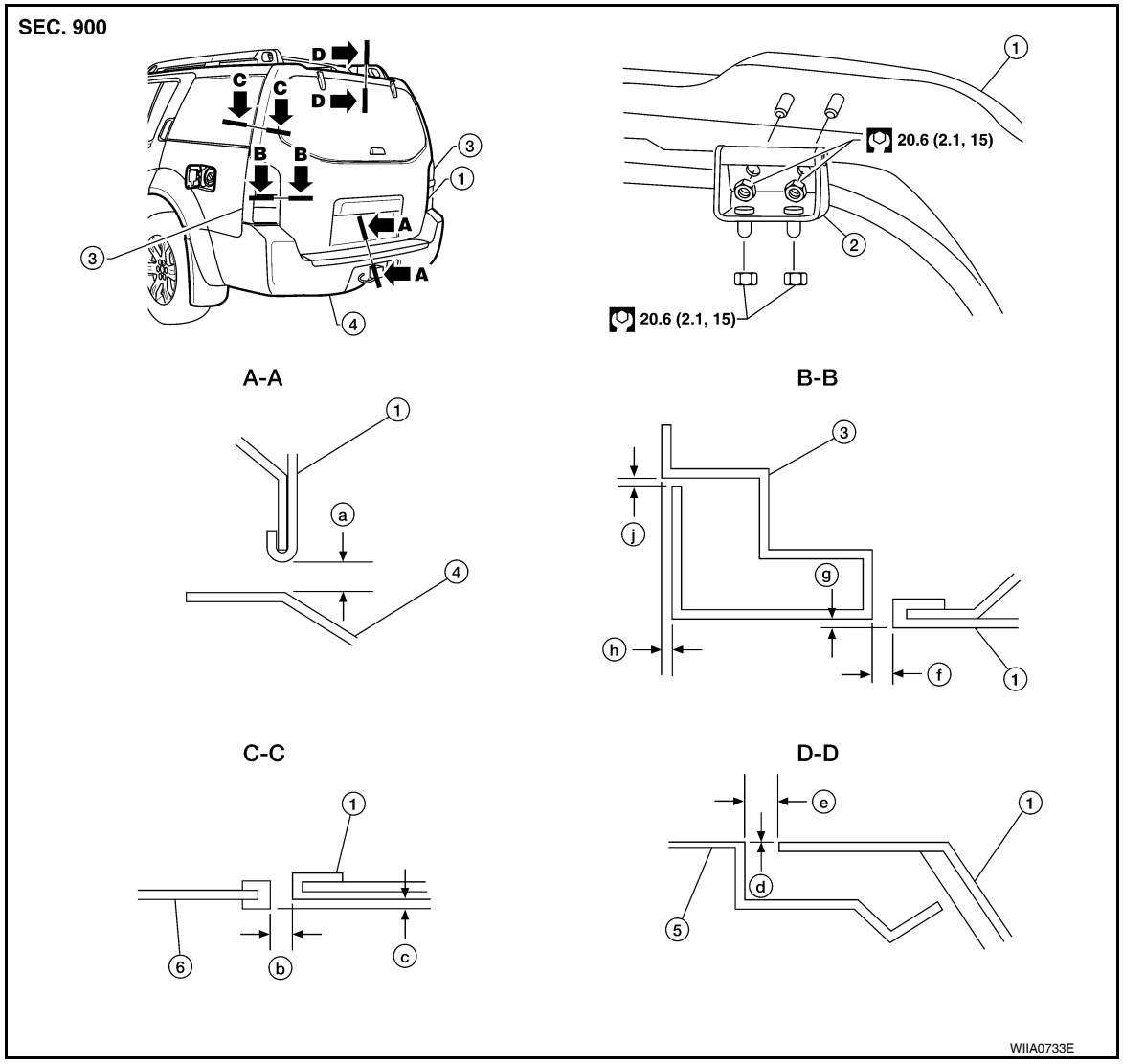
Rear door

Longitudinal clearance and surface height adjustment at front end

1. Remove the center pillar upper finisher. Refer to INT-17, "Removal and Installation".
2. Loosen the lower hinge bolts.
3. From inside the vehicle, loosen the upper hinge nuts. Open the door, and raise or lower the rear end of the door to adjust.
4. Install the center pillar lower finisher. Refer to INT-17, "Removal and Installation".

Back door

Longitudinal clearance and surface height adjustment



1. Back door assembly
2. Back door hinge
3. Tail lamp assembly
4. Rear bumper fascia
5. Roof
6. Side window glass

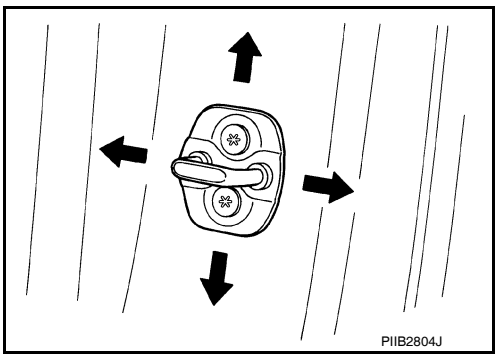
a. 7.2 ± 2.0 mm (0.28 ± 0.06 in)
b. 6.0 ± 1.5 mm (0.24 ± 0.06 in)
c. 2.0 ± 2.0 mm (0.08 ± 0.08 in)
d. 1.0 ± 1.5 mm (0.04 ± 0.06 in)
e. 8.0 ± 1.5 mm (0.31 ± 0.06 in)
f. 5.3 ± 2.0 mm (0.21 ± 0.08 in)
g. 0.8 ± 2.0 mm (0.03 ± 0.08 in)
h. 0.8 ± 1.0 mm (0.03 ± 0.04 in)
j. 2.0 ± 1.0 mm (0.08 ± 0.04 in)

1. Open and support the back door.
2. Slightly loosen the hinge nuts.
3. Reposition the door as necessary and tighten the nuts.
4. Confirm the adjustment. Repeat as necessary to obtain the desired fit.

Striker adjustment

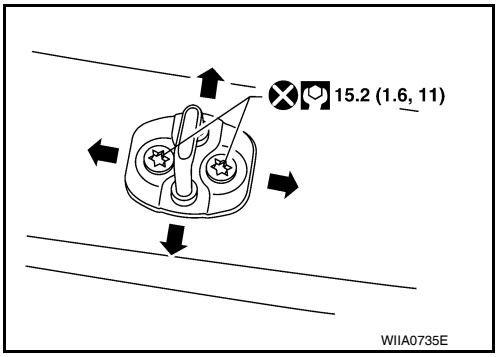
BODY SIDE DOORS

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



BACK DOOR

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



Removal and Installation

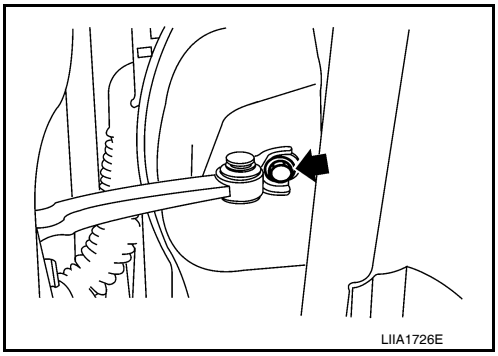
INFOID:0000000005260009

FRONT DOOR

CAUTION:

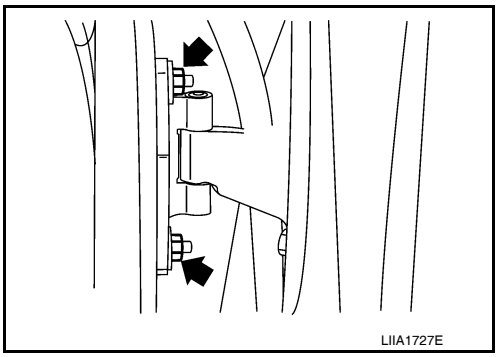
- **When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.**
- **When removing and installing door assembly, be sure to carry out the fitting adjustment.**
- **Check the hinge rotating part for poor lubrication. If necessary, apply "body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

1. Remove the front door glass and regulator. Refer to GW-15, "Front Door Glass Regulator".
2. Remove the door harness.
3. Remove the check link bolt from the hinge pillar.



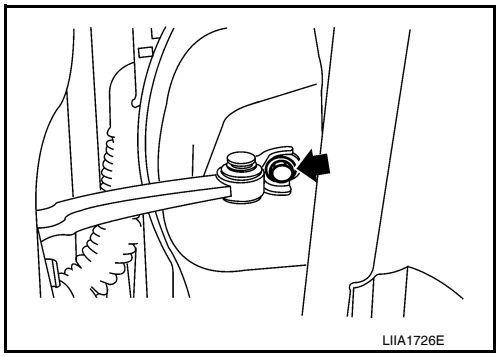
4. Remove the door-side hinge nuts, and the door assembly.

Installation is in the reverse order of removal.



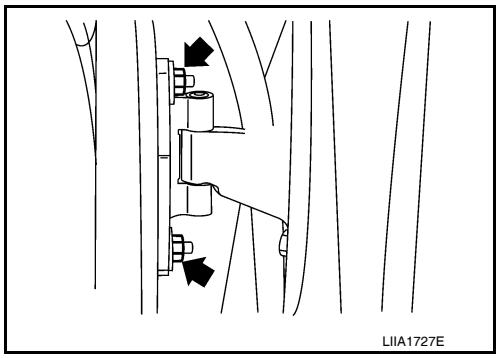
REAR DOOR

1. Remove the door finisher. Refer to INT-14, "Removal and Installation".
2. Remove the inner seal.
3. Remove the rear door glass and regulator. Refer to GW-19, "Rear Door Glass Regulator".
4. Remove the door harness.
5. Remove the check link bolt from the hinge pillar.



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

Installation is in the reverse order of removal.

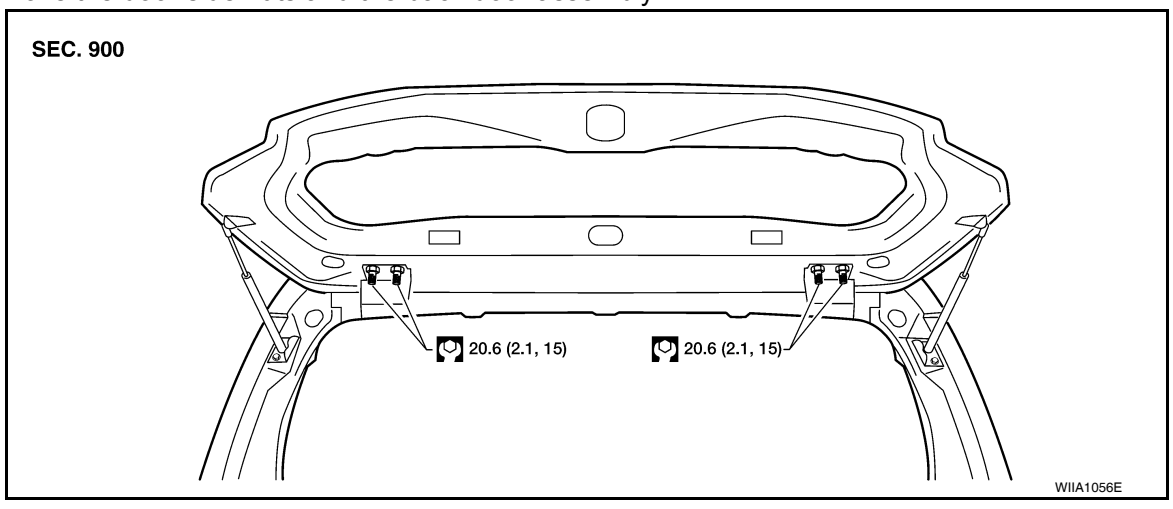


BACK DOOR

1. Remove the glass hatch. Refer to GW-24, "Removal and Installation".
2. Remove the license lamp finisher. Refer to EXT-21, "Removal and Installation".
3. Remove the back door lock assembly. Refer to DLK-203, "Component Structure".
4. Remove the back door wire harness.
5. Remove the rear washer nozzle and hose from the back door. Refer to WW-83, "Removal and Installation"

CAUTION:
Two technicians should be used to avoid damaging the back door during removal.

6. Support the back door.
7. Remove the back door stays.
8. Remove the door side nuts and the back door assembly.



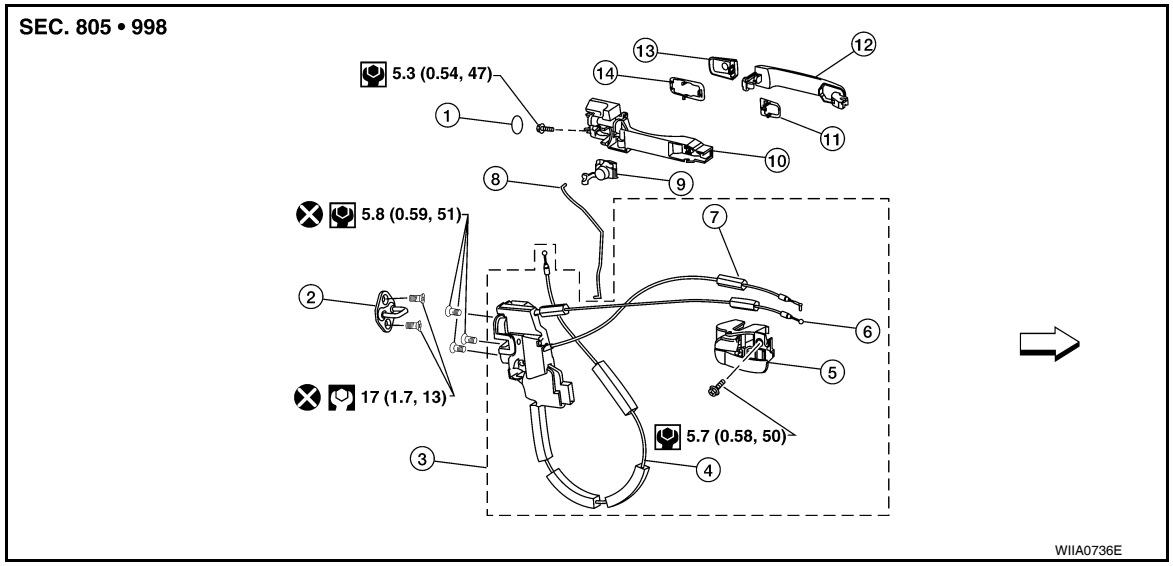
Installation is in the reverse order of removal.

- Align the back door. Refer to DLK-194, "Fitting Adjustment".

FRONT DOOR LOCK

Component Structure

INFOID:0000000005260010



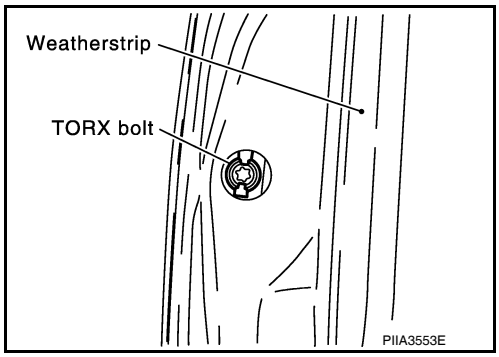
1. Grommet
2. Front door striker
3. Door lock assembly
4. Outside handle cable
5. Inside handle assembly
6. Inside handle cable
7. Door lock cable
8. Key cylinder rod (Driver side only)
9. Door key cylinder
10. Outside handle bracket
11. Front gasket
12. Outside handle
13. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side)
14. Rear gasket
⇐ Vehicle front

Removal and Installation

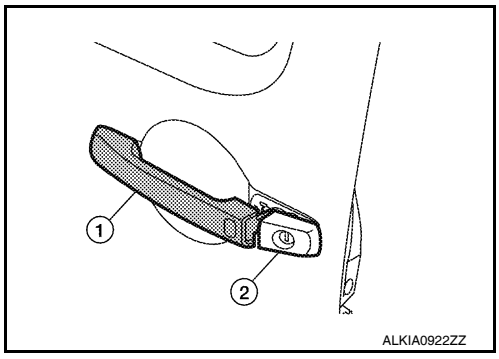
INFOID:0000000005260011

REMOVAL

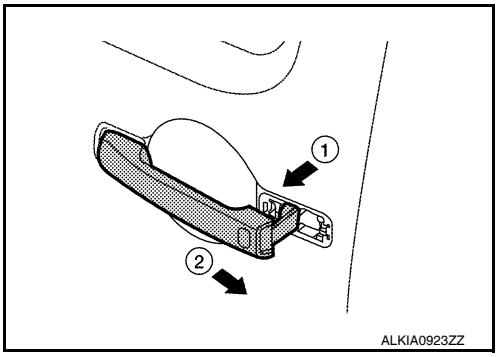
1. Remove the front door window regulator. Refer to GW-15, "Front Door Glass Regulator".
2. Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



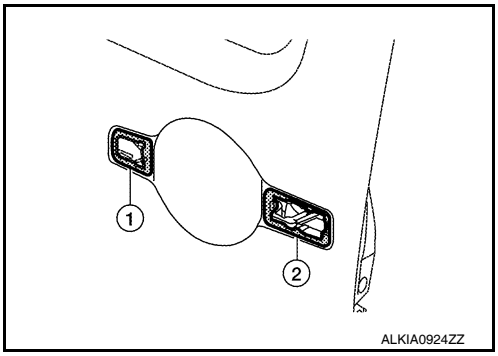
3. While pulling the outside handle (1), remove door key cylinder assembly or escutcheon (2).



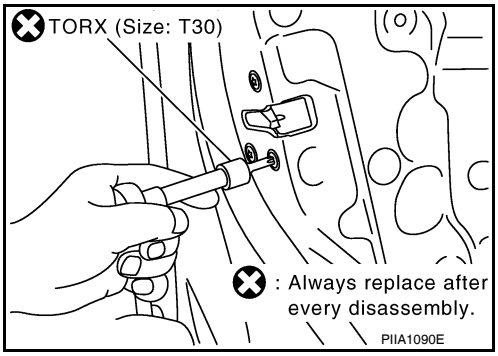
4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.
5. Disconnect the intelligent key electrical connectors.
6. While pulling outside handle (1), slide toward rear of vehicle (2) to remove outside handle.



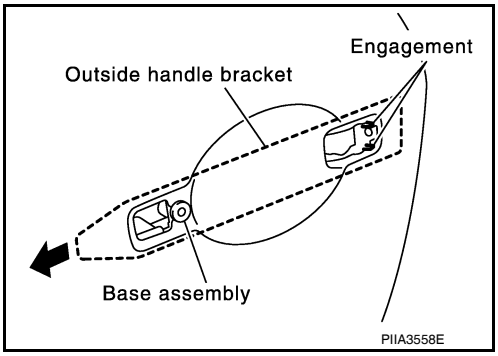
7. Remove the front gasket (1) and rear gasket (2).



8. Remove the TORX bolts (T30), remove the door lock assembly.

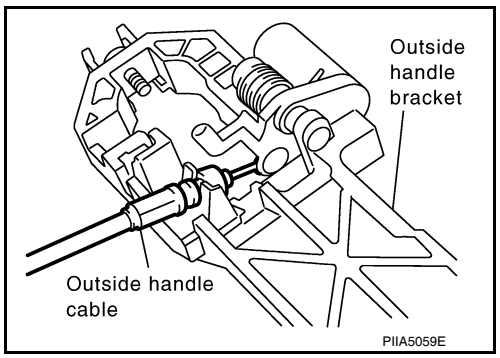


9. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket and door lock assembly as shown.



10. Disconnect the door lock actuator electrical connector.

11. Separate the outside handle cable connection from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

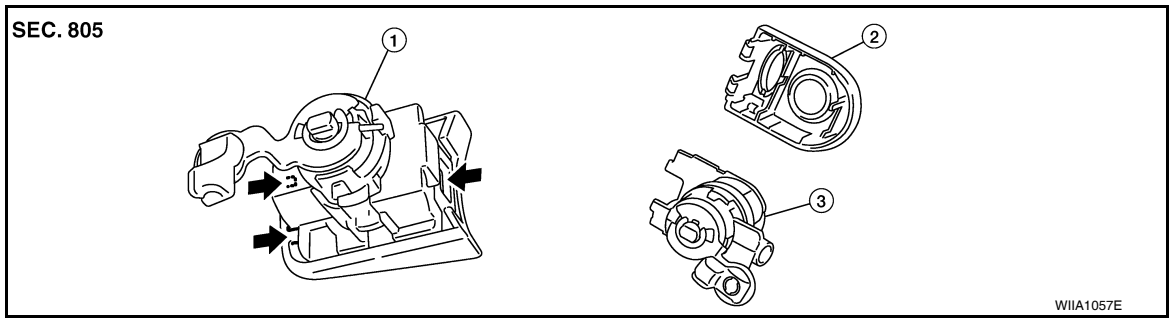
CAUTION:

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

Disassembly and Assembly

INFOID:0000000005260012

DOOR KEY CYLINDER ASSEMBLY



1. Door key cylinder assembly
2. Door key cylinder escutcheon
3. Door key cylinder

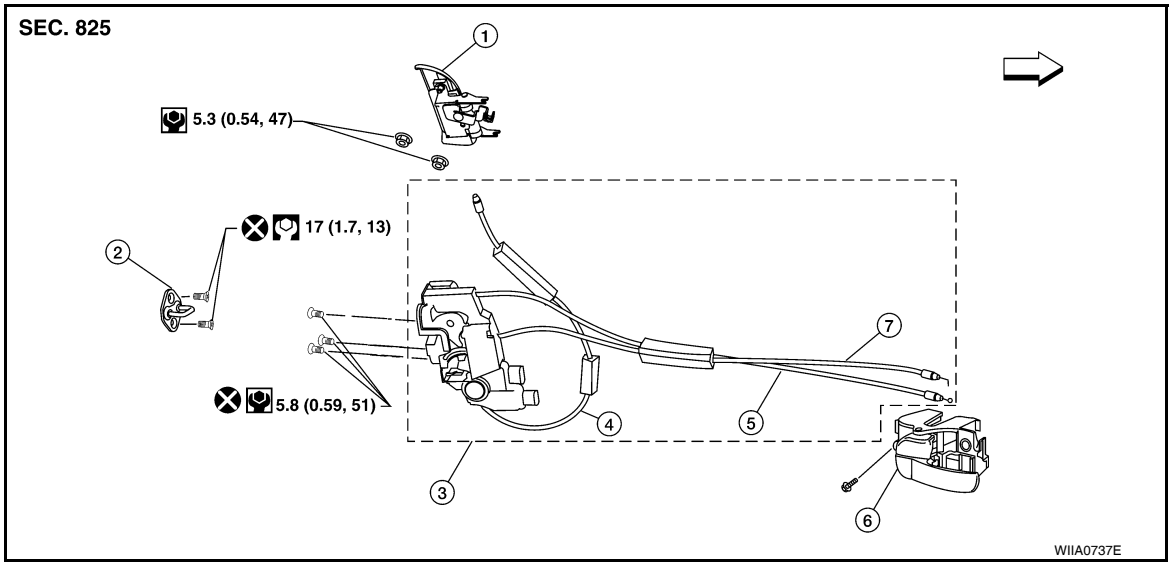
⇐ Pawl

Release the key cylinder escutcheon pawls to remove the door key cylinder.

REAR DOOR LOCK

Component Structure

INFOID:0000000005260013



1. Outside door handle
2. Rear door striker
3. Rear door lock assembly
4. Outside door handle cable
5. Inside door handle cable
6. Inside door handle assembly
7. Door lock cable
⇐ Vehicle front

Removal and Installation

INFOID:0000000005260014

REMOVAL

1. Remove the rear door window regulator. Refer to GW-19, "Rear Door Glass Regulator".
2. Remove door grommets, and remove outside handle nuts from the hole.
3. Remove outside handle.
4. Disconnect the outside handle cable connection.
5. Remove the inside door handle.
6. Disconnect the door lock and inside door handle cables from the inside door handle.
7. Disconnect the door lock actuator connector and remove the assembly.

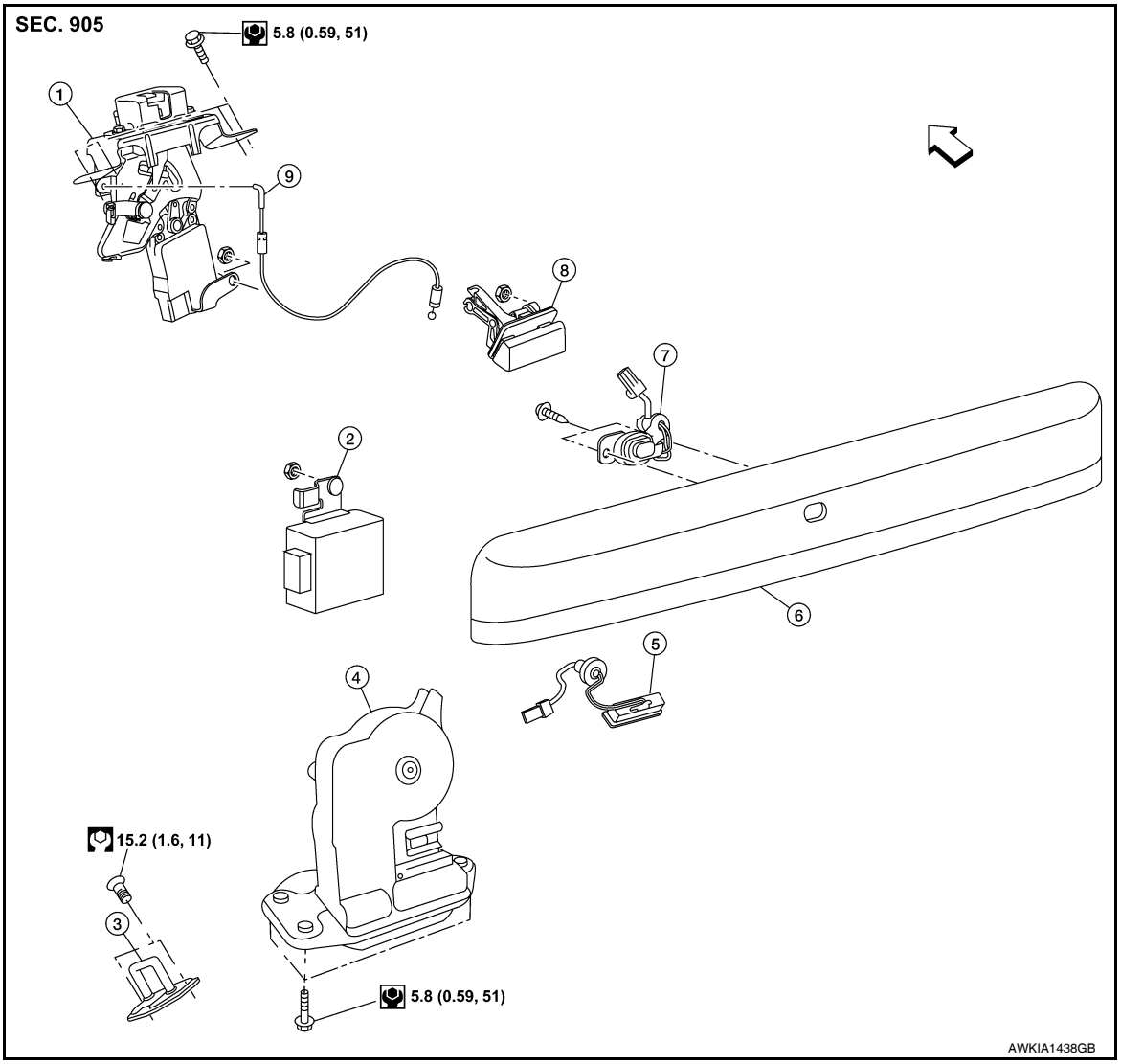
INSTALLATION

Installation is in the reverse order of removal.

BACK DOOR LOCK

Component Structure

INFOID:0000000005260015



1. Glass hatch latch assembly
2. Back door control assembly
3. Back door striker
4. Back door latch assembly
5. Back door release button
6. Back door finisher
7. Key button
8. Glass hatch release handle
9. Glass hatch release cable

⇦ Front

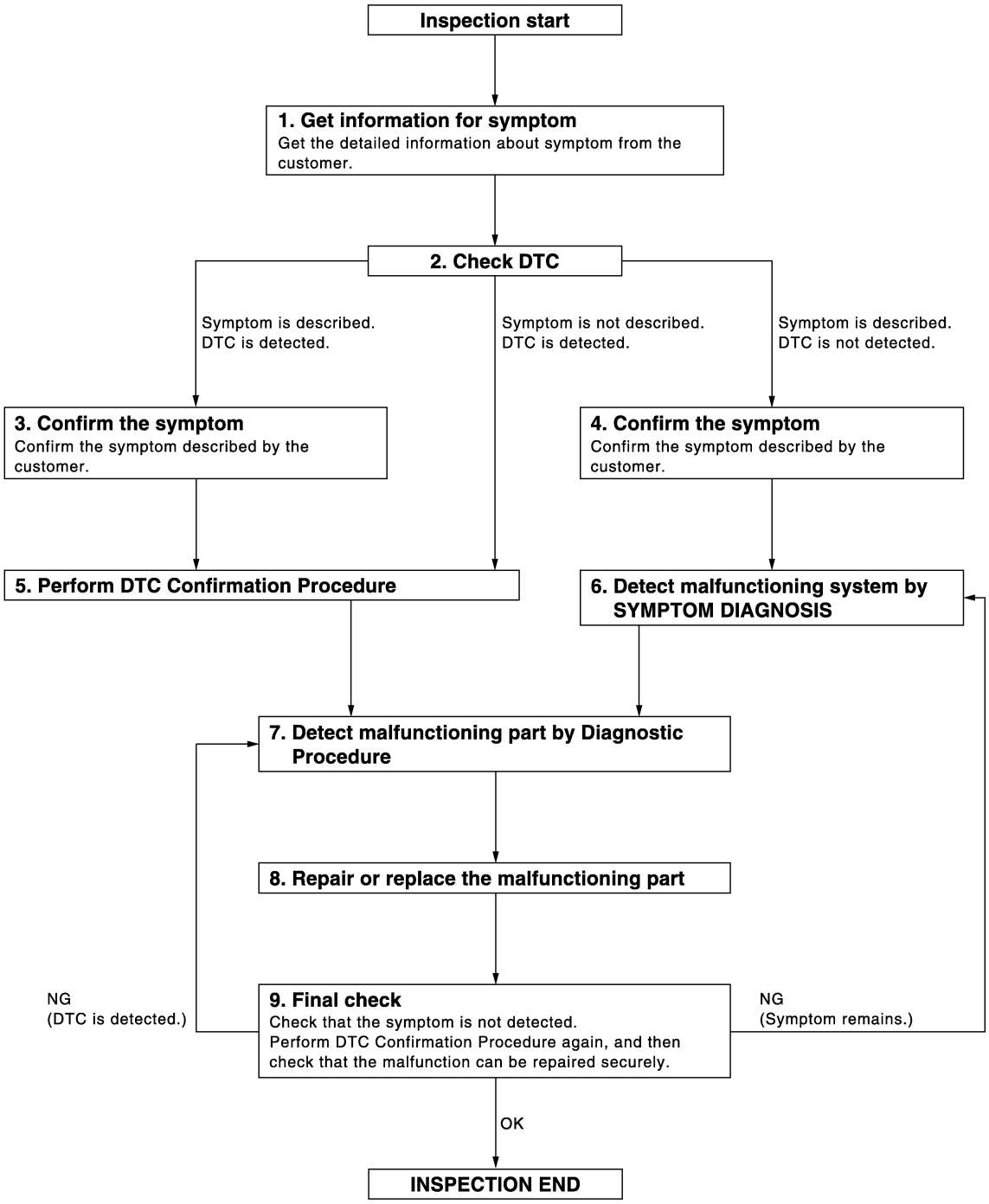
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005260016

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-298, "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-37, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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.

Is the inspection result normal?

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

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000005260017

Perform the system initialization when replacing BCM, replacing a keyfob or registering an additional keyfob.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:0000000005260018

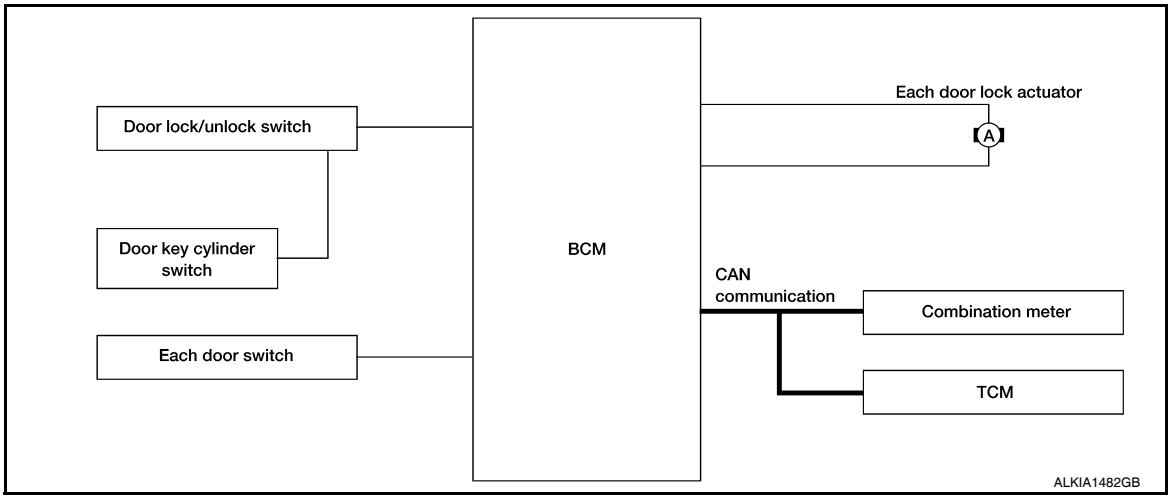
Refer to the CONSULT-III Operation Manual for the initialization procedure.

FUNCTION DIAGNOSIS

AUTOMATIC DOOR LOCKS

System Diagram

INFOID:0000000005260019



System Description

INFOID:0000000005260020

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-219, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

BCM outputs the lock signal to all door lock actuators when it detects that the ignition switch is turned ON, all doors are closed and the vehicle speed received from the combination meter via CAN communication becomes 24 km/h (15 MPH) 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 lock 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-219, "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 lock 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-219, "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.

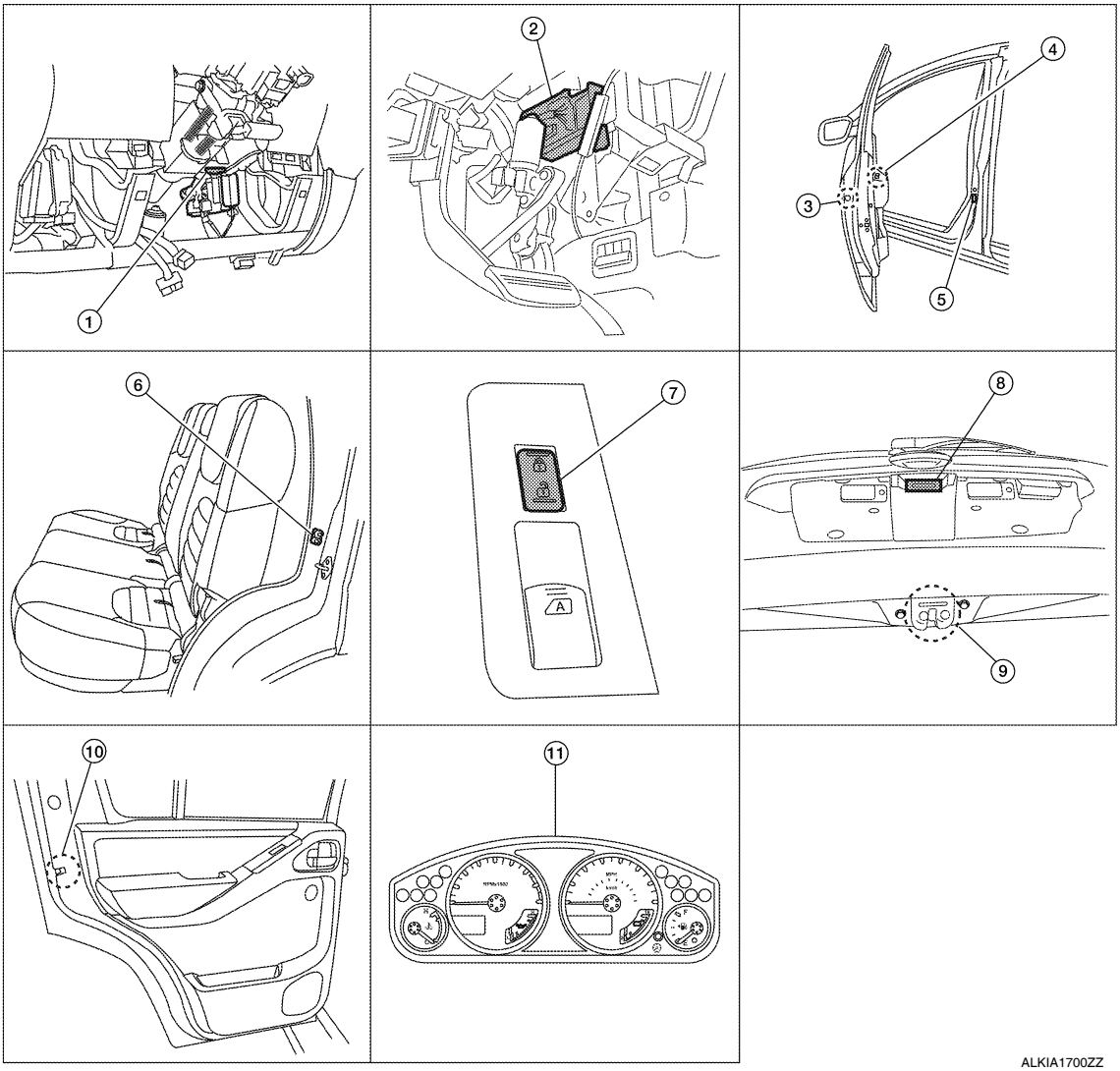
OFF → ON	: 2 blinks
ON → OFF	: 1 blink

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:0000000005260021



ALKIA1700ZZ

1. Key switch M27
2. BCM M18, M19, M20
3. Front door lock assembly LH (key cylinder switch) D14
   Front door lock assembly RH (door lock actuator) D119
   Front door lock assembly RH (door unlock sensor) D103
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 opener switch D510
9. Back door latch (door ajar switch) D502
10. Rear door lock actuator LH D205
    RH D305
11. Combination meter M24

Component Description

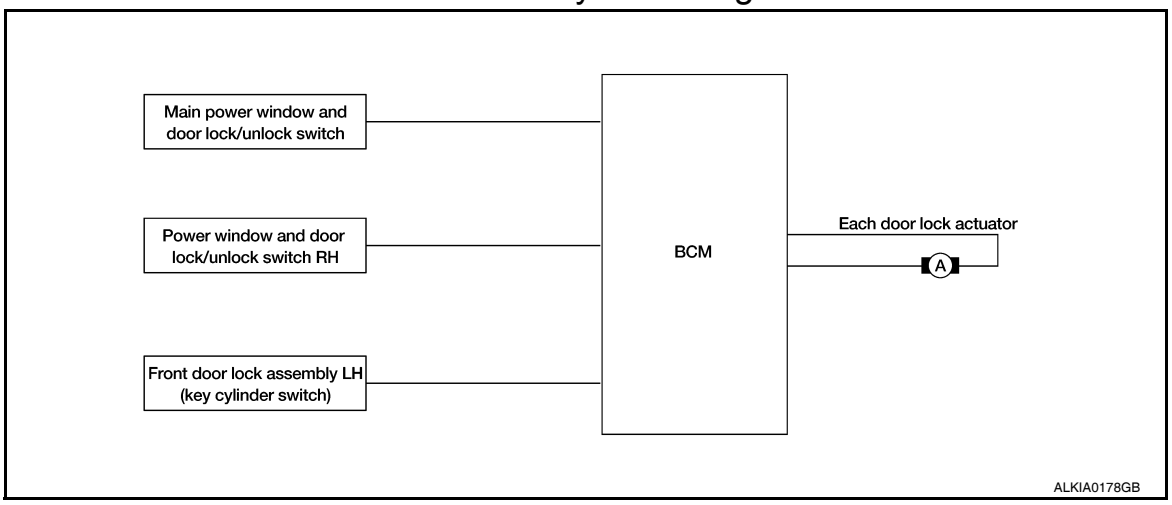
INFOID:0000000005260022

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

Item	Function
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.

DOOR LOCK FUNCTION
DOOR LOCK AND UNLOCK SWITCH
DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:0000000005260023



DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:0000000005260024

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 doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors are unlocked, back door opener switch is enabled, and mechanical glass hatch switch is enabled.
- Provided the passenger front door is unlocked, when the back door opener switch is pressed, the BCM terminal 30 receives signal from the back door opener switch terminal 1, through terminal 2, to front door lock assembly RH (door unlock sensor) terminal 1, through terminal 3, to ground.
- When the BCM receives the signal, if the back door operating enable conditions are met, it sends a signal through terminal 53 to open the back door latch.

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 doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.

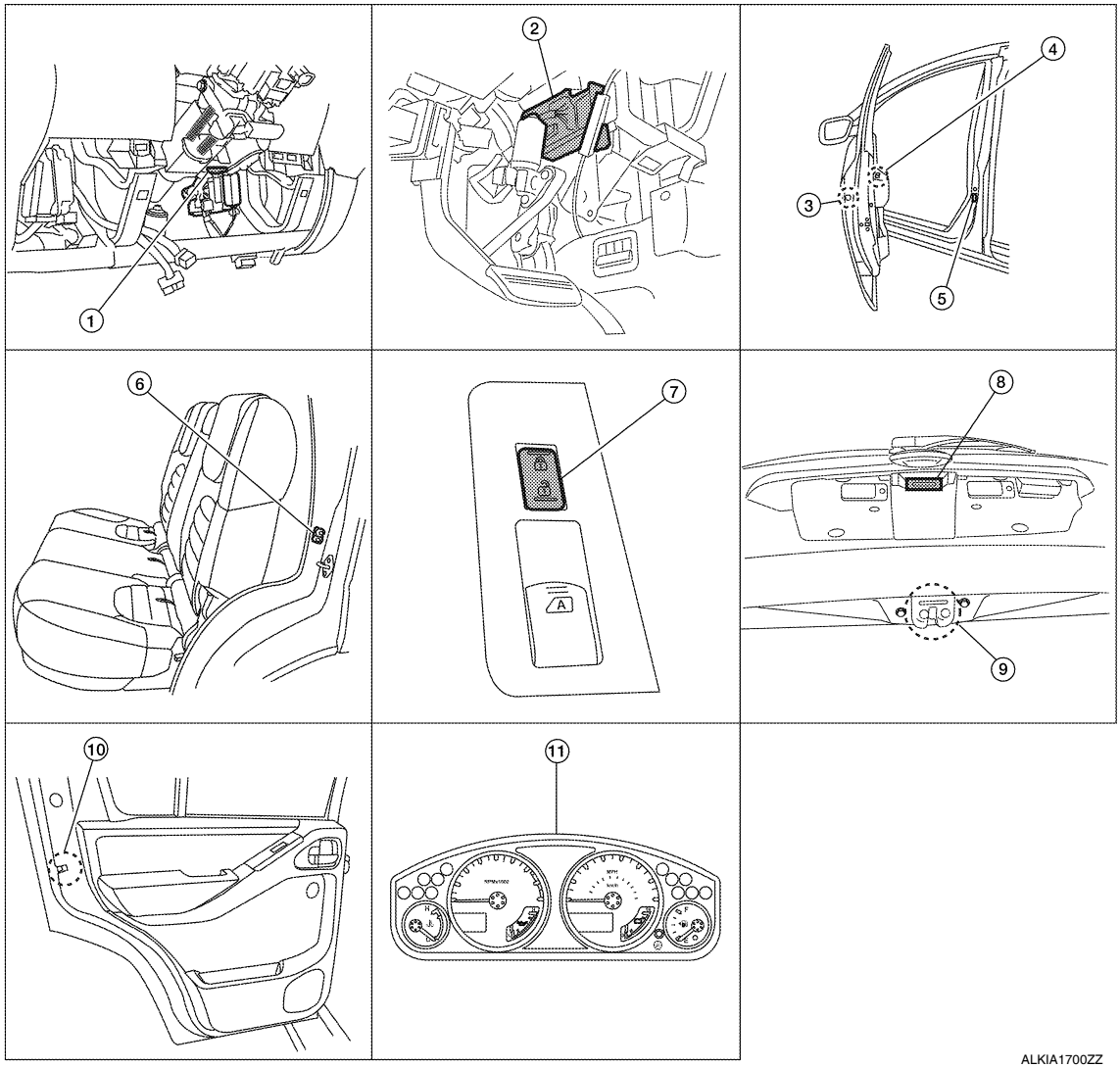
Selective Unlock Operation
- When door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in “WORK SUPPORT”. Refer to DLK-219, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

Key Reminder System
Refer to DLK-256, "Diagnosis Procedure".

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:0000000005260025



ALKIA1700ZZ

1. Key switch M27
2. BCM M18, M19, M20
3. Front door lock assembly LH (key cylinder switch) D14
   Front door lock assembly RH (door lock actuator) D119
   Front door lock assembly RH (door unlock sensor) D103
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 opener switch D510
9. Back door latch (door ajar switch) D502
10. Rear door lock actuator LH D205
    RH D305
11. Combination meter M24

DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:0000000005260026

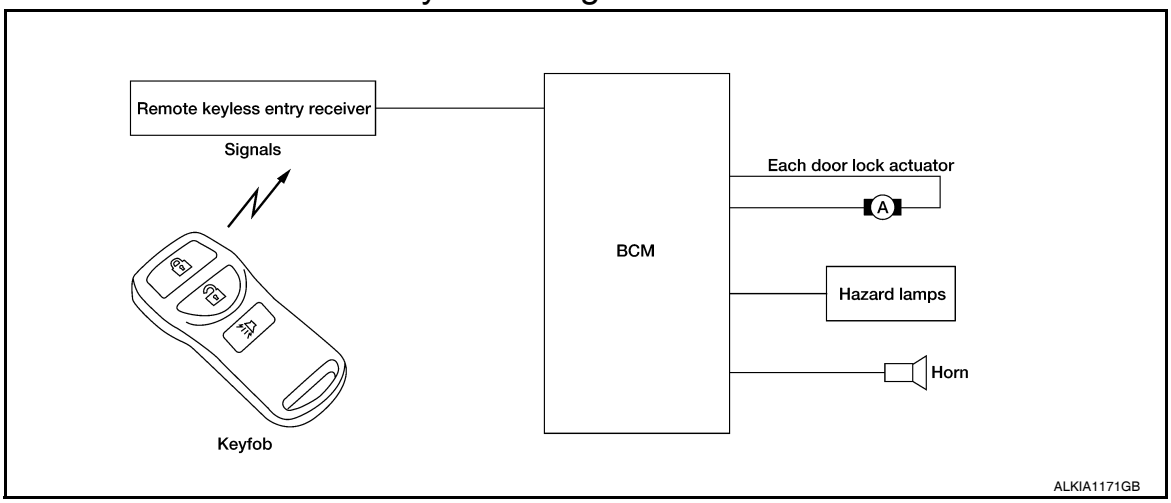
Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.

Item	Function
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

REMOTE KEYLESS ENTRY : System Diagram

INFOID:0000000005260027



REMOTE KEYLESS ENTRY : System Description

INFOID:0000000005260028

OPERATED PROCEDURE

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

REMOTE CONTROL ENTRY FUNCTIONS

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

REMOTE CONTROL ENTRY OPERATION CONDITIONS

Keyfob operation	Operation condition
Door lock operation (locking)	• With key removed (key switch: OFF) • Closing all doors (door switch: OFF)
Door lock operation (unlocking)	With key removed (key switch: OFF)

AUTO RELOCK FUNCTION

Operation Description

- Unless the key is inserted into the ignition key cylinder, one of the doors is opened, or the keyfob is operated within 1 minute after a door lock is unlocked by keyfob operation, all the doors are automatically locked.
  The 1 minute timer count is executed by the BCM and after 1 minute, the BCM sends the lock signal to all doors.
  Lock operations are the same as for the remote control entry function.

ACTIVE CHECK FUNCTION

Operation Description

When a door is locked or unlocked by keyfob operation, the vehicle turn signals flash and the horn sounds to verify operation.

- When a button on the keyfob is operated, the signal is sent from the remote controller and received by the keyless remote entry receiver.
- The received signal is sent to the BCM and compared with the registered ID number.
- If the ID number matches, the BCM uses communication to send the turn signal flashing and horn signal to the IPDM E/R.
- The IPDM E/R flashes the turn signal lamps and sounds the horn for each keyfob operation.

Operating function of hazard and horn reminder

	C mode		S mode	
Keyfob operation	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—
Horn sound	Once	—	—	—

HAZARD AND HORN REMINDER

BCM output to IPDM E/R for horn reminder signal as DATA LINE (CAN-H line and CAN-L line).
The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

How to change hazard and horn reminder mode

With CONSULT-III

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

Without CONSULT-III

Refer to Owner's Manual for instructions.

INTERIOR LAMP OPERATION

When the following input signals are both supplied:

- all door switches are in the OFF position. (when all the doors are closed);
- interior lamp switch is in DOOR position.

Remote keyless entry system turns on interior lamp and ignition keyhole illumination (for 30 seconds) with input of UNLOCK signal from keyfob.

PANIC ALARM OPERATION

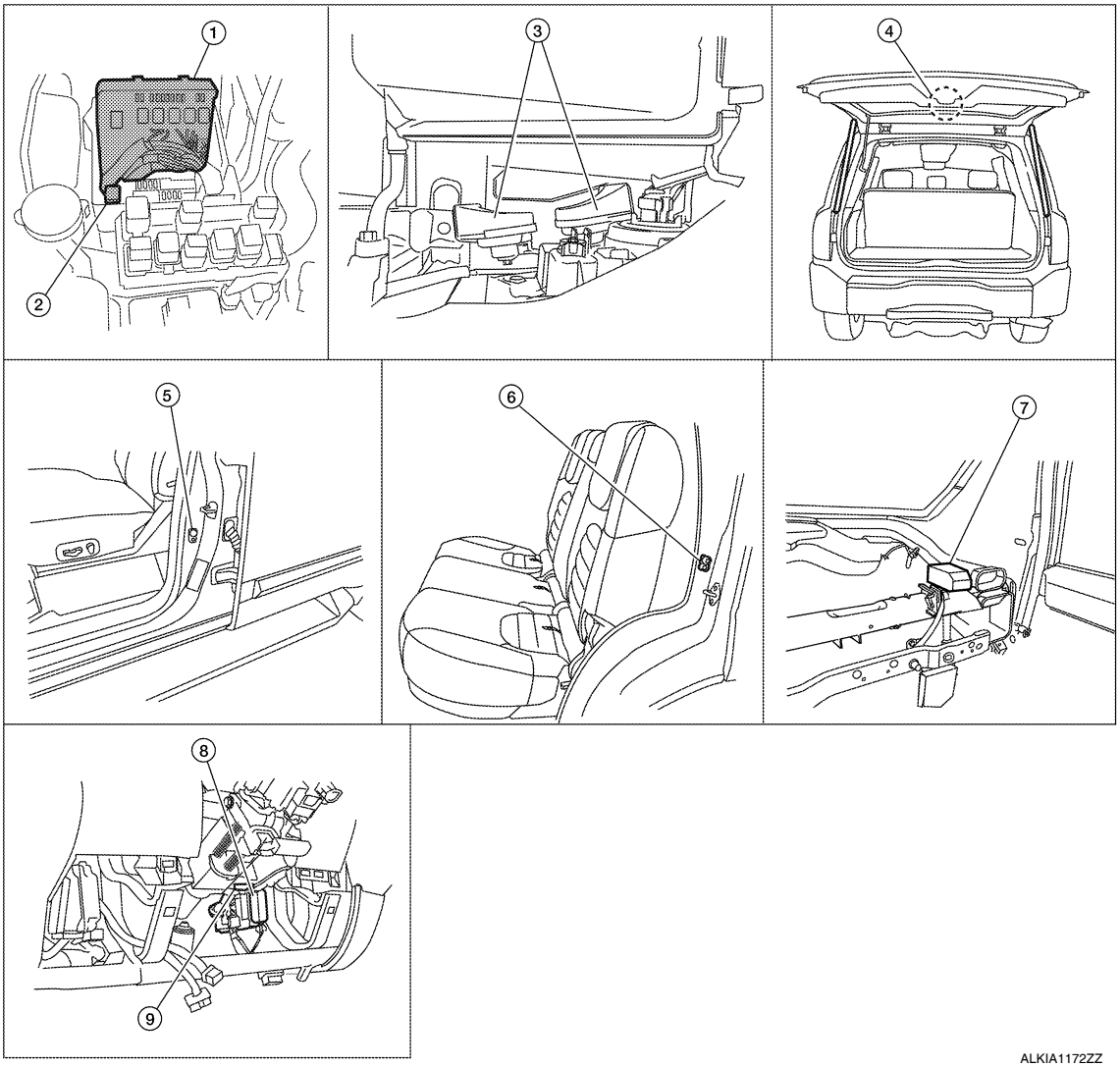
When key switch is OFF (when ignition key is not inserted in key cylinder), remote keyless entry system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from keyfob.
The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

When keyfob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be ON continuously for more than 3 second, the driver's door and passenger's door power windows are simultaneously opened.
Power window is operated to open and the operation continues as long as the keyfob unlock switch is pressed.

REMOTE KEYLESS ENTRY : Component Parts Location

INFOID:0000000005260029



ALKIA1172ZZ

1. IPDM E/R E122, E124
2. Horn relay H-1 (view with cover removed)
3. Horn E3 (behind front combination lamp LH)
4. Back door cinching latch unit (door ajar switch) D502
5. Front door switch LH B8 RH B108
6. Rear door switch LH B18 RH B116
7. Remote keyless entry receiver M120 (view with instrument panel RH removed)
8. BCM M18, M19, M20 (view with instrument panel LH removed)
9. Key switch M27

REMOTE KEYLESS ENTRY : Component Description

INFOID:0000000005260030

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door switch	Transmits door open/close condition to BCM.
Remote keyless entry receiver	Receives lock/unlock signal from the keyfob, and then transmits to BCM.

HOMELINK UNIVERSAL TRANSCEIVER

Component Description

INFOID:0000000005260031

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:0000000005483719

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-54, "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[1]	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[2]	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	THEFT ALM	×	×	×
Panic alarm	PANIC ALARM			×

1: With remote keyless entry system

2: With Intelligent Key

DOOR LOCK

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

INFOID:0000000005483720

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
KEYLESS LOCK[1] [ON/OFF]	Indicates condition of lock signal from keyfob
KEYLESS UNLOCK[1] [ON/OFF]	Indicates condition of unlock signal from keyfob
I-KEY LOCK[2] [ON/OFF]	Indicates condition of lock signal from Intelligent Key
I-KEY UNLOCK[2] [ON/OFF]	Indicates condition of unlock signal from Intelligent Key

1: With remote keyless entry system

2: With 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].

MULTIREMOTE ENT

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

INFOID:0000000005483721

WORK SUPPORT

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

Monitored Item	Description
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.
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.

TRUNK

TRUNK : CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005483722

DATA MONITOR

Monitor Item [Unit]	Contents
IGN ON SW [ON/OFF]	Indicates condition of ignition switch in ON position
I-KEY TRUNK [ON/OFF]	Indicates condition of Intelligent Key back door opening operation
TRNK OPNR SW [ON/OFF]	Indicates condition of back door opener switch.
VEHICLE SPEED [ON/OFF]	Indicates condition of vehicle speed signal from combination meter

ACTIVE TEST

Test Item	Description
TRUNK/BACK DOOR	This test is able to check back door open operation. Back door open when “OPEN” on CONSULT-III screen is touched.

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:0000000005260036

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-53, "CAN Communication Signal Chart".

DTC Logic

INFOID:0000000005260037

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)

Diagnosis Procedure

INFOID:0000000005260038

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-5, "CAN Communication Control Circuit".
NO >> Refer to GI-37, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000005260039

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:0000000005260040

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM. Refer to BCS-59, "Removal and Installation".

>> Replace BCM.

Special Repair Requirement

INFOID:0000000005260041

1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to BCS-59, "Removal and Installation" for BCM configuration.
Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III Operation Manual.

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT
BCM (BODY CONTROL MODULE)
BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000005485386

Regarding Wiring Diagram information, refer to BCS-50, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

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

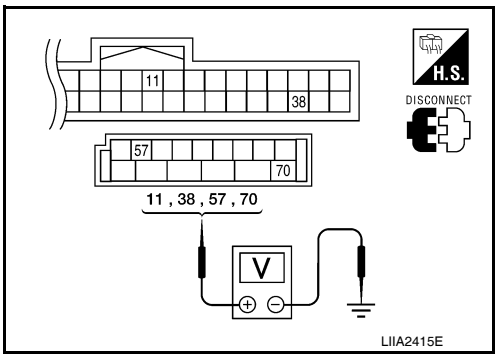
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	18 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

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 (+)	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

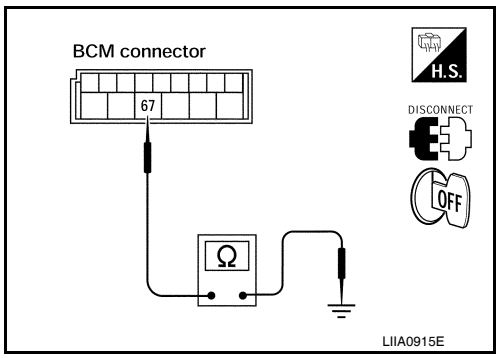
Is the measurement value normal?

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.

DOOR SWITCH

Description

INFOID:0000000005260043

Detects door open/close condition.

Component Function Check

INFOID:0000000005260044

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-226, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260045

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

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:

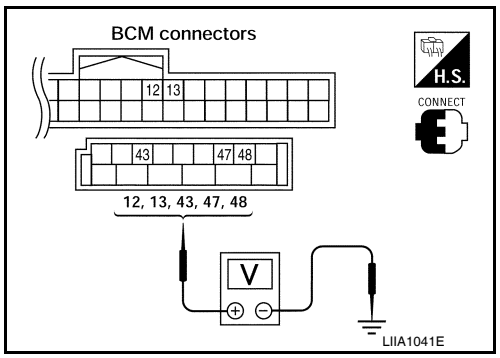
DOOR SW-DR :ON
DOOR SW-AS :ON
DOOR SW-RL :ON
DOOR SW-RR :ON
BACK DOOR SW :ON

- 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

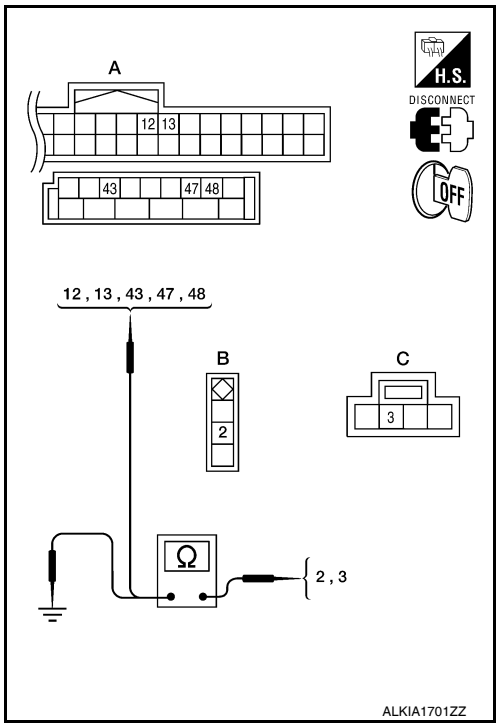
2.CHECK DOOR SWITCH CIRCUIT

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) D502 terminal 3.

2 - 47 :Continuity should exist
2 - 12 :Continuity should exist
2 - 48 :Continuity should exist
2 - 13 :Continuity should exist
3 - 43 :Continuity should exist

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) D502 terminal 7 and ground.

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



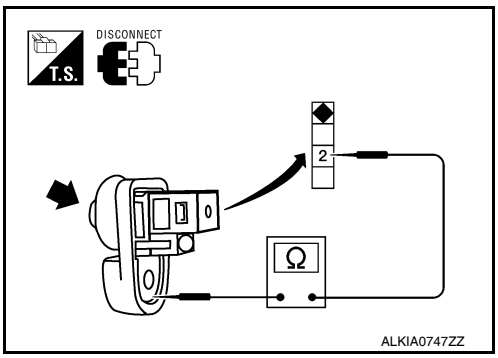
Is the inspection result normal?

YES >> (Front and rear doors) GO TO 3.
YES >> (Back door) GO TO 4.
NO >> Repair or replace harness.

3.CHECK DOOR SWITCH

- Check continuity between door switch terminals.

Switch	Terminals	Condition	Continuity
Door switch	2 – Ground	Open	Yes
		Closed	No



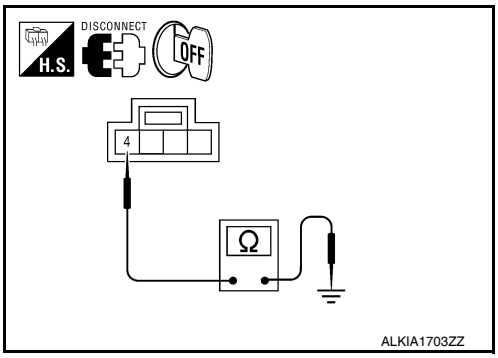
Is the inspection result normal?

YES >> Door switch circuit is OK.
NO >> Replace door switch.

4. CHECK BACK DOOR LATCH CIRCUIT

• Check continuity between back door latch connector terminal 4 and ground.

Connector	Terminals	Continuity
Back door latch	4 – Ground	Yes



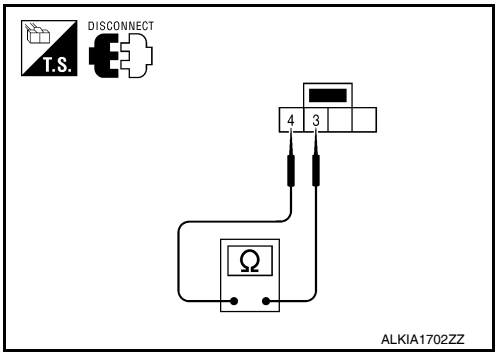
Is the inspection result normal?

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

5. CHECK BACK DOOR LATCH SWITCH

• Check continuity between back door latch switch terminals.

Switch	Terminals	Condition	Continuity
Back door latch	3 – 4	Open	Yes
		Closed	No



Is the inspection result normal?

YES >> Back door latch switch circuit is OK.
NO >> Replace back door latch.

GLASS HATCH AJAR SWITCH

Description

INFOID:0000000005260046

Detects glass hatch open/close condition.

Component Function Check

INFOID:0000000005260047

1.CHECK FUNCTION

With CONSULT-III
Check glass hatch switch in data monitor mode with CONSULT-III.

Monitor item	Condition
GLASS HATCH SW	CLOSE → OPEN: OFF → ON

Is the inspection result normal?

YES >> Glass hatch switch is OK.
NO >> Refer to DLK-229, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260048

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

With CONSULT-III
Check glass hatch ajar switch "GLASS HATCH SW" in DATA MONITOR mode with CONSULT–III.
- When glass hatch is open:

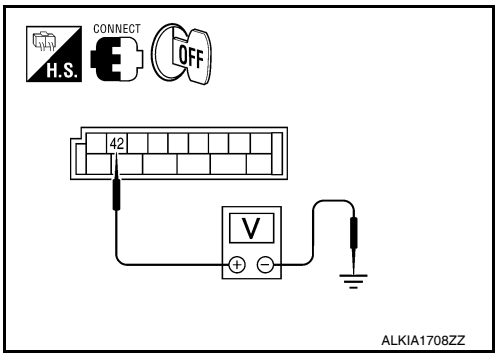
GLASS HATCH SW :ON

- When glass hatch is closed:

GLASS HATCH SW :OFF

Without CONSULT-III
Check voltage between BCM connector M19 terminals 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 >> Glass hatch ajar switch circuit is OK.
NO >> GO TO 2

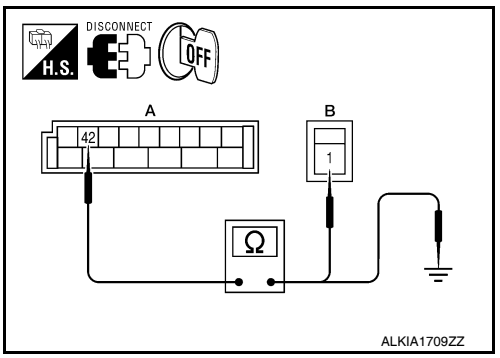
2.CHECK GLASS HATCH AJAR SWITCH CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect glass hatch ajar switch and BCM.
3. Check continuity between BCM connector (A) M19 terminal 42 and glass hatch ajar switch connector (B) D503 terminal 1.

42 - 1 :Continuity should exist

4. Check continuity between BCM connector (A) M19 terminal 42 and ground.

42 - Ground :Continuity should not exist



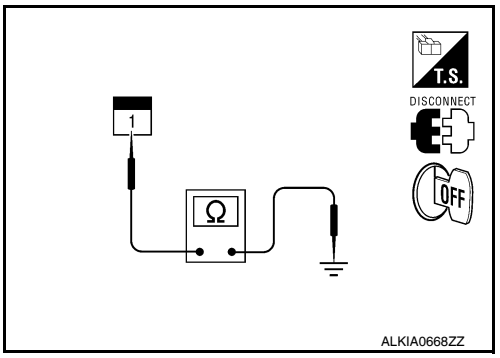
Is the inspection result normal?

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

3. CHECK GLASS HATCH AJAR SWITCH

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 >> Refer to GI-37, "Intermittent Incident".
NO >> Replace glass hatch ajar switch.

DOOR LOCK AND UNLOCK SWITCH
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005260049

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000005260050

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-231, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005260051

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

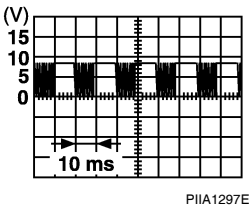
With CONSULT-III
Check main power window and door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–III.
- When main power window and door lock/unlock switch is turned to LOCK:

CDL LOCK SW :ON

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

CDL UNLOCK SW :ON

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

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

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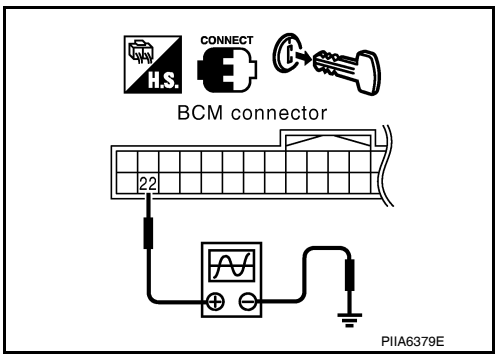

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Is the inspection result normal?

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

2.CHECK BCM OUTPUT SIGNAL

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

The front windows should be lowered.

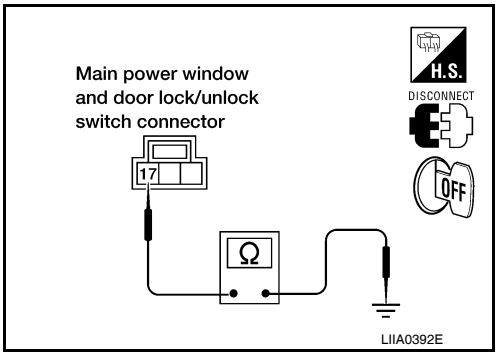
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-59, "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.



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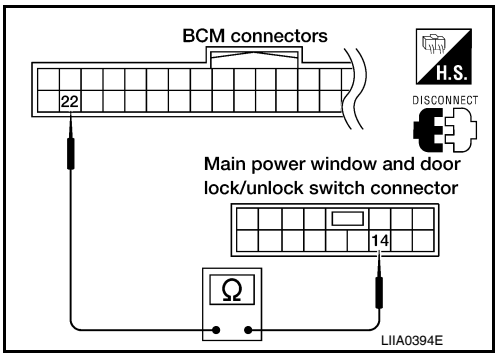
Is the inspection result normal?

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.

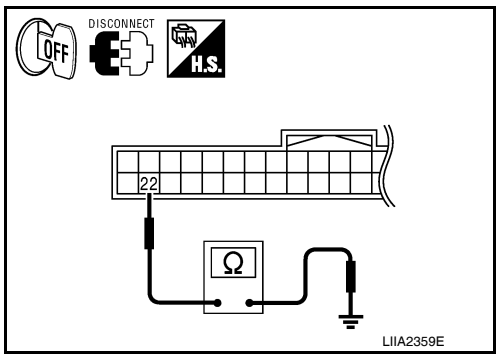
22 - 14 : Continuity should exist.



LIIA0394E

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:0000000005260052

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005260053

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-233, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005260054

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-III
Check power window and door lock/unlock switch RH ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT–III.
- When power window and door lock/unlock switch RH is turned to LOCK:

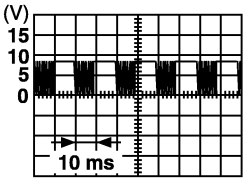
CDL LOCK SW :ON

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

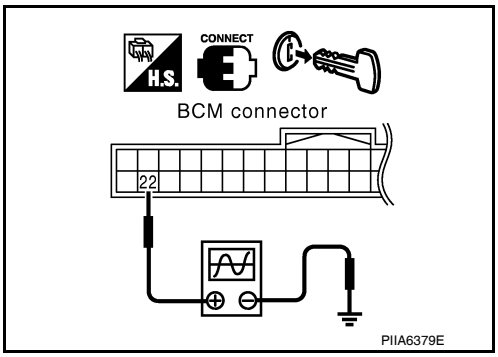
CDL UNLOCK SW :ON

Without CONSULT-III
1. Remove key from ignition key cylinder.
2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.

3. Make sure the signals which are shown in the figure below can be detected during 10 seconds just after the power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.

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

PIIA1297E



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 keyfob, press and hold the UNLOCK button for more than 3 seconds.

The front windows should be lowered.

Is the inspection normal?

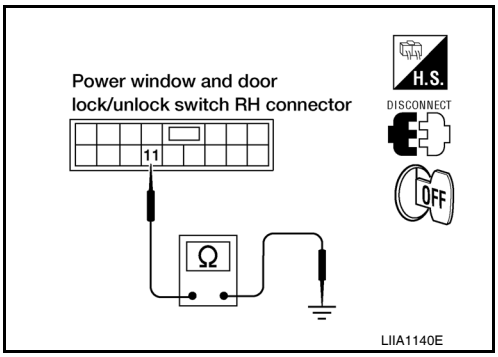
YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-59, "Removal and Installation".

3.CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

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

3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground

11 - Ground : Continuity should exist.



LIIA1140E

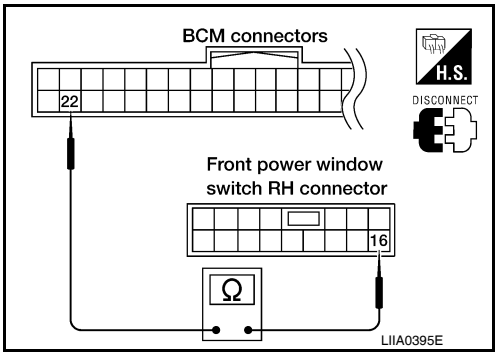
Is the inspection normal?

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

4.CHECK POWER WINDOW SERIAL LINK CIRCUIT

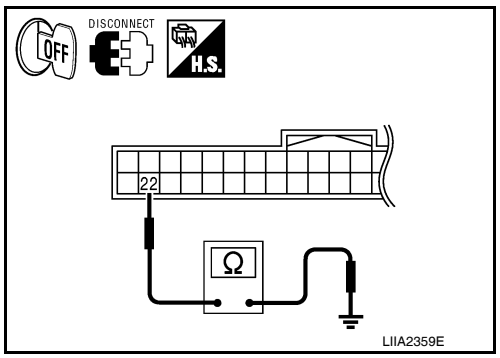
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

22 - 16 : Continuity should exist.



LIIA0395E

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.

BACK DOOR OPENER SWITCH

Diagnosis Procedure

INFOID:0000000005260055

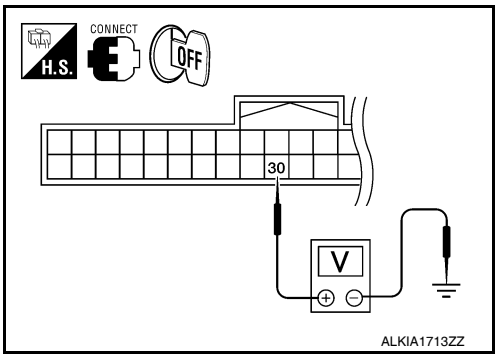
Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK BACK DOOR OPENER SWITCH

With CONSULT-III
Check back door opener switch (“TRUNK OPNR SW”) in “DATA MONITOR” mode.

Monitor item	Condition
TRUNK OPNR SW	Back door opener switch is pressed: ON
	Back door opener switch is released: OFF

Without CONSULT-III
1. Turn ignition switch OFF.
2. Check voltage between BCM connector M18 terminal 30 and ground.



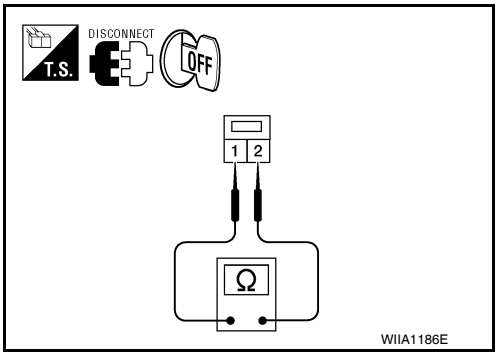
Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M18	30	Ground	Back door opener switch is pressed	0
			Back door opener switch is released	5

Is the inspection result normal?

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

2.CHECK BACK DOOR OPENER SWITCH OPERATION

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



Component	Terminals		Condition	Continuity
Back door opener switch	1	2	Back door opener switch is pressed	Yes
			Back door opener switch is released	No

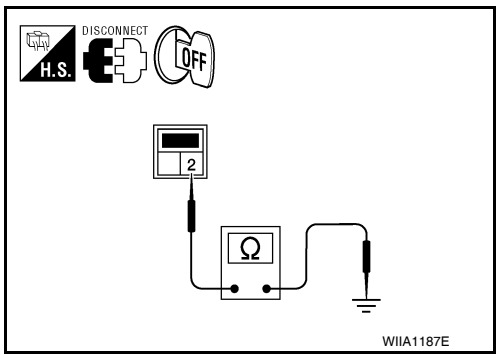
Is the inspection result normal?

YES >> GO TO 3
NO >> Replace back door opener switch.

3.CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

NOTE:
The passenger door must be unlocked during this step.
Check continuity between back door opener switch harness connector D510 terminal 2 and ground.

2 - Ground : Continuity should exist.



Is the inspection result normal?

YES >> GO TO 4
NO >> GO TO 5

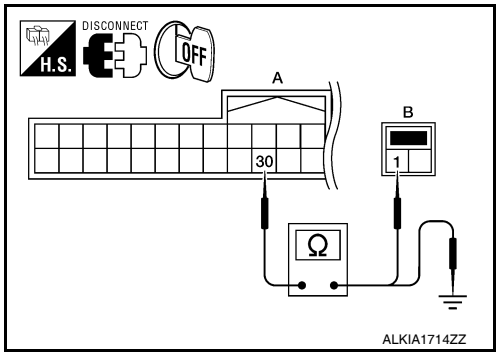
4. CHECK BACK DOOR OPENER SWITCH CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM harness connector (A) M18 terminal 30 and back door opener switch harness connector (B) D510 terminal 1.

30 - 1 : Continuity should exist.

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

30 - Ground : Continuity should not exist.



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness between BCM and back door opener switch.

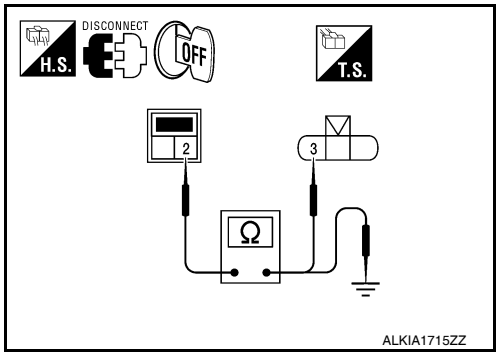
5. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

1. Disconnect front door lock assembly RH (door unlock sensor).
2. Check continuity between back door opener switch harness connector (A) D510 terminal 2 and front door lock assembly RH (door unlock sensor) connector (B) D103 terminal 3.

2 - 3 : Continuity should exist.

3. Check continuity between back door opener switch harness connector (A) D510 terminal 2 and ground.

2 - Ground : Continuity should not exist.



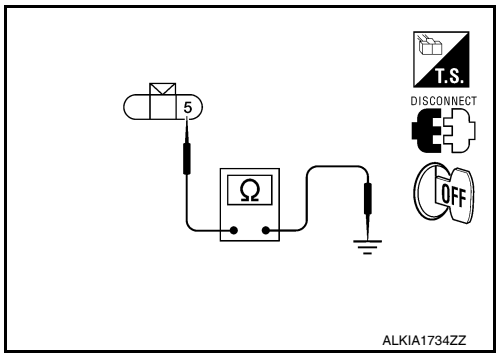
Is the inspection result normal?

YES >> GO TO 6
NO >> Repair or replace harness.

6. CHECK DOOR UNLOCK SENSOR CIRCUIT

1. Check continuity between front door lock assembly RH (door unlock sensor) connector D103 terminal 5 and ground.

5 - Ground : Continuity should exist.



Is the inspection result normal?

YES >> Replace front door lock assembly RH (door unlock sensor).
NO >> Repair or replace harness for open.

KEY CYLINDER SWITCH

Description

INFOID:0000000005260056

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:0000000005260057

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-238, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260058

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

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

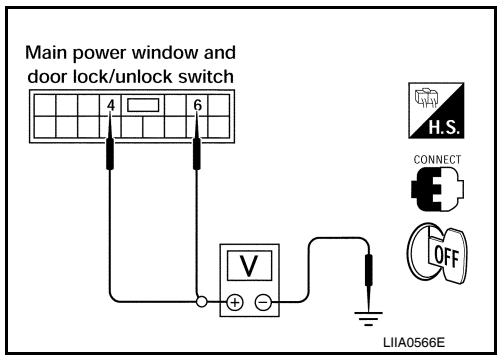
- When key inserted in left front key cylinder is turned to UNLOCK:

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



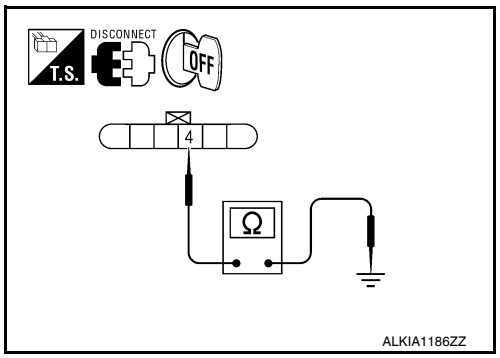
Is the inspection result normal?

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 4 and body ground.

Connector	Terminals	Continuity
D14	4 – Ground	Yes



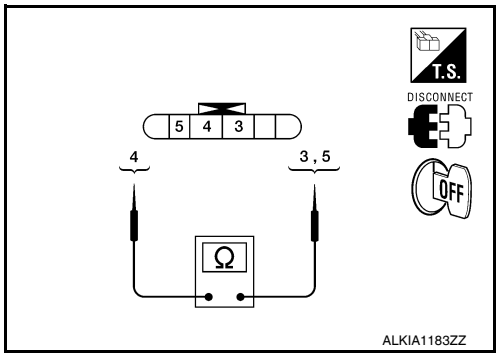
Is the inspection result normal?

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
3 – 4	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes
4 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes



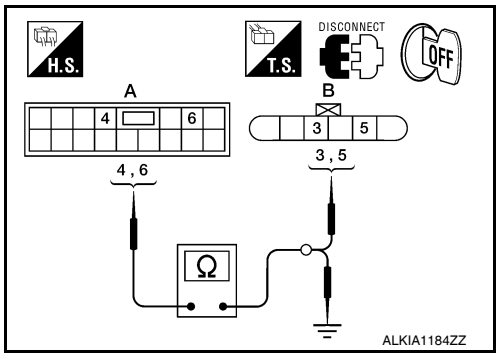
Is the inspection result normal?

YES >> GO TO 4
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-322, "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 3, 5 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)	5	Yes
	6		3	Yes
	4, 6	Ground		No



Is the inspection result normal?

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

DOOR LOCK ACTUATOR
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000005260059

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:0000000005260060

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-240, "DRIVER SIDE : Diagnosis Procedure".

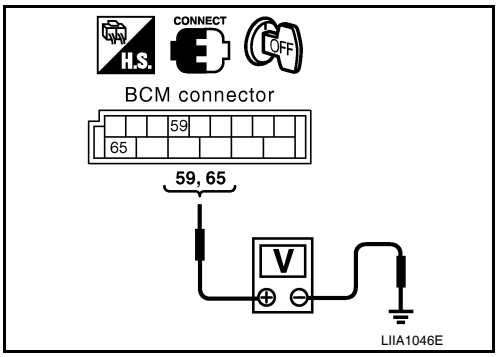
DRIVER SIDE : Diagnosis Procedure

INFOID:0000000005260061

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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



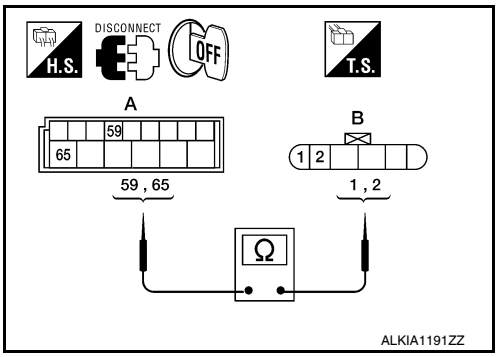
Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M20	59	Ground	Driver door lock/unlock switch is turned to UNLOCK	0 → Battery voltage
	65		Driver door lock/unlock switch is turned to LOCK	0 → Battery voltage

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 1, 2.



Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
	65		1	

Is the inspection result normal?

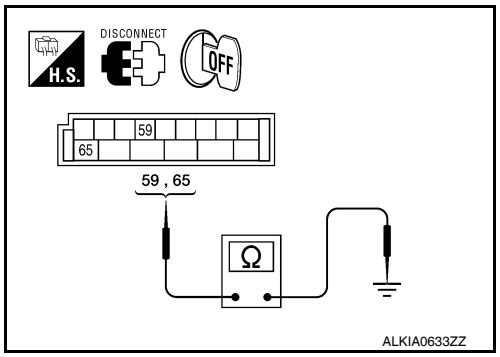
YES >> Replace front door lock assembly LH (actuator).

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		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000005260062

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005260063

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-241, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

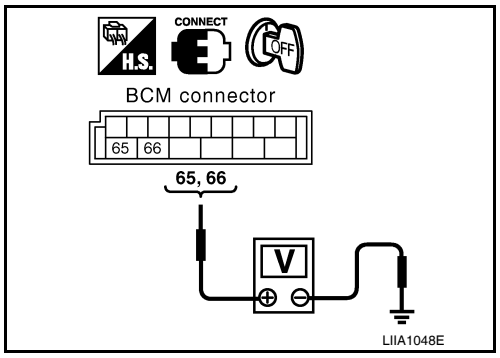
INFOID:0000000005260064

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



Is the inspection result normal?

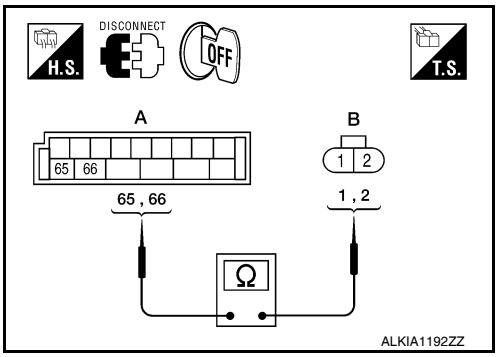
YES >> GO TO 2

NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly RH (door lock actuator).
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and front door lock assembly RH (door lock actuator) (B) D119 terminals 1, 2.

Terminal		Continuity
65	2	Yes
66	1	



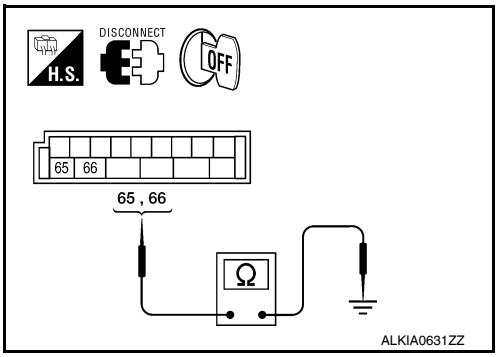
Is the inspection result normal?

YES >> Replace front door lock assembly RH (door lock actuator). Refer to DLK-322, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

REAR LH

REAR LH : Description

INFOID:0000000005260065

Locks/unlocks the door with the signal from BCM.

REAR LH : Component Function Check

INFOID:0000000005260066

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-242, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

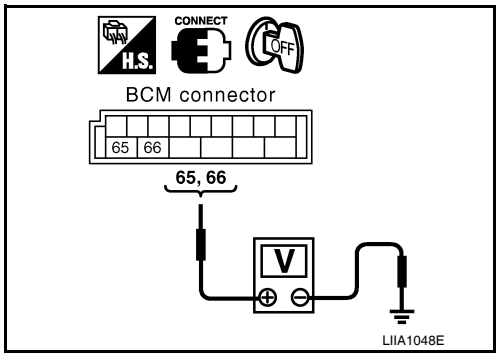
INFOID:0000000005260067

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals (+)	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	



Is the inspection result normal?

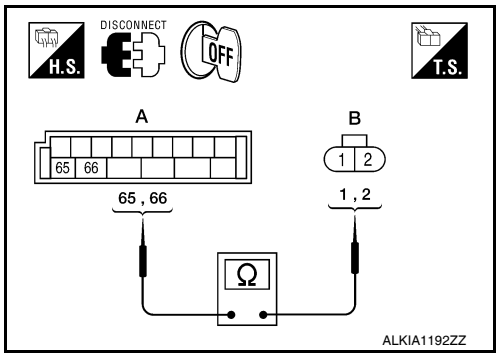
YES >> GO TO 2
NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

NOTE:
The passenger select unlock relay must remain connected during this test.

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 1, 2.

Terminals		Continuity
65	2	Yes
66	1	



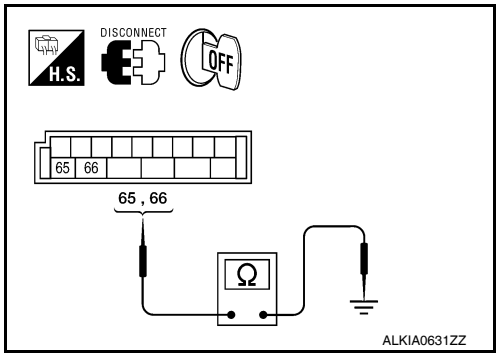
Is the inspection result normal?

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-59, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

REAR RH

REAR RH : Description

INFOID:0000000005260068

Locks/unlocks the door with the signal from BCM.

REAR RH : Component Function Check

INFOID:0000000005260069

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.
NO >> Refer to DLK-244, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

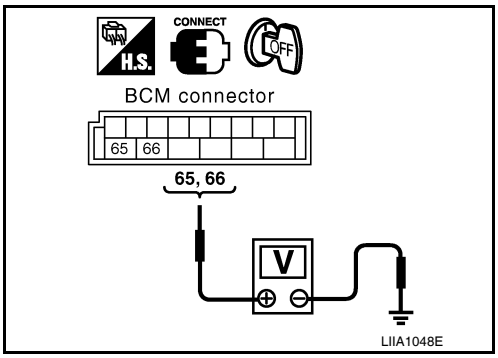
INFOID:0000000005260070

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

Connector	Terminals (+)	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	



Is the inspection result normal?

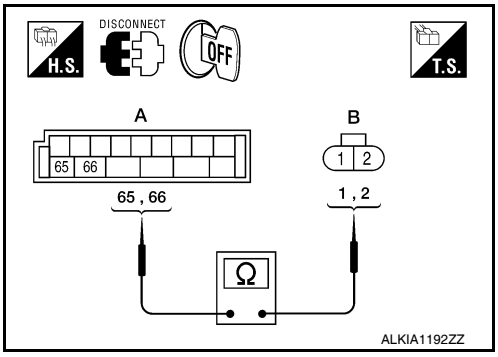
YES >> GO TO 2
NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

NOTE:
The passenger select unlock relay must remain connected during this test.

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 1, 2.

Terminals		Continuity
65	2	Yes
66	1	



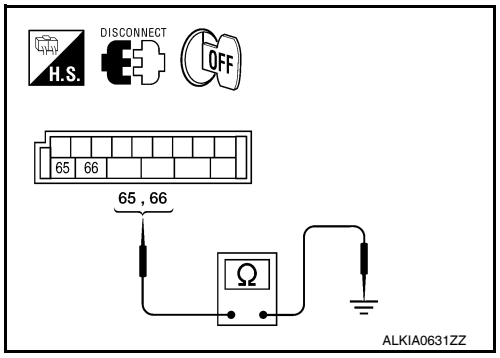
Is the inspection result normal?

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		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness or passenger select unlock relay.

BACK DOOR LATCH

BACK DOOR LATCH : Description

INFOID:0000000005260071

Locks/unlocks the door with the signal from BCM.

BACK DOOR LATCH : Diagnosis Procedure

INFOID:0000000005260072

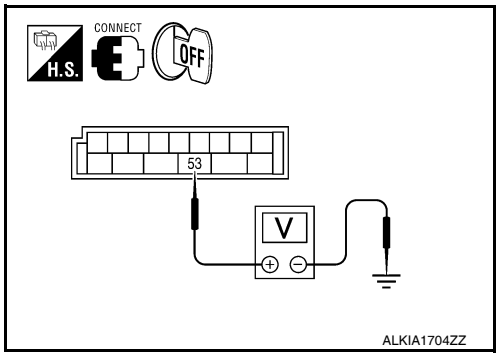
Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK BACK DOOR LATCH SIGNAL

NOTE:
Ensure back door opener switch is operating properly before proceeding.

1. Turn ignition switch OFF.
2. Unlock all doors using main power window and door lock/unlock switch.
3. While pressing the back door opener switch, check voltage between BCM connector M19 terminal 53 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	53	Ground	Back door opener switch is pressed	0 → Battery voltage for 300 ms



Is the inspection result normal?

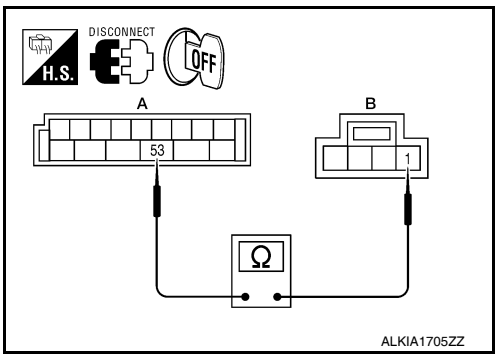
YES >> GO TO 2
NO >> GO TO 4

2.CHECK BACK DOOR LATCH HARNESS FOR OPEN

1. Disconnect BCM and back door latch.

2. Check continuity between BCM connector (A) M19 terminals 53 and back door latch connector (B) D502 terminal 1.

Terminals		Continuity
53	1	Yes



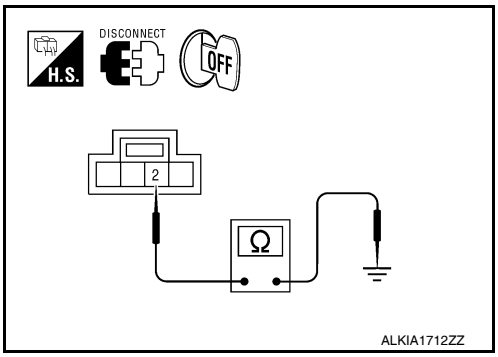
Is the inspection result normal?

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

3. CHECK BACK DOOR LATCH GROUND

Check continuity between back door latch connector D502 terminal 2 and ground.

Terminals		Continuity
2	Ground	Yes



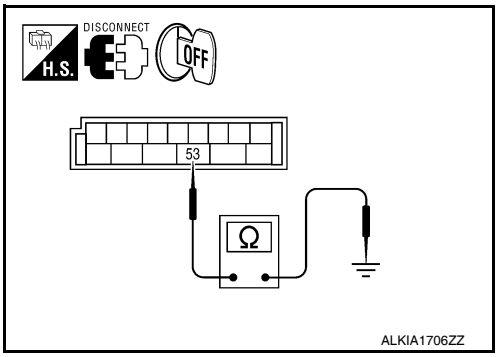
Is the inspection result normal?

YES >> Replace back door latch.
NO >> Repair or replace harness.

4. CHECK BACK DOOR LATCH HARNESS FOR SHORT

1. Disconnect BCM and back door latch.
2. Check continuity between BCM connector M19 terminal 53 and ground.

Terminals		Continuity
53	Ground	No



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

GLASS HATCH LOCK ACTUATOR

Description

INFOID:0000000005260073

Locks/unlocks the glass hatch with the signal from BCM.

Component Function Check

INFOID:0000000005260074

1.CHECK FUNCTION

1. Use CONSULT-III to perform Active Test DOOR LOCK.
2. Touch “ALL LOCK” and operate glass hatch lever to ensure it is locked.
3. Touch “ALL UNLOCK” and operate glass hatch lever to ensure it is unlocked.

Is the inspection result normal?

YES >> Glass hatch lock actuator is OK.
NO >> Ensure glass hatch mechanical linkage is OK. Refer to DLK-247, "Diagnosis Procedure".

Diagnosis Procedure

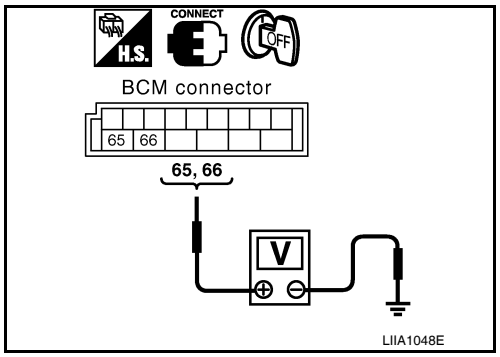
INFOID:0000000005260075

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK GLASS HATCH 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	



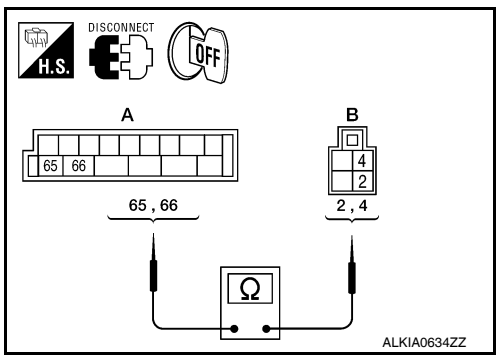
Is the inspection result normal?

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

2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

1. Disconnect BCM and glass hatch lock actuator.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and glass hatch lock actuator connector (B) D508 terminals 2, 4.

Terminals		Continuity
65	4	Yes
66	2	



Is the inspection result normal?

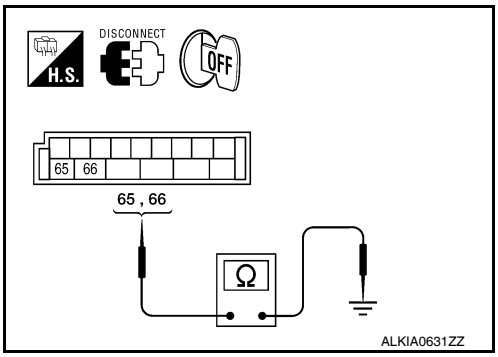
YES >> Replace glass hatch lock actuator.

NO >> Repair or replace harness.

3. CHECK GLASS HATCH LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".
NO >> Repair or replace harness.

REMOTE KEYLESS ENTRY RECEIVER

Description

INFOID:0000000005260076

Receives keyfob operation and transmits to BCM.

Component Function Check

INFOID:0000000005260077

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 key fob.

Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.
NO >> Refer to DLK-249, "Diagnosis Procedure".

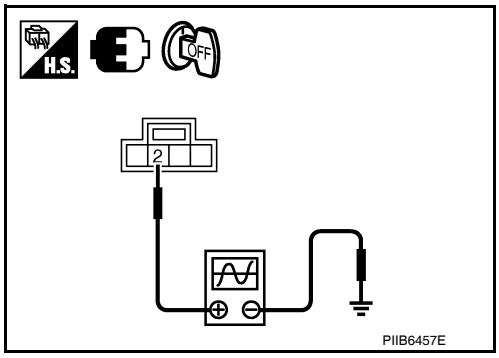
Diagnosis Procedure

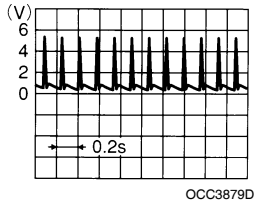
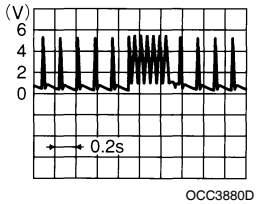
INFOID:0000000005260078

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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



Terminals (+) Remote keyless entry receiver connector	Terminals (+) Terminal	Terminals (–)	Keyfob condition	Signal (Reference value)
M120	2	Ground	No function	
			Any button is pressed	

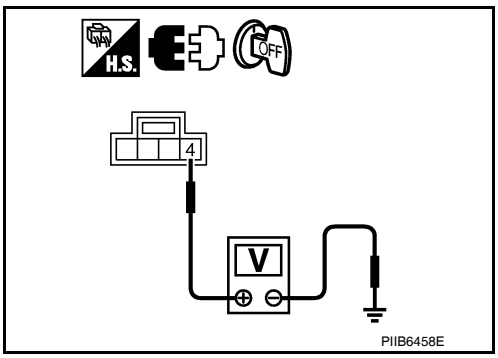
Is the inspection result normal?

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

2.REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

Check voltage between remote keyless entry receiver connector M120 terminal 4 and ground.

4 - Ground : Approx. 5 volt.



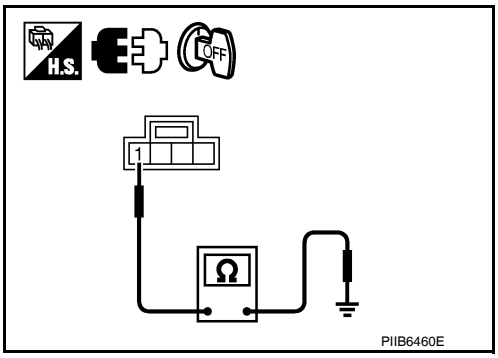
Is the inspection result normal?

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

3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

Check continuity between remote keyless entry receiver connector M120 terminal 1 and ground.

1 - Ground : Continuity should exist.



Is the inspection result normal?

YES >> Replace remote keyless entry receiver.
NO >> GO TO 4

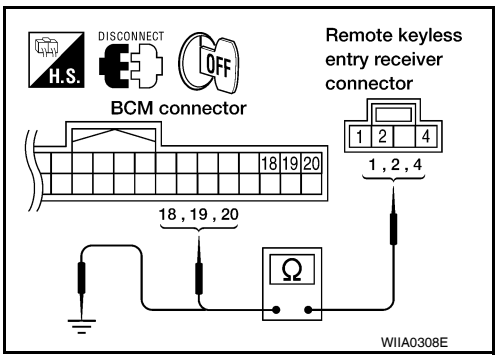
4. HARNESS INSPECTION BETWEEN BCM AND RKE RECEIVER

1. Disconnect remote keyless entry receiver and BCM connectors.
2. Check continuity between BCM connector M18 terminals 18, 19, 20 and remote keyless entry receiver connector M120 terminals 1, 2, 4.

1 - 18 : Continuity should exist.
2 - 20 : Continuity should exist.
4 - 19 : Continuity should exist.

3. Check continuity between remote keyless entry receiver connector M120 terminals 1, 2, 4 and ground.

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



Is the inspection result normal?

YES >> Replace remote keyless entry receiver.
NO >> Repair or replace the harness between the remote keyless entry receiver and BCM.

KEYFOB BATTERY AND FUNCTION

Description

INFOID:0000000005260079

The following functions are available when having and carrying electronic ID.
- Door lock/unlock
- Panic alarm

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

Component Function Check

INFOID:0000000005260080

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 key fob.

Is the inspection result normal?

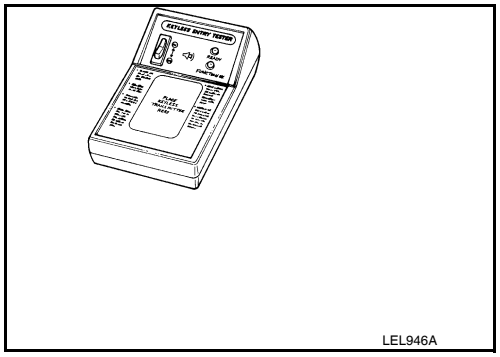
YES >> Keyfob is OK.
NO >> Refer to DLK-251, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260081

1.CHECK KEYFOB FUNCTION

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

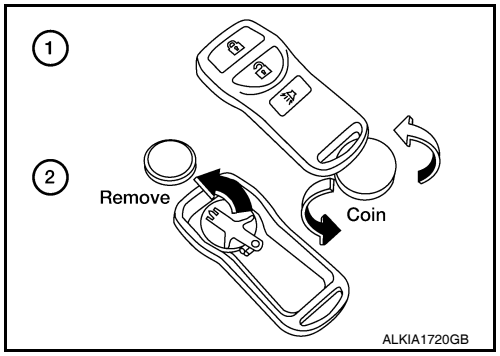


Does the test pass?

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

2. CHECK KEY FOB COMPONENTS

1. Open the lid using a coin.
   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.**
2. Remove the key fob battery.
   CAUTION:
   - **Keep dirt, grease, and other foreign materials off the electrode contact area.**
3. Visually inspect keyfob internal components.

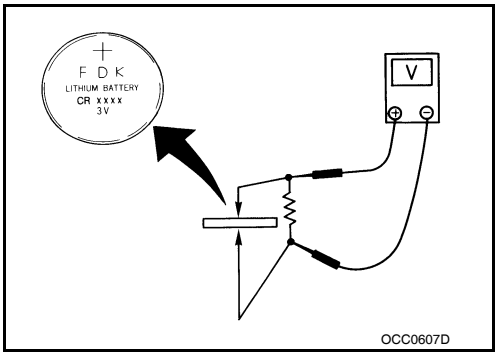


Is the inspection result normal?

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

3.CHECK KEY FOB 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 >> Key fob battery is OK. Check remote keyless entry receiver. Refer to DLK-249, "Component Function Check".

NO >> GO TO 4

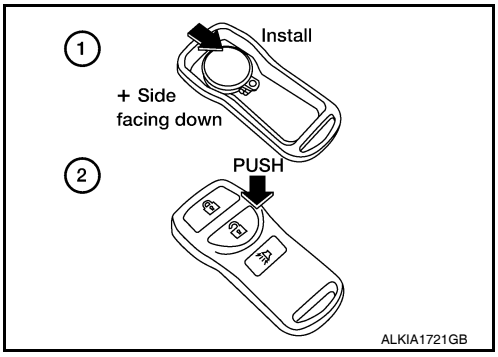
4. REPLACE KEY FOB BATTERY

1. Replace the key fob battery, positive side down.
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 key fob functions work properly.



Is the inspection result normal?

YES >> Key fob is OK.

NO >> Check remote keyless entry receiver. Refer to DLK-249, "Component Function Check".

HORN FUNCTION

Description

INFOID:0000000005260082

Perform answer-back for each operation with horn.

Component Function Check

INFOID:0000000005260083

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 >> Refer to DLK-253, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260084

Regarding Wiring Diagram information, refer to DLK-287, "Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —".

1.CHECK HORN FUNCTION

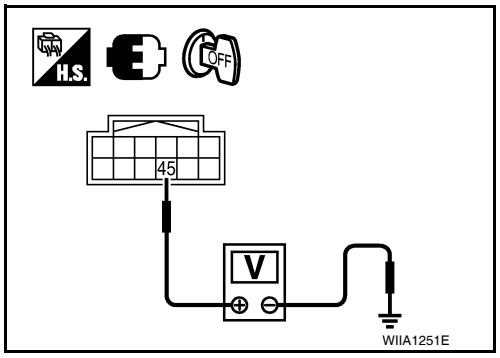
Check horn function with horn switch.

Does the horn sound?

YES >> GO TO 2
NO >> Refer 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 IPDM E/R connector E122 terminal 45 and ground.



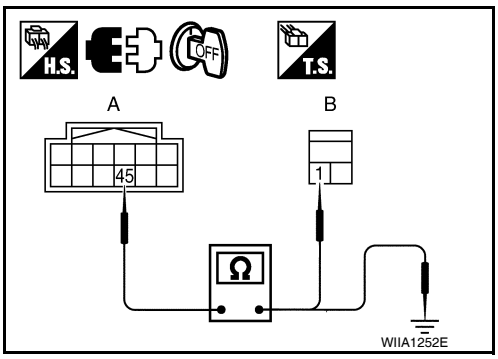
IPDM E/R		Ground	Test item		Voltage (V) (Approx.)
Connector	Terminal				
E122	45	Ground	HORN	OFF → ON → OFF	Battery voltage → 0 → Battery voltage
				Other than above	Battery voltage

Is the inspection result normal?

YES >> Repair harness for open between IPDM E/R and horn relay.
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	
A: E122	45	B: 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-37, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-33, "Removal and Installation of IPDM E/R".
NO >> Repair or replace the malfunctioning part.

HAZARD FUNCTION

Description

INFOID:0000000005260091

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

Component Function Check

INFOID:0000000005260092

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-255, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005260093

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-59, "Removal and Installation".
NO >> Repair or replace hazard warning switch circuit. Refer to EXL-77, "Wiring Diagram".

KEY SWITCH (BCM INPUT)

Diagnosis Procedure

INFOID:0000000005260094

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYSTEM —".

1.CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-III

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT–III. Refer to DLK-219, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

- When key is inserted to ignition key cylinder:

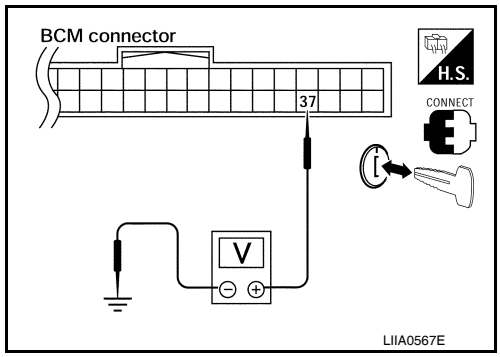
KEY ON SW : ON

- When key is removed from ignition key cylinder:

KEY ON SW : OFF

Without CONSULT-III

Check voltage between BCM connector M18 terminal 37 and ground.



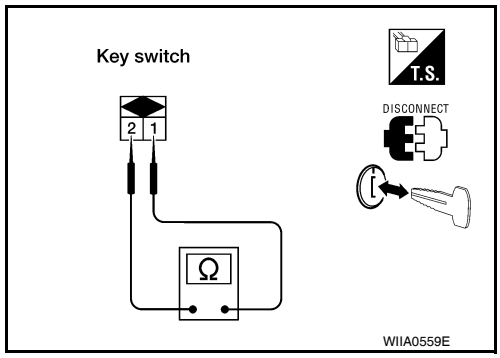
Connector	Terminal (+)	Terminal (–)	Condition	Voltage (V)
M18	37	Ground	Key is inserted.	Battery voltage
			Key is removed.	0

Is the inspection result normal?

YES >> Key switch (insert) circuit is OK.
NO >> GO TO 2

2.CHECK KEY SWITCH (INSERT)

1. Turn ignition switch OFF.
2. Disconnect key switch connector.
3. Check continuity between key switch terminals.



Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
	Key is removed.	No

Is the inspection result normal?

YES >> Repair or replace harness or fuse.
NO >> Replace key switch.

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:0000000005260095

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:0000000005260096

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:0000000005260097

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.**

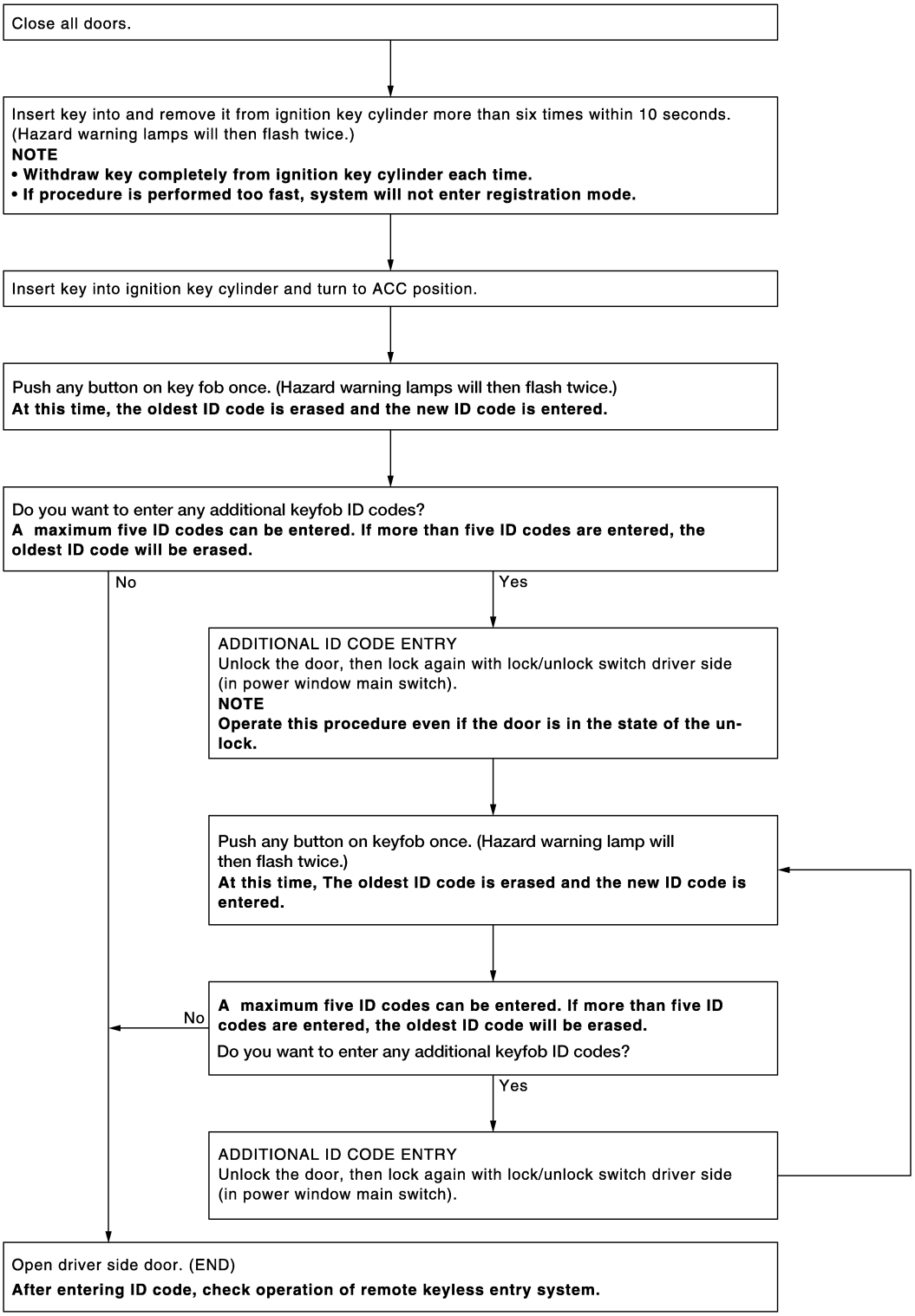
1. Turn ignition switch ON.
2. Select “BCM”.
3. Select “MULTI REMOTE ENT”.
4. Select “WORK SUPPORT”.
5. You can register, erase or confirm a keyfob ID code. To register a new code, select the following option and follow CONSULT-III instructions:
   - “REMO CONT ID REGIST”
     Use this mode to register 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:0000000005260098

KEYFOB ID SET UP WITHOUT CONSULT-III



LIIA1670E

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-

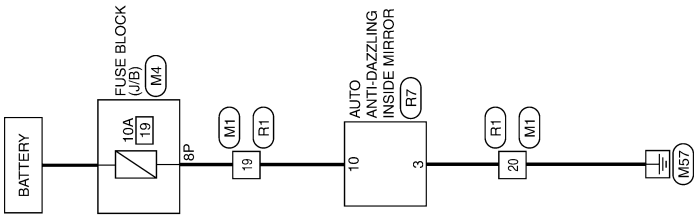
ler ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
To erase all ID codes in memory, register one ID code (keyfob) five times. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.

- 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.

HOMELINK UNIVERSAL TRANSCEIVER

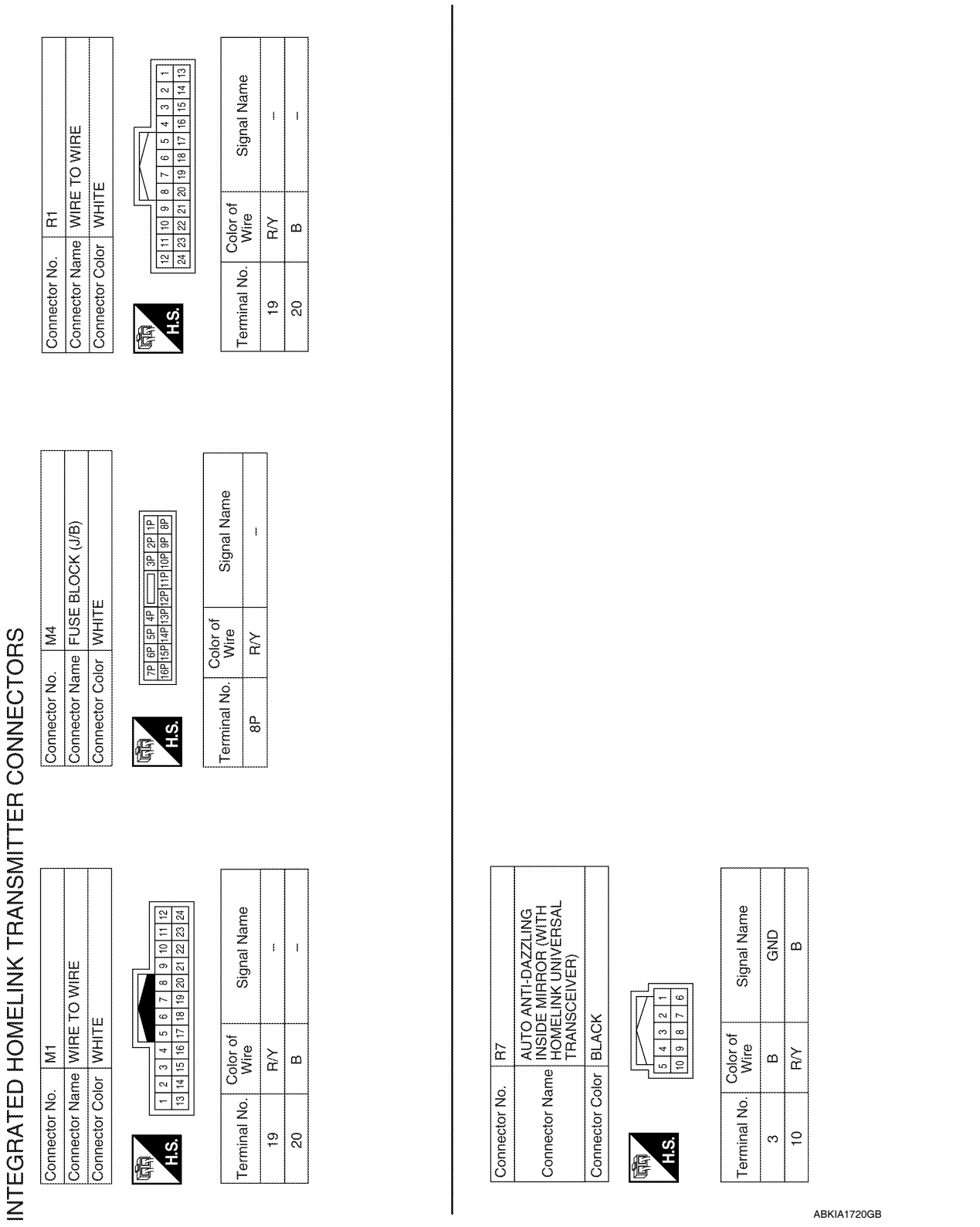
Wiring Diagram

INFOID:0000000005260099



INTEGRATED HOMELINK TRANSMITTER

AWKWA0054GB



Description

INFOID:0000000005260100

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:0000000005260101

1.CHECK FUNCTION

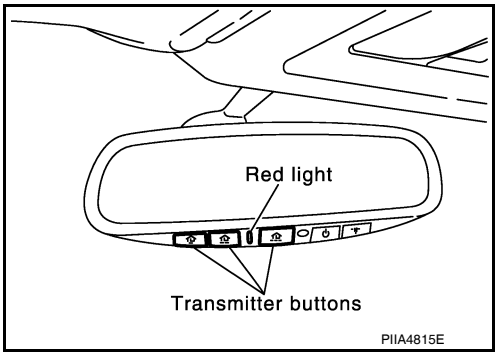
Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter.

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-264, "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).

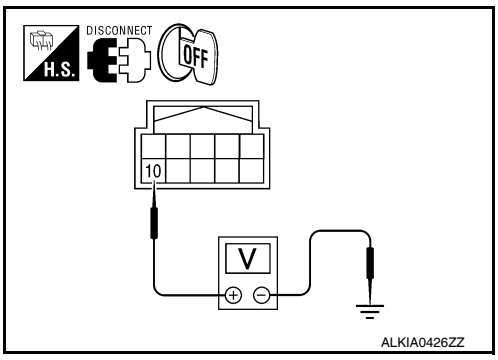
Diagnosis Procedure

INFOID:0000000005260102

Regarding Wiring Diagram information, refer to DLK-262, "Wiring Diagram".

1.CHECK POWER SUPPLY

1. Disconnect auto anti-dazzling inside mirror (homelink universal transceiver) connector.
2. Check voltage between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



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

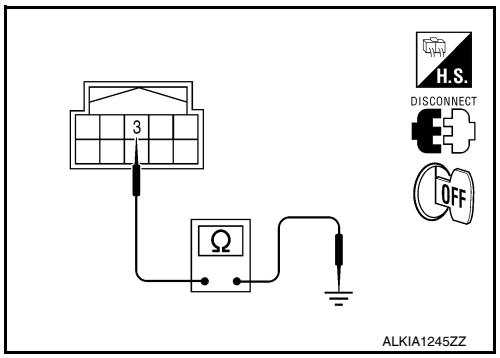
Is the inspection result normal?

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	3		Yes

Is the inspection result normal?

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

3.CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

>> Inspection End.

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005483729

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
HEAD LAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEAD LAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK[1]	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK[1]	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
KEYLESS LOCK[2]	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK[2]	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	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
PUSH SW[1]	Return to ignition switch to LOCK position	OFF
	Press ignition switch	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	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

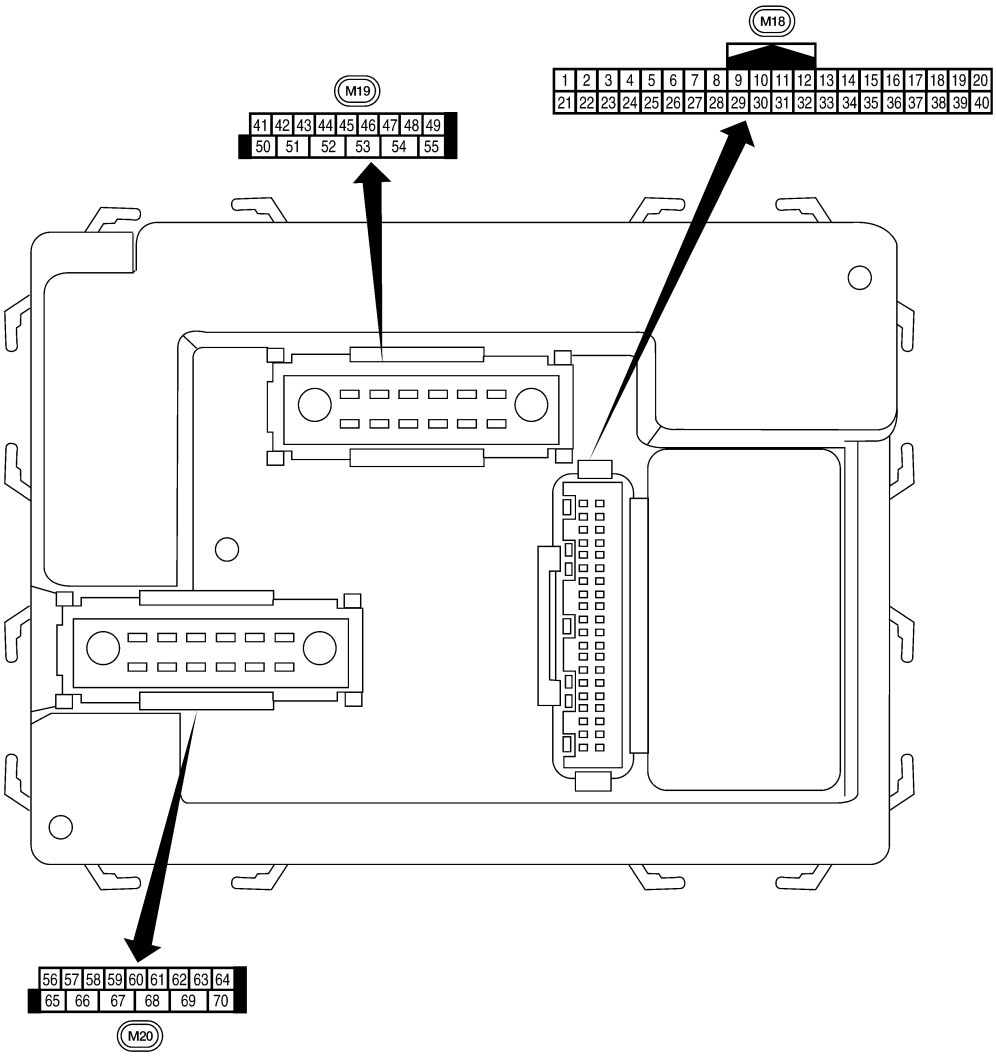
Monitor Item	Condition	Value/Status
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

1: With Intelligent Key

2: With remote keyless entry system

Terminal Layout

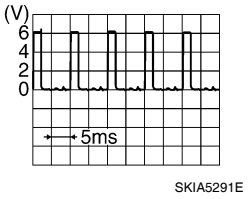
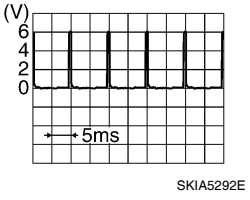
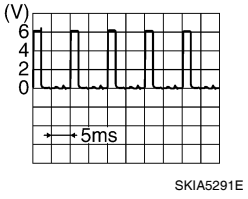
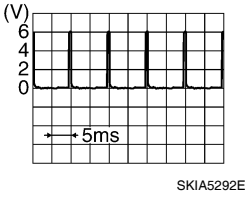
INFOID:0000000005483730

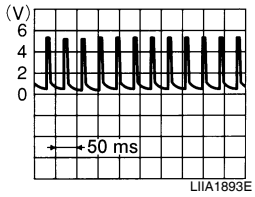
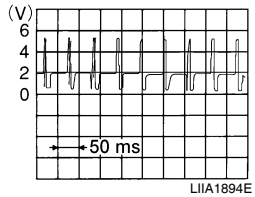
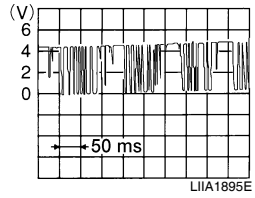
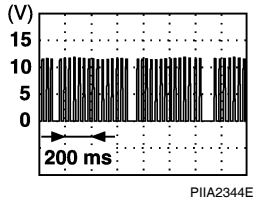


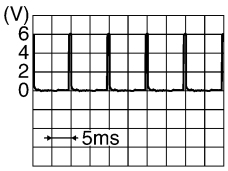
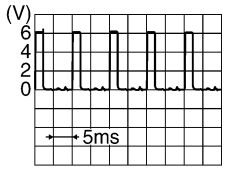
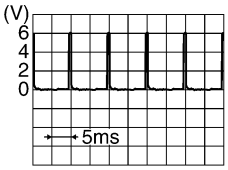
LIIA2443E

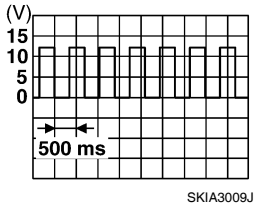
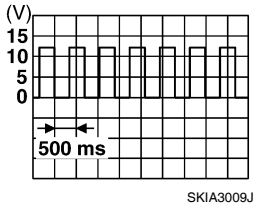
Physical Values

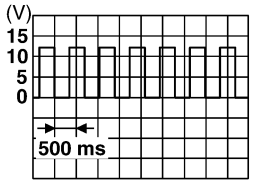
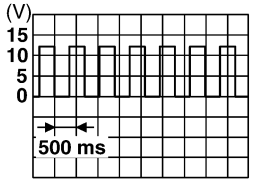
INFOID:0000000005483731

Terminal	Wire color	Signal name	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	R	Combination switch input 1				
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	L	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	—	5V
18	BR	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	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LIIA1893E
20	G	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	GR	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	V	BUS	—	—	Ignition switch ON or power window timer operates	 PIIA2344E
23	G	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.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	LG	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
30[1]	G	Back door opener switch	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
30[2]	SB	Back door opener 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	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	LG	Combination switch output 1				
37[1]	B	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key inserted	0V
37[2]	B	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	LG	Glass hatch ajar switch	Input	ON	Glass hatch open	0V
					Glass hatch closed	Battery voltage
43	P	Back door latch 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	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	GR	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	P	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	O	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
53	L	Back door latch actuator	Output	OFF	OFF	0
					ON	Battery voltage
55	W	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	R/Y	Battery power supply	Input	OFF	—	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage

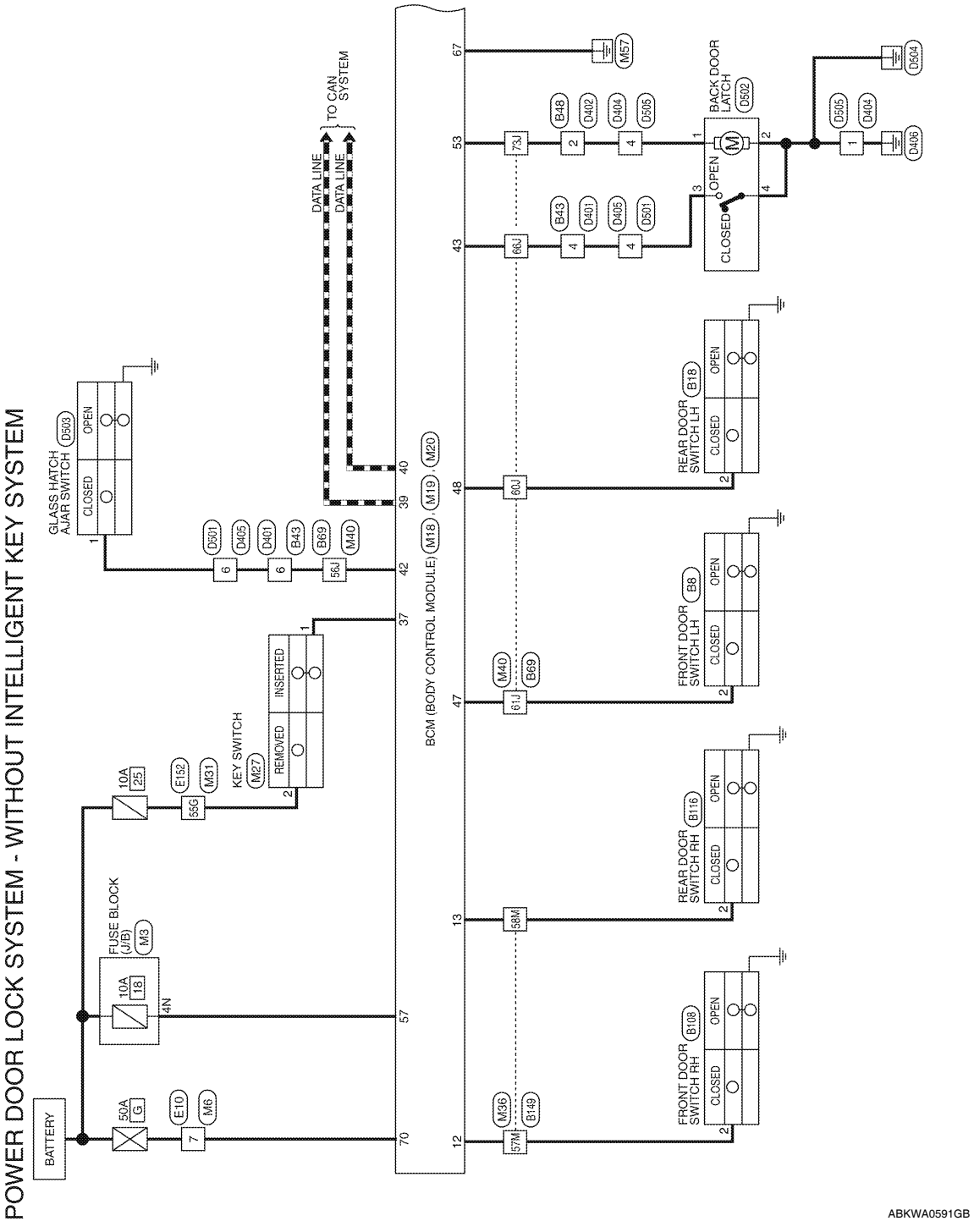
Terminal	Wire color	Signal name	Signal input/ output	Measuring condition			Reference value or waveform (Approx.)
				Ignition switch	Operation or condition		
60	LG	Turn signal (left)	Output	ON	Turn left ON		 SKIA3009J
61	G	Turn signal (right)	Output	ON	Turn right ON		 SKIA3009J
63	BR	Interior room/map lamp	Output	OFF	Any door switch	ON (open)	0V
						OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)		0V
					ON (lock)		Battery voltage
66	L	Front door lock actuator RH, rear door lock actuators LH/RH and glass hatch lock actuator (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
67	B	Ground	Input	ON	—		0V
68	O	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	L	Power window power supply	Output	—	—		Battery voltage
70	W	Battery power supply	Input	OFF	—		Battery voltage

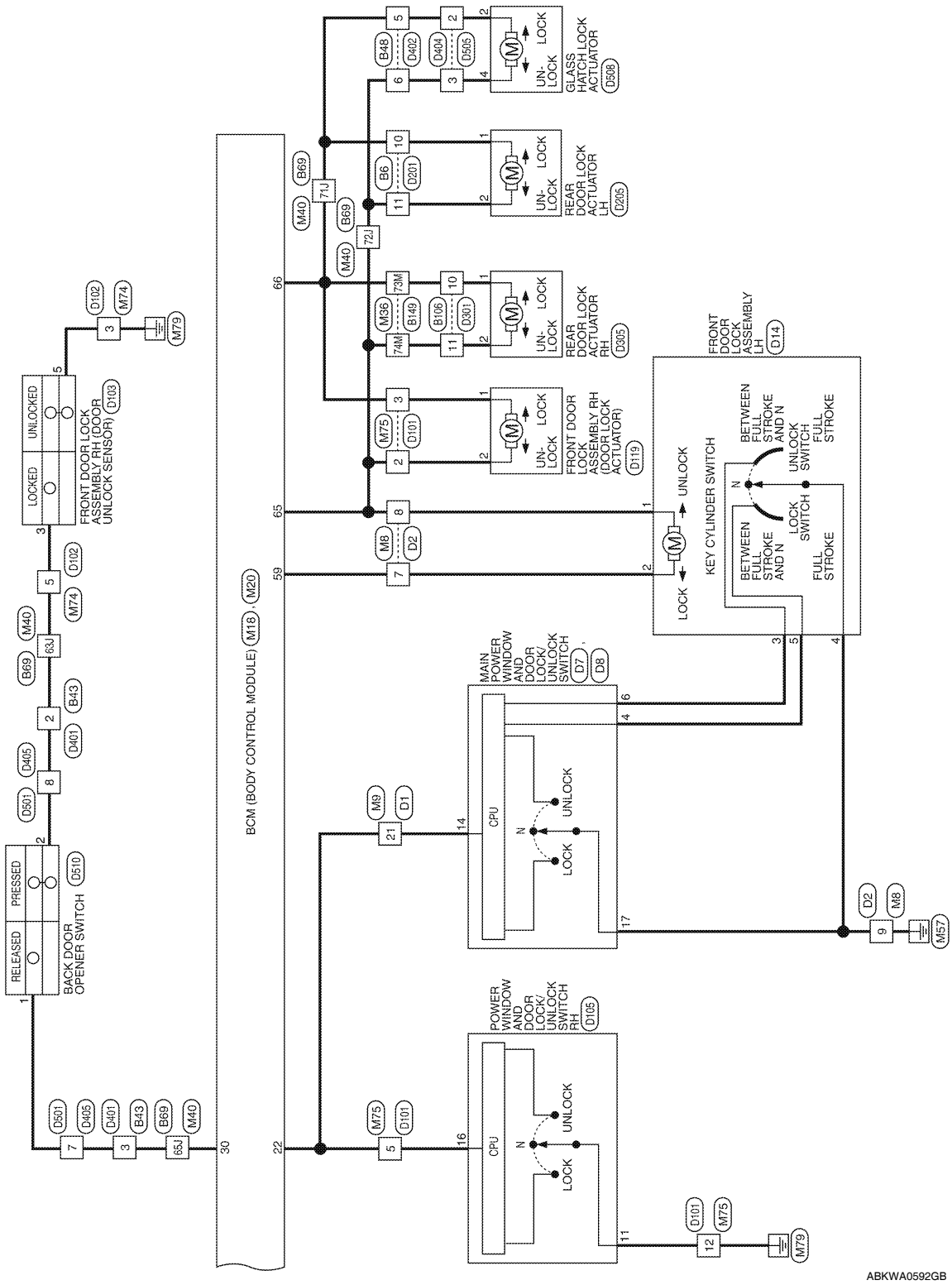
1: With remote keyless entry system

2: With Intelligent Key system

Wiring Diagram — POWER DOOR LOCK SYSTEM —

INFOID:0000000005260106




BCM (BODY CONTROL MODULE)
FRONT DOOR LOCK ASSEMBLY RH (DOOR UNLOCK SENSOR)
BACK DOOR OPENER SWITCH
GLASS HATCH LOCK ACTUATOR
REAR DOOR LOCK ACTUATOR LH
REAR DOOR LOCK ACTUATOR RH
FRONT DOOR LOCK ASSEMBLY RH (DOOR LOCK ACTUATOR)
FRONT DOOR LOCK ASSEMBLY LH
KEY CYLINDER SWITCH
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
CPU
UNLOCK
LOCK
BETWEEN FULL STROKE AND N
UNLOCK SWITCH
LOCK SWITCH
FULL STROKE
ABKWA0592GB

POWER DOOR LOCK SYSTEM CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

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

H.S.

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

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

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	W	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	GR	–
8	V	–
9	B	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
21	V	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
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
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
22	V	ANTI-PINCH SERIAL LINK (RX, TX)
30	G	LIFTGATE OPENER SW
37	B	KEY SW
39	L	CAN-H
40	P	CAN-L

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

H.S.

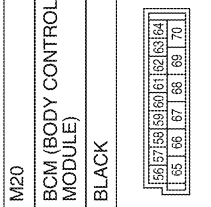
41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
42	LG	GLASS HATCH SW
43	P	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
53	L	LIFTGATE OPENER OUTPUT

ABKIA1736GB

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

H.S.



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

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

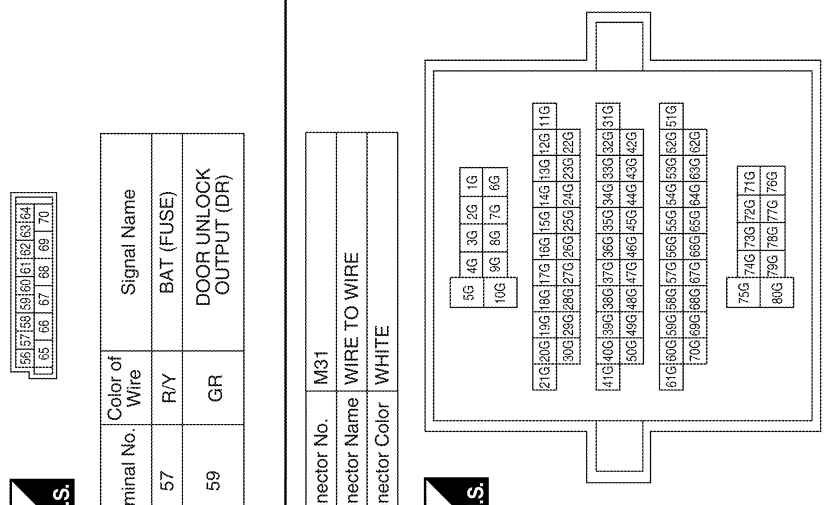
Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE

H.S.

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

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

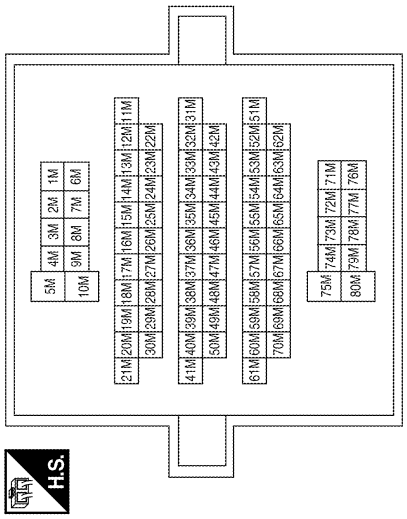
H.S.



Terminal No.	Color of Wire	Signal Name
55G	Y	--

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

H.S.

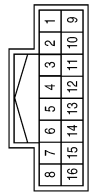


Terminal No.	Color of Wire	Signal Name
57M	LG	--
58M	L	--
73M	SB	--
74M	V	--

ABKIA1737GB

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

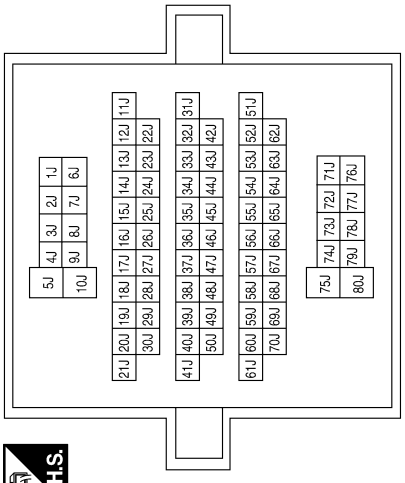
H.S.



Terminal No.	Color of Wire	Signal Name
3	B	–
5	O	–

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

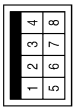
H.S.



Terminal No.	Color of Wire	Signal Name
56J	LG	–
60J	P	–
61J	GR	–
63J	O	–
65J	G	–
66J	P	–
71J	L	–
72J	V	–
73J	L	–

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

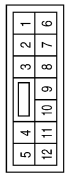
H.S.



Terminal No.	Color of Wire	Signal Name
7	W	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
2	V	–
3	L	–
5	V	–
12	B	–

ABKIA0367GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	GR	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	L	–
11	V	–

Connector No.	B48
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	–
5	V	–
6	G	–

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

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
2	O	–
3	G	–
4	P	–
6	LG	–

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
55G	Y	–

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	P	–

ABKIA0368GB

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	SB	–
11	V	–

Terminal No.	Color of Wire	Signal Name
56J	LG	–
60J	P	–
61J	GR	–
63J	O	–
65J	G	–
66J	P	–
71J	L	–
72J	V	–
73J	L	–

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

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	L	–

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	LG	–

ABKIA1738GB

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
57M	LG	–
58M	L	–
73M	SB	–
74M	V	–

Connector No.	D1
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
21	V	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	G	–
8	V	–
9	B	–

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	SB	KEY CYL LOCK SW
6	R/W	KEY CYL UNLOCK SW
14	V	POWER WINDOW SERIAL LINK

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

ABKIA0370GB

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

H.S.

6	5	4	3	2	1

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	V	–
3	G/Y	–
5	V	–
12	B	–

Connector No.	D102
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
3	B	–
5	O	–

Connector No.	D103
Connector Name	FRONT DOOR LOCK ASSEMBLY RH (DOOR UNLOCK SENSOR)
Connector Color	BLACK

H.S.

5	4	3

Terminal No.	Color of Wire	Signal Name
3	O	–
5	B	–

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	V	POWER WINDOW SERIAL LINK

Connector No.	D119
Connector Name	FRONT DOOR LOCK ASSEMBLY RH (DOOR LOCK ACTUATOR)
Connector Color	WHITE

H.S.

2	1

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

ABKIA1739GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	G	–
11	V	–

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

H.S.

2	1

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

Connector No.	D402
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name
2	L	–
5	V	–
6	G	–

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

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
2	O	–
3	G	–
4	P	–
6	LG	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	G	–
11	V	–

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

H.S.

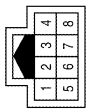
2	1

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

ABKIA0372GB

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

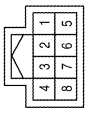
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	--
6	LG	--
7	G	--
8	O	--

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

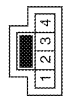
H.S.



Terminal No.	Color of Wire	Signal Name
4	P	--
6	LG	--
7	G	--
8	O	--

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



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

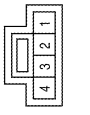
Connector No.	D503
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	--

Connector No.	D404
Connector Name	WIRE TO WIRE
Connector Color	WHITE

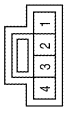
H.S.



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

Connector No.	D502
Connector Name	BACK DOOR LATCH
Connector Color	WHITE

H.S.



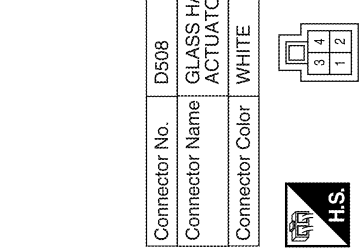
Terminal No.	Color of Wire	Signal Name
1	L	--
2	B	--
3	P	--
4	BR	--

ABKIA1740GB

Connector No.	D510
Connector Name	BACK DOOR OPENER SWITCH (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	BROWN

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

Connector No.	D508
Connector Name	GLASS HATCH LOCK ACTUATOR
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	V	–
4	G	–

ABKIA1780GB

Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —

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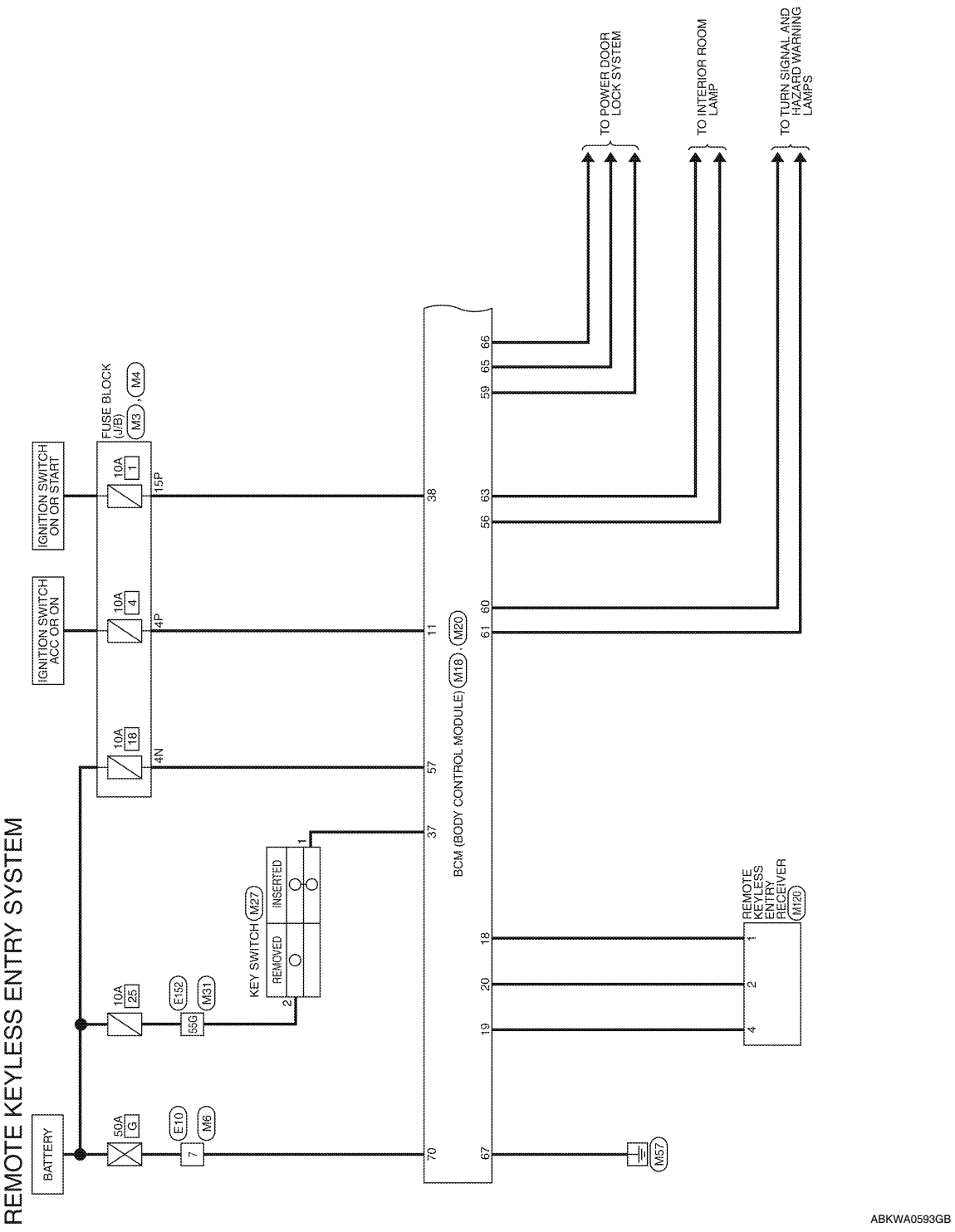
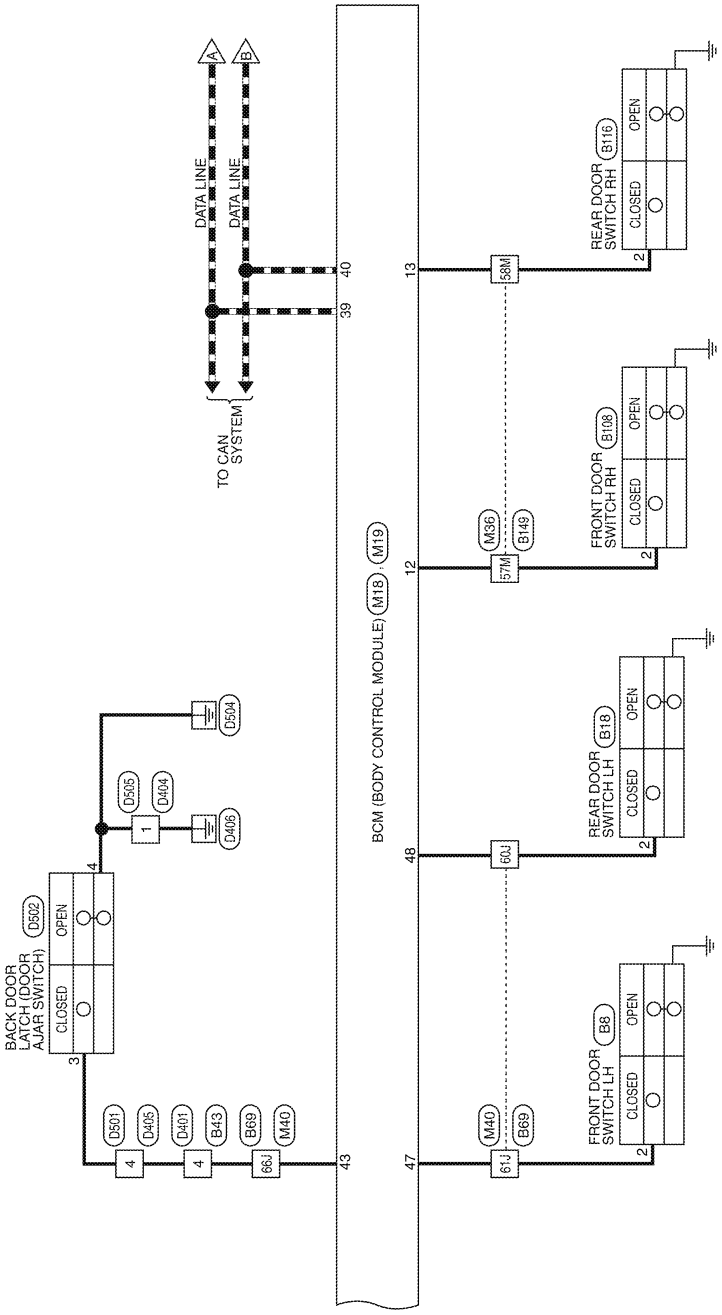
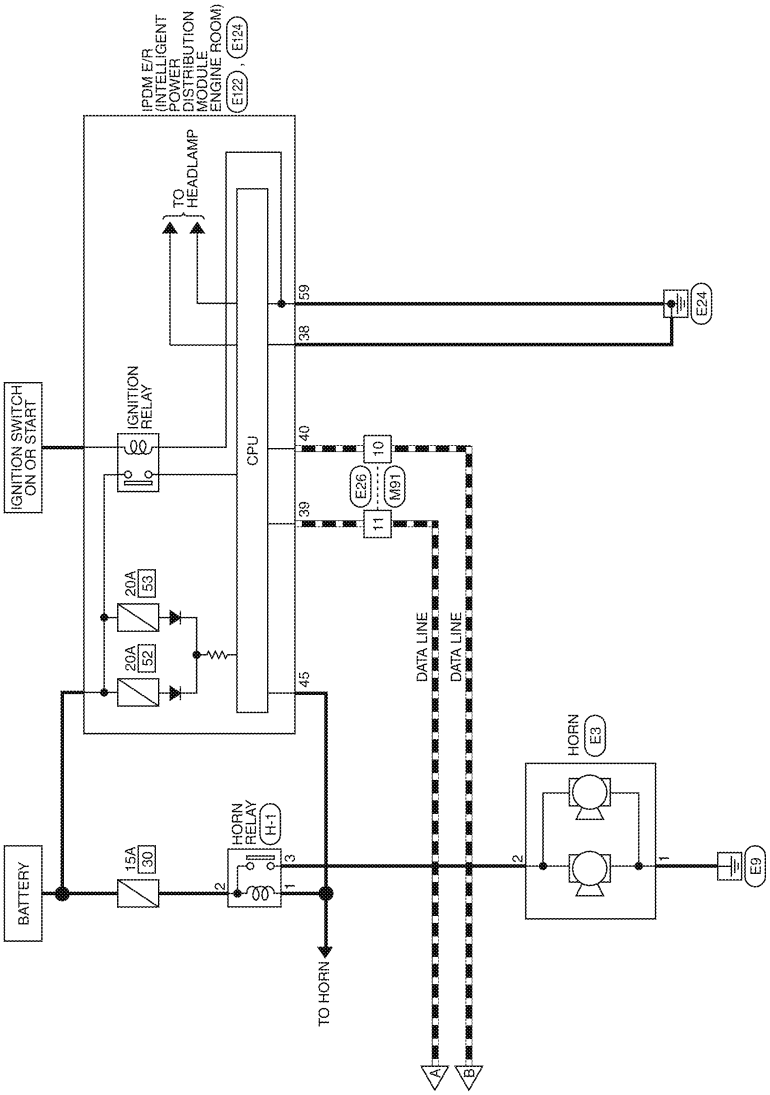




ABKWA0594GB



ABKWA0595GB

REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
4P	G/B	--
15P	W/R	--

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

4	3	2	1
8	7	6	5

Terminal No.	Color of Wire	Signal Name
7	W	--

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
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
11	G/B	ACC SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
18	BR	KEYLESS AND AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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	P	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

ABKIA1741GB

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/Y	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
59	GR	DOOR UNLOCK OUTPUT (DR)

Terminal No.	Color of Wire	Signal Name
60	LG	FLASHER OUTPUT (LEFT)
61	G	FLASHER OUTPUT (RIGHT)
63	BR	ROOM LAMP
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W	BAT (F/L)

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE

H.S.

2	1

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

Terminal No.	Color of Wire	Signal Name
55G	Y	–

ABKIA1742GB

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
57M	LG	–
58M	L	–

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

H.S.

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

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
60J	P	–
61J	GR	–
66J	P	–

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
10	P	–
11	L	–

ABKIA0389GB

Connector No.	M120
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	BR	GND
2	G	SIGNAL
4	V	PWR

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK

H.S.

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

Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

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	LG	ANT THEFT HORN

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

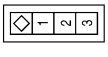
H.S.

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

ABKIA1743GB

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

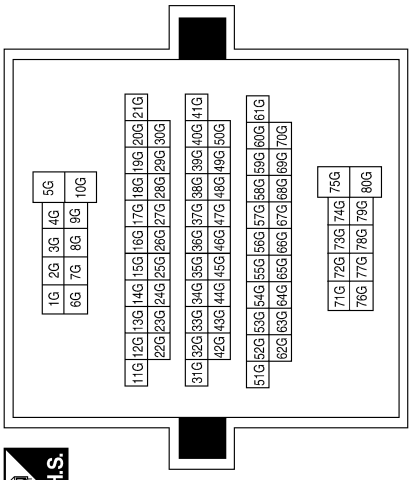
H.S.



Terminal No.	Color of Wire	Signal Name
2	GR	–

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

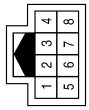
H.S.



Terminal No.	Color of Wire	Signal Name
55G	Y	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–

ABKIA0391GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	LG	–

Terminal No.	Color of Wire	Signal Name
57M	LG	–
58M	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
60J	P	–
61J	GR	–
66J	P	–

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

H.S.

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

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–

ABKIA0392GB

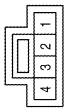
Connector No.	D401
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	P	–

Connector No.	D404
Connector Name	WIRE TO WIRE
Connector Color	WHITE

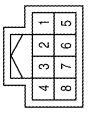
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
4	P	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
4	P	–

Connector No.	D502
Connector Name	BACK DOOR LATCH
Connector Color	WHITE

H.S.

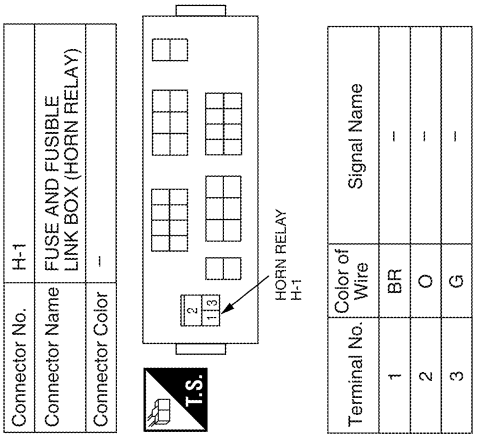
Terminal No.	Color of Wire	Signal Name
3	P	–
4	BR	–

Connector No.	D505
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	–

ABKIA1744GB



ABKIA1745GB

Fail Safe

INFOID:0000000005483732

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID:0000000005483733

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
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:0000000005483734

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-33
B2013: STRG COMM 1	—	—	—	SEC-29
B2190: NATS ANTENNA AMP	—	—	—	SEC-32 (with I-Key), SEC-136 (without I-Key)
B2191: DIFFERENCE OF KEY	—	—	—	SEC-35 (with I-Key), SEC-139 (without I-Key)
B2192: ID DISCORD BCM-ECM	—	—	—	SEC-36 (with I-Key), SEC-140 (without I-Key)
B2193: CHAIN OF BCM-ECM	—	—	—	SEC-38 (with I-Key), SEC-142 (without I-Key)
B2552: INTELLIGENT KEY	—	—	—	SEC-40
B2590: NATS MALFUNCTION	—	—	—	SEC-41
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 SWITCH	—	—	—	—

SYMPTOM DIAGNOSIS

DOOR LOCK

Symptom Table

INFOID:0000000005260111

DOOR LOCK SYSTEM

NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to DLK-204, "Work Flow".
- If the following symptoms” are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

Symptom	Repair order	Refer to page
Key reminder door function does not operate properly.	1. Door switch check	DLK-226
	2. Key switch (Insert) check	DLK-256
	3. Replace BCM.	BCS-59
Power door lock does not operate with door lock and unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH.	1. Door lock/unlock switch check (driver side)	DLK-231
	2. Door lock/unlock switch check (passenger side)	DLK-233
Specific door lock actuator does not operate.	1. Door lock actuator check (Front LH)	DLK-240
	2. Door lock actuator check (Front RH)	DLK-241
	3. Door lock actuator check (Rear LH)	DLK-242
	4. Door lock actuator check (Rear RH)	DLK-244
	5. Back door lock actuator check	DLK-245
	6.Glass hatch lock actuator check	DLK-247
Back door does not operate using back door opener switch (door locks are open).	1. Check back door opener switch	DLK-236
	2. Check back door lock actuator.	DLK-245
Glass hatch does not open using glass hatch ajar switch (door locks are open).	1. Check glass hatch ajar switch	DLK-229
	2. Check glass hatch lock actuator.	DLK-247
Power door lock does not operate with front door key cylinder LH operation.	1. Front door lock assembly LH (key cylinder switch) check	DLK-238
	2. Replace BCM.	BCS-59
Power door lock does not operate.	1. BCM power supply and ground circuit check	BCS-34
	2. Door lock/unlock switch check (driver)	DLK-231
	3. Door lock/unlock switch check (passenger)	DLK-233
Vehicle speed sensing auto LOCK operation does not operate.	1. Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-219
	2. Check combination meter vehicle speed signal.	MWI-28
	3. Check intermittent incident.	GI-37
Ignition OFF interlock door UNLOCK function does not operate.	1. Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-219
	2. Check BCM for DTCs.	DLK-298
	3. Check intermittent incident.	GI-37

REMOTE KEYLESS ENTRY SYSTEM

Symptom Table

INFOID:0000000005260112

REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
	2. Check BCM and remote keyless entry receiver.	DLK-249
The new ID of keyfob cannot be entered.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
	2. Key switch (insert) check	DLK-256
	3. Door switch check	DLK-226
	4. ACC power check	BCS-34
	5. Replace BCM.	BCS-59
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-214
	2. Replace BCM.	BCS-59
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	1. Check hazard and horn reminder mode with CONSULT-III **NOTE:** Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	DLK-214
	2. Door switch check	DLK-226
	3. Replace BCM.	BCS-59
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder OK)	1. Check hazard reminder mode with CONSULT-III **NOTE:** Hazard reminder mode can be changed. First check the hazard reminder mode setting.	DLK-220
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	BCS-59
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	1. Check horn reminder mode with CONSULT-III **NOTE:** Horn reminder mode can be changed. First check the horn reminder mode setting.	DLK-214
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	DLK-253
	4. Replace BCM.	BCS-59
Room lamp and ignition keyhole illumination do not operate properly.	1. Room lamp operation check	INL-3
	2. Ignition keyhole illumination operation check	INL-3
	3. Door switch check	DLK-226
	4. Replace BCM.	BCS-59

Symptom	Diagnoses/service procedure	Reference page
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) **NOTE:** If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
	2. Key switch (insert) check	DLK-256
	3. Replace BCM.	BCS-59
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode with CONSULT-III **NOTE:** Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	DLK-212
	2. Replace BCM.	BCS-59
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check power window down operation mode with CONSULT-III **NOTE:** Power window down operation mode can be changed. First check the power window down operation mode setting.	DLK-220
	2. Check power window function with switch	PWC-5
	3. Replace BCM.	BCS-59

HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

INFOID:0000000005260113

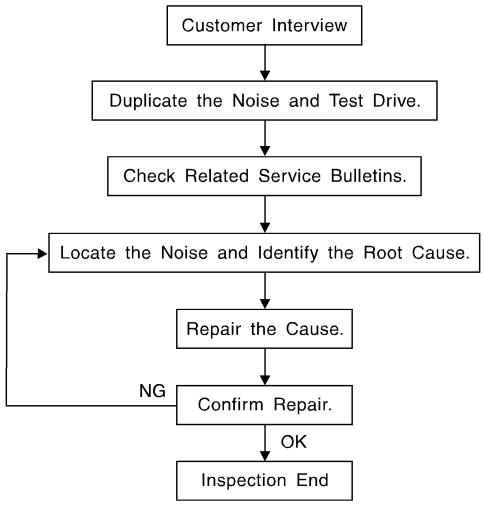
HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	DLK-264
	2. Check Intermittent Incident.	GI-37

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000005260114



SBT842

CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to DLK-308, "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: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:

- removing the components in the area that you suspect the noise is coming from.
  Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
  Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks.
  Refer to DLK-306, "Generic Squeak and Rattle Troubleshooting".

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
- separate components by repositioning or loosening and retightening the component, if possible.
- insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through your authorized NISSAN Parts Department.

CAUTION:
Do not use excessive force as many components are constructed of plastic and may be damaged.
Always check with the Parts Department for the latest parts information.
The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.
URETHANE PADS [1.5 mm (0.059 in) thick]
Insulates connectors, harness, etc.
76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)
INSULATOR (Foam blocks)
Insulates components from contact. Can be used to fill space behind a panel.
73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)
INSULATOR (Light foam block)
80845-71L00: 30 mm (1.18 in) thick, 30×50 mm (1.18×1.97 in)
FELT CLOTH TAPE
Used to insulate where movement does not occur. Ideal for instrument panel applications.
68370-4B000: 15×25 mm (0.59×0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following materials not found in the kit can also be used to repair squeaks and rattles.
UHMW (TEFLON) TAPE
Insulates where slight movement is present. Ideal for instrument panel applications.

SILICONE GREASE
Used instead of UHMW tape that will be visible or not fit.
Note: Will only last a few months.
SILICONE SPRAY
Use when grease cannot be applied.
DUCT TAPE
Use to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Generic Squeak and Rattle Troubleshooting

INFOID:0000000005260115

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar garnish
4. Instrument panel to windshield
5. Instrument panel mounting pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

CAUTION:
Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.

CENTER CONSOLE

Components to pay attention to include:

1. Shifter assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.
In addition look for:

1. Trunk lid bumpers out of adjustment
2. Trunk lid striker out of adjustment
3. The trunk lid torsion bars knocking together
4. A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sun visor shaft shaking in the holder
3. Front or rear windshield touching headliner and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.
In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lense loose.
3. Loose screws at console attachment points.

SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.
Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.
Causes of transmitted underhood noise include:

1. Any component mounted to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator mounting pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

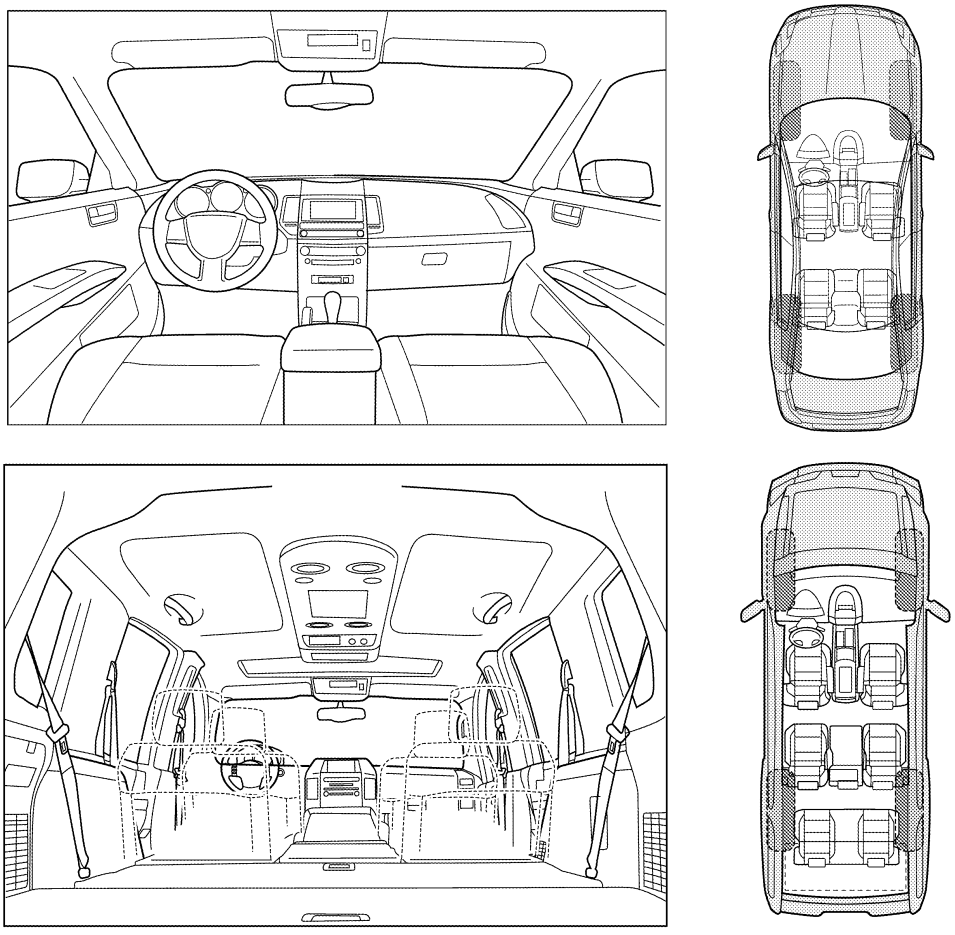
Diagnostic Worksheet

INFOID:0000000005260116

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.

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:0000000005503160

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

WARNING:

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

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

WARNING:

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

Precaution for work

INFOID:0000000005260118

- 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.

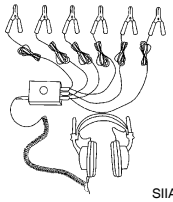
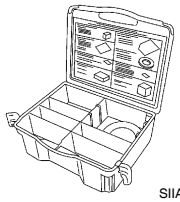
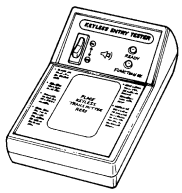
PREPARATION

PREPARATION

Special Service Tool

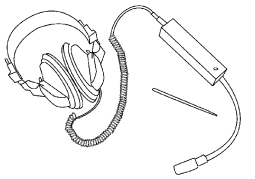
INFOID:0000000005260119

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:0000000005260120

(Kent-Moore No.) Tool name	Description
(J-39565) Engine ear  SIIA0995E	Locating the noise

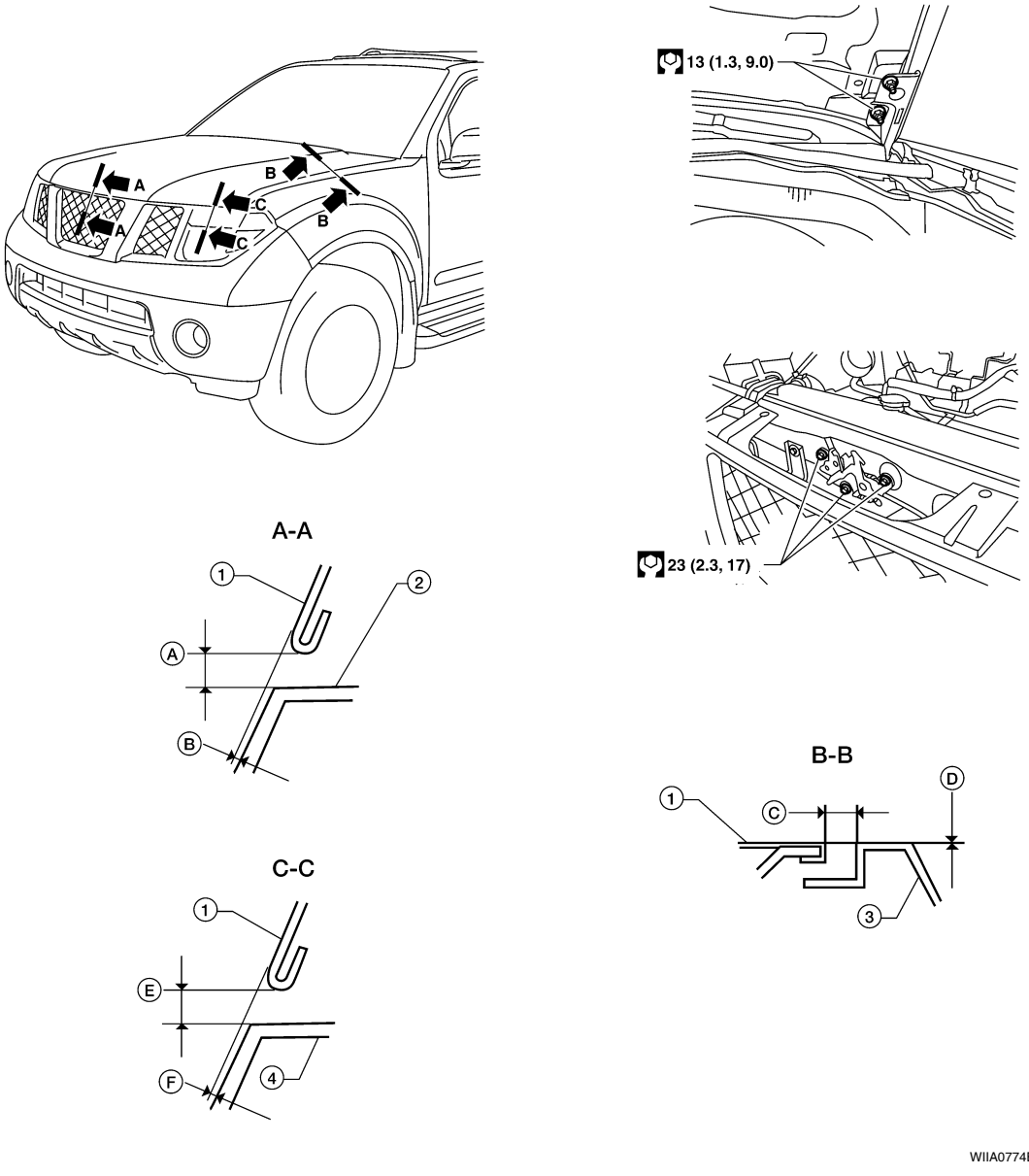
ON-VEHICLE REPAIR

HOOD

Fitting Adjustment

INFOID:0000000005260121

SEC.650



WIIA0774E

1. Hood
2. Front grille
3. Front fender
4. Headlamp assembly
A. 6.0 mm (0.24 in)
B. 0.7 mm (0.03 in)
C. 4.5 mm (0.18 in)
D. 0.0 mm (0.0 in)
E. 6.0 mm (0.24 in)
F. 0.7 mm (0.03 in)

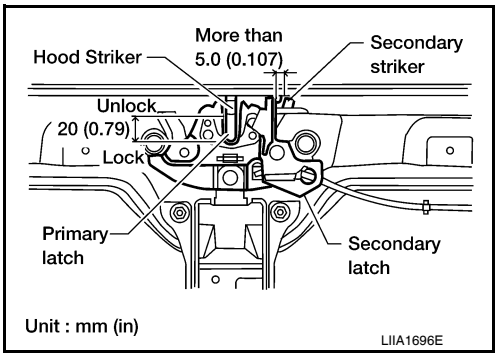
CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Loosen the hood lock assembly and adjust the rubber bumpers until the surface height of the hood becomes 1 mm (0.04 in) lower than the fender.
3. Engage the hood striker and temporarily tighten.
4. Check the lock and striker for looseness.

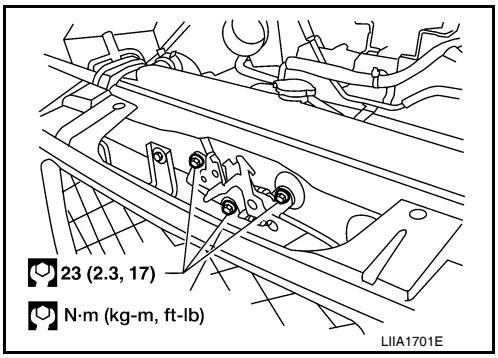
5. Tighten the bolts to specification.
6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
7. Install the front grille. Refer to EXT-18, "Removal and Installation".

HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).
   CAUTION:
   Do not drop the hood from 300 mm (11.81 in) height or higher.



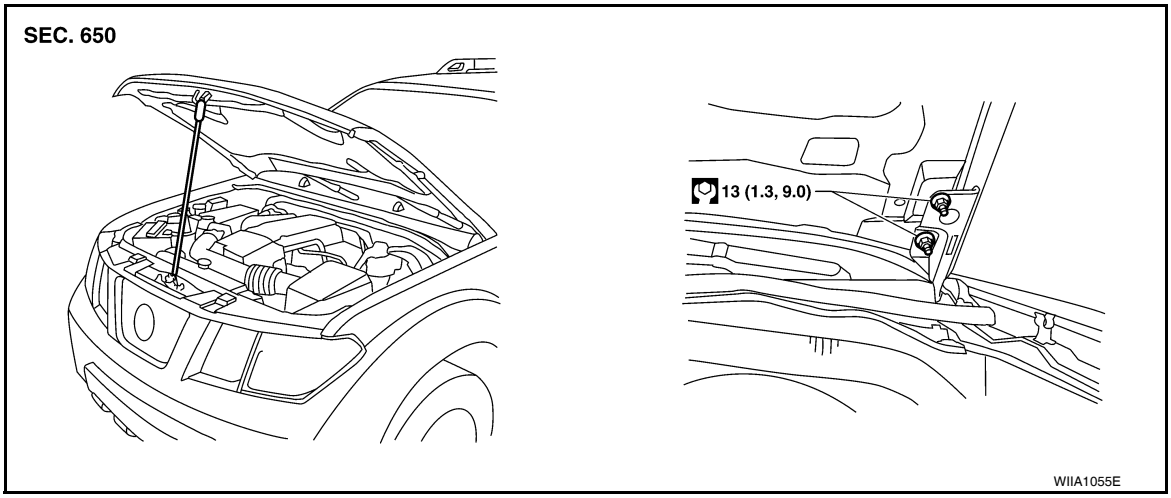
4. After adjusting hood lock, tighten the lock bolts to the specified torque.



5. Install the front grille. Refer to EXT-18, "Removal and Installation".

Removal and Installation of Hood Assembly

INFOID:0000000005260122

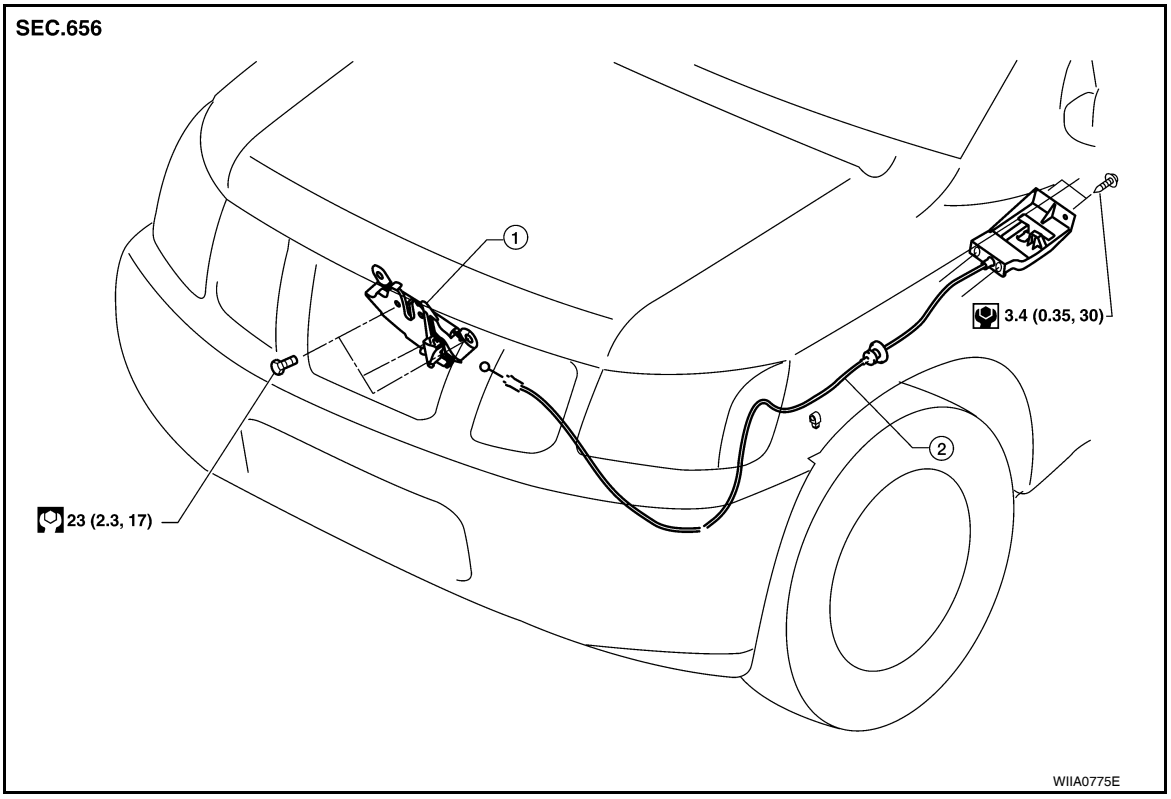


1. Support the hood striker with suitable tool to prevent it from falling.
2. Remove the hinge nuts from the hood to remove the hood assembly.

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:0000000005260123



1. Hood lock assembly
2. Hood lock cable

REMOVAL

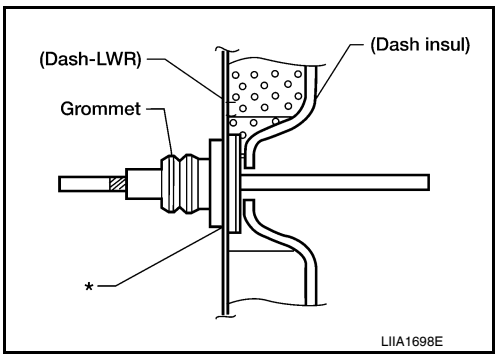
1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
2. Remove the front fender protector (LH). Refer to EXT-23, "Removal and Installation of Front Fender Protector".
3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
4. Remove the bolts, and the hood release handle.
5. Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.
   CAUTION:
   While pulling, be careful not to damage the outside of the hood lock cable.

INSTALLATION

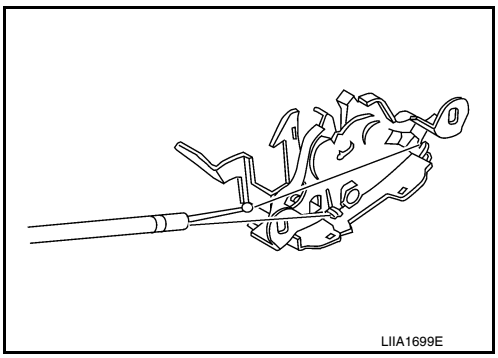
1. Pull the hood lock cable through the lower dash panel hole into the engine room.

Be careful not to bend the cable too much, keep the radius 100mm (3.94 in) or more.

2. Make sure the cable is not offset from the grommet, and push the grommet into the lower dash panel hole securely.
3. Apply sealant around the grommet at * mark.



4. Install the cable securely to the lock.
5. Adjust the hood lock. Refer to DLK-316, "Hood Lock Control Inspection".



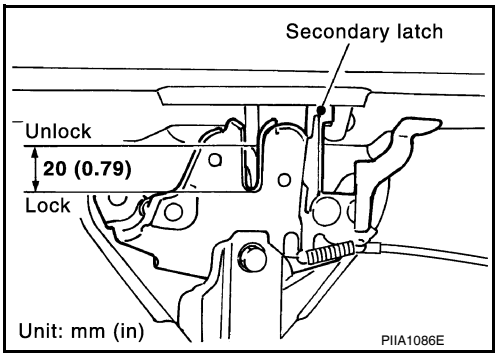
6. Install the front grille. Refer to EXT-18, "Removal and Installation".

Hood Lock Control Inspection

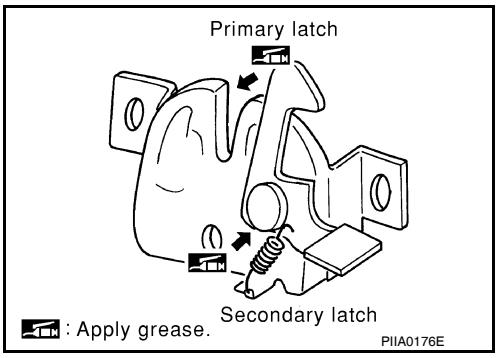
INFOID:0000000005260124

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

1. Remove the front grille. Refer to EXT-18, "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.

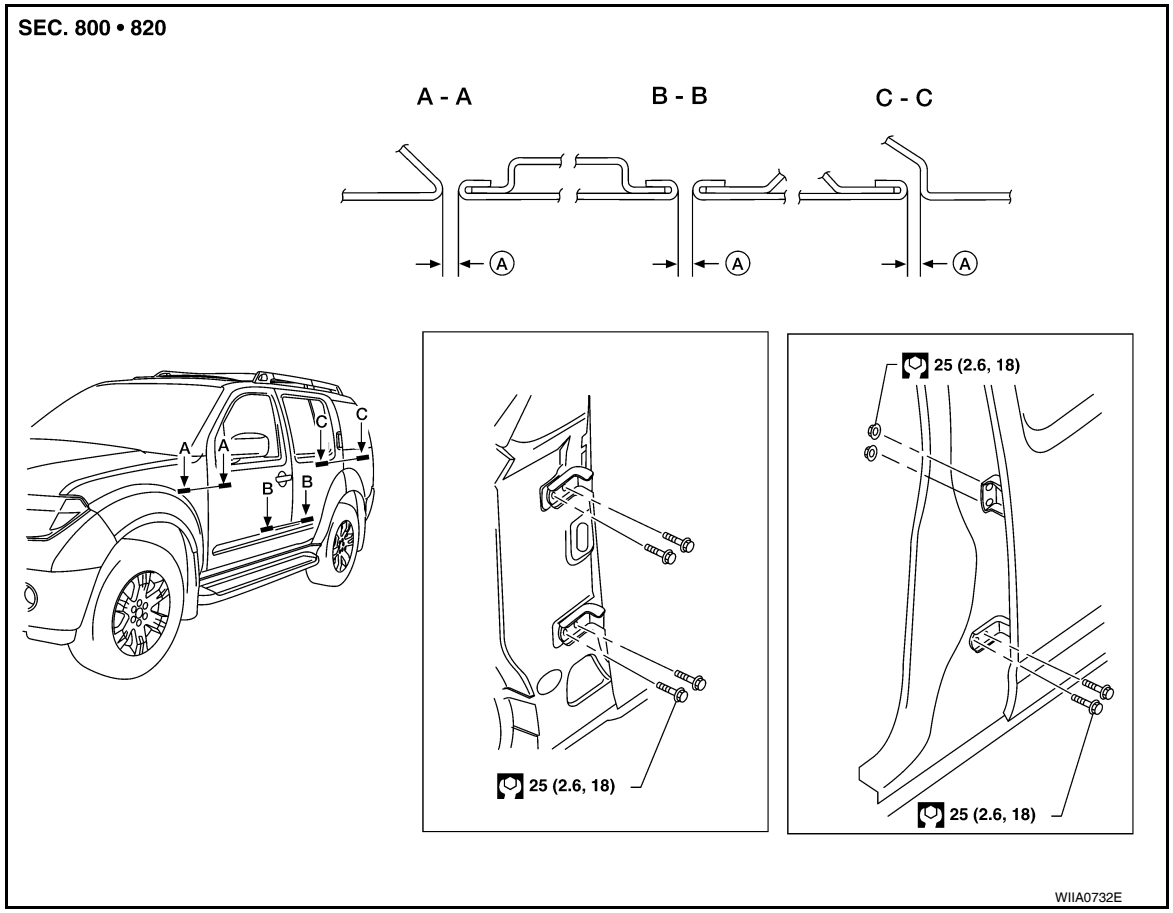


5. Install the front grille. Refer to EXT-18, "Removal and Installation".

DOOR

Fitting Adjustment

INFOID:0000000005260125



A. 4.5 ± 1.0 mm (0.177 ± 0.039 in)

Front door

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to EXT-20, "Removal and Installation".
2. Loosen the hinge bolts. Raise or lower the front door at rear end to adjust.
3. Install the fender. Refer to EXT-20, "Removal and Installation".

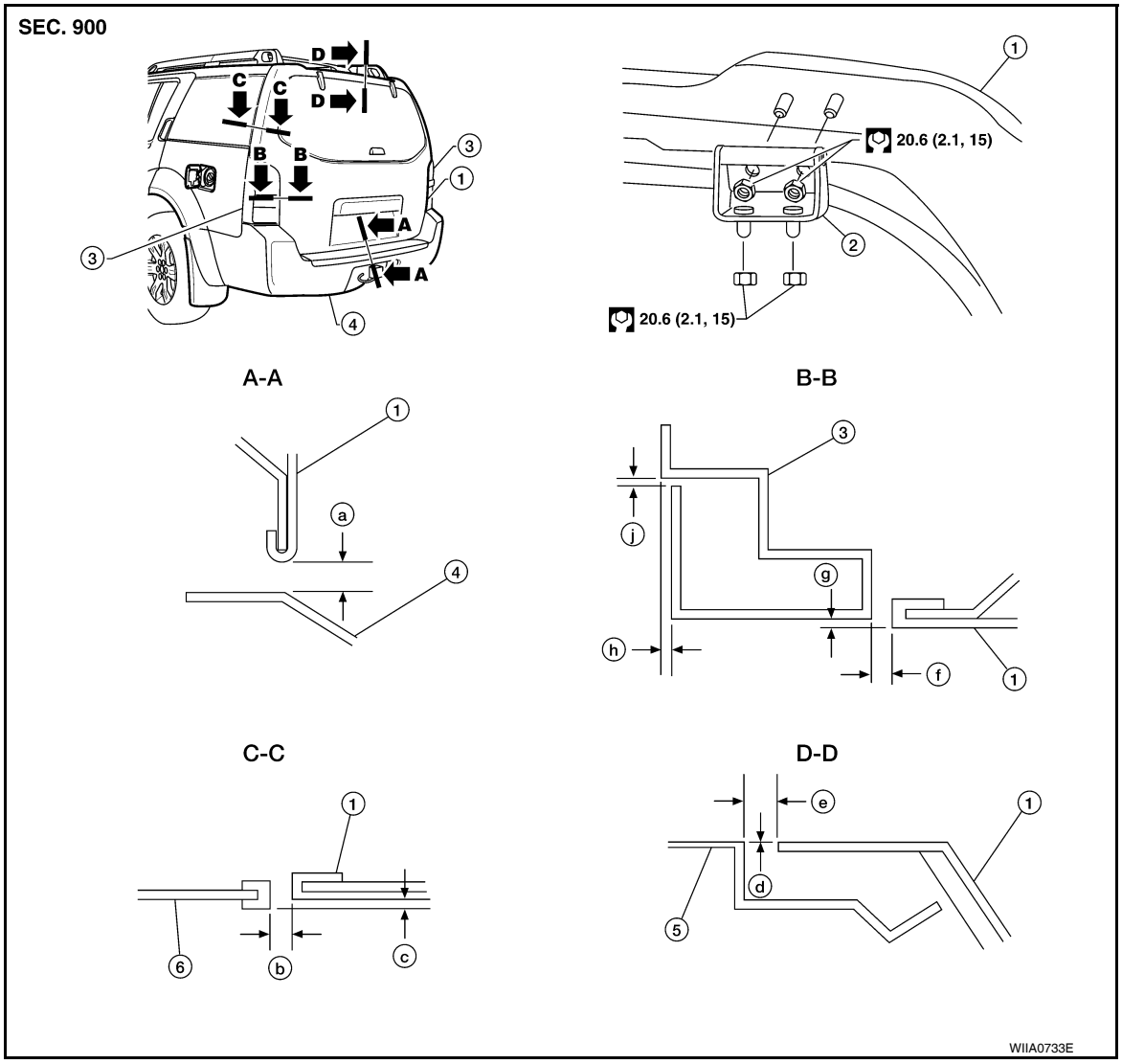
Rear door

Longitudinal clearance and surface height adjustment at front end

1. Remove the center pillar upper finisher. Refer to INT-17, "Removal and Installation".
2. Loosen the lower hinge bolts.
3. From inside the vehicle, loosen the upper hinge nuts. Open the door, and raise or lower the rear end of the door to adjust.
4. Install the center pillar lower finisher. Refer to INT-17, "Removal and Installation".

Back door

Longitudinal clearance and surface height adjustment



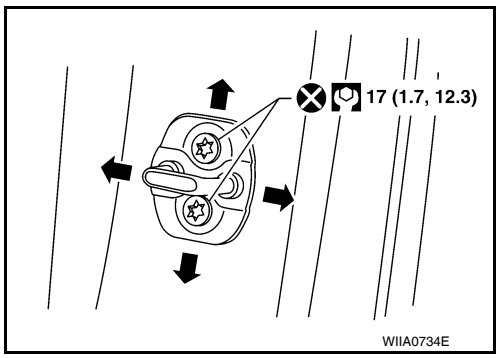
1.	Back door assembly	2.	Back door hinge	3.	Tail lamp assembly
4.	Rear bumper fascia	5.	Roof	6.	Side window glass
a.	7.2 ± 2.0 mm (0.28 ± 0.06 in)	b.	6.0 ± 1.5 mm (0.24 ± 0.06 in)	c.	2.0 ± 2.0 mm (0.08 ± 0.08 in)
d.	1.0 ± 1.5 mm (0.04 ± 0.06 in)	e.	8.0 ± 1.5 mm (0.31 ± 0.06 in)	f.	5.3 ± 2.0 mm (0.21 ± 0.08 in)
g.	0.8 ± 2.0 mm (0.03 ± 0.08 in)	h.	0.8 ± 1.0 mm (0.03 ± 0.04 in)	j.	2.0 ± 1.0 mm (0.08 ± 0.04 in)

1. Open and support the back door.
2. Slightly loosen the hinge nuts.
3. Reposition the door as necessary and tighten the nuts.
4. Confirm the adjustment. Repeat as necessary to obtain the desired fit.

Striker adjustment

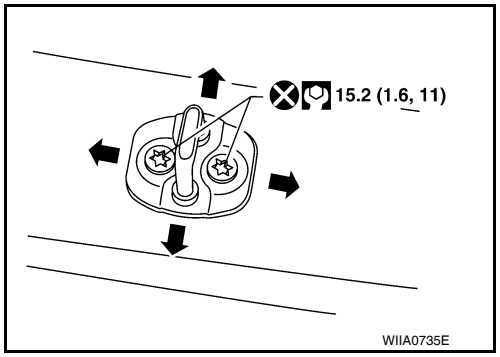
BODY SIDE DOORS

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



BACK DOOR

1. Adjust the striker so that it becomes parallel with the lock insertion direction.



Removal and Installation

INFOID:0000000005260126

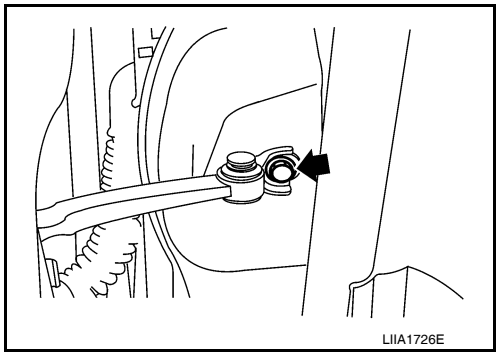
FRONT DOOR

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 front door glass and regulator. Refer to GW-15, "Front Door Glass Regulator".
2. Remove the door harness.
3. Remove the check link bolt from the hinge pillar.

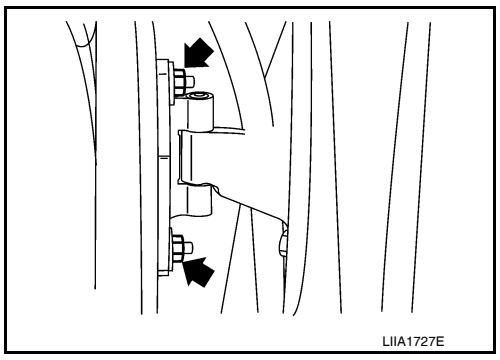
Check link to hinge pillar bolt **14.7 N·m (1.5 kg-m, 11 ft-lb)**



4. Remove the door-side hinge nuts, and the door assembly.

Door hinge nuts **24.5 N·m (2.5 kg-m, 18 ft-lb)**

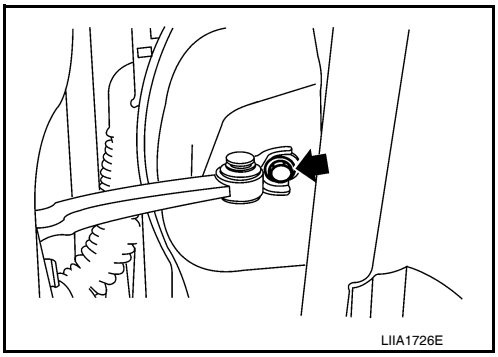
Installation is in the reverse order of removal.



REAR DOOR

1. Remove the door finisher. Refer to INT-14, "Removal and Installation".
2. Remove the inner seal.
3. Remove the rear door glass and regulator. Refer to GW-19, "Rear Door Glass Regulator".
4. Remove the door harness.
5. Remove the check link bolt from the hinge pillar.

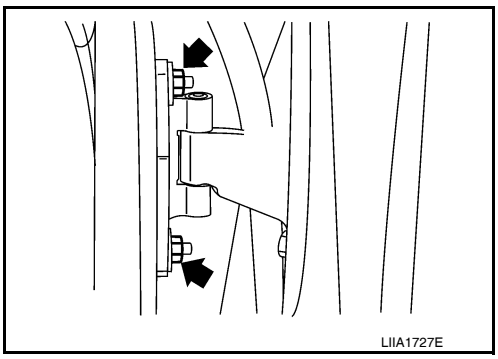
Check link to hinge pillar bolt **14.7 N·m (1.5 kg-m, 11 ft-lb)**



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

Door hinge nuts **24.5 N·m (2.5 kg-m, 18 ft-lb)**

Installation is in the reverse order of removal.



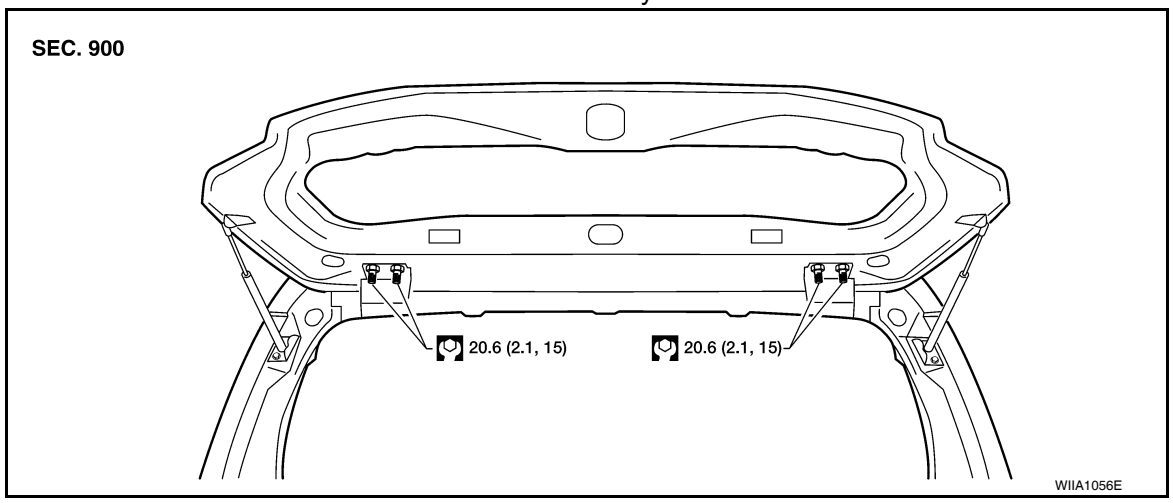
BACK DOOR

1. Remove the glass hatch. Refer to GW-24, "Removal and Installation".
2. Remove the license lamp finisher. Refer to EXT-21, "Removal and Installation".
3. Remove the back door lock assembly. Refer to DLK-326, "Component Structure".
4. Remove the back door wire harness.
5. Remove the rear washer nozzle and hose from the back door. Refer to WW-83, "Removal and Installation"

CAUTION:
Two technicians should be used to avoid damaging the back door during removal.

6. Support the back door.
7. Remove the back door stays.

8. Remove the door side nuts and the back door assembly.



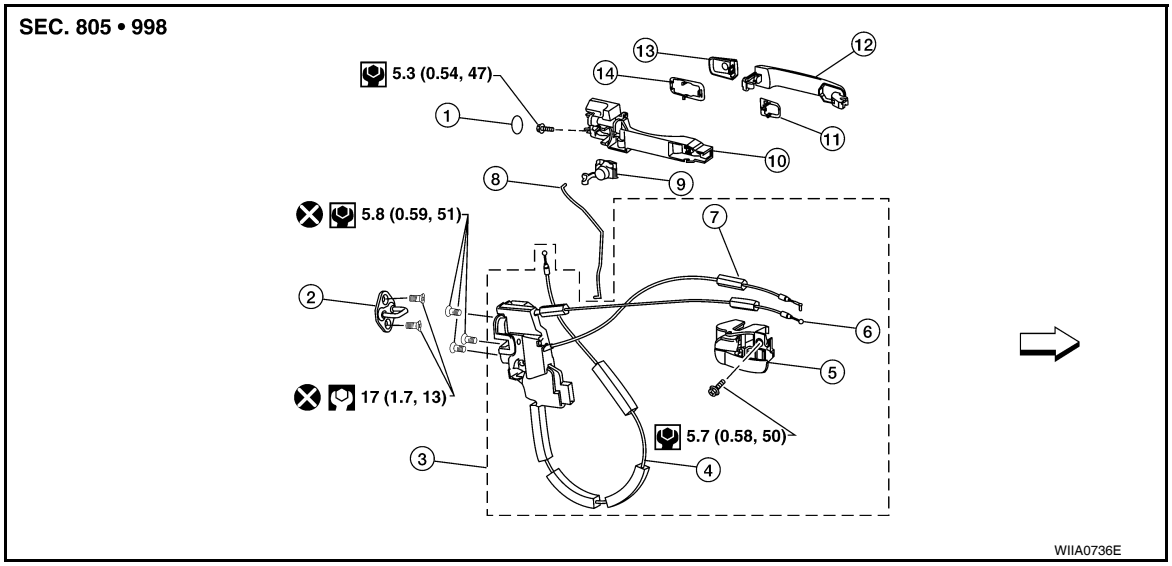
Installation is in the reverse order of removal.

- Align the back door. Refer to DLK-317, "Fitting Adjustment".

FRONT DOOR LOCK

Component Structure

INFOID:0000000005260127



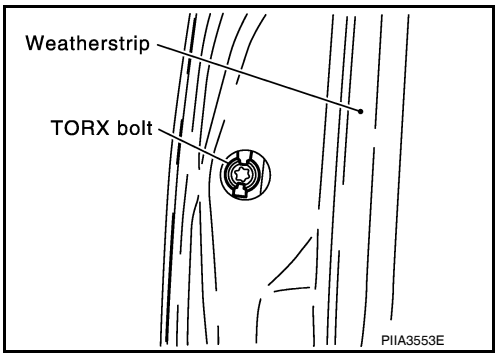
1. Grommet
2. Front door striker
3. Door lock assembly
4. Outside handle cable
5. Inside handle assembly
6. Inside handle cable
7. Door lock cable
8. Key cylinder rod (Driver side only)
9. Door key cylinder
10. Outside handle bracket
11. Front gasket
12. Outside handle
13. Door key cylinder assembly (Driver side) Outside handle escutcheon (Passenger side)
14. Rear gasket
⇐ Vehicle front

Removal and Installation

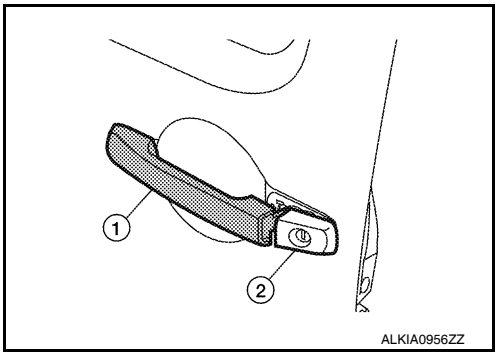
INFOID:0000000005260128

REMOVAL

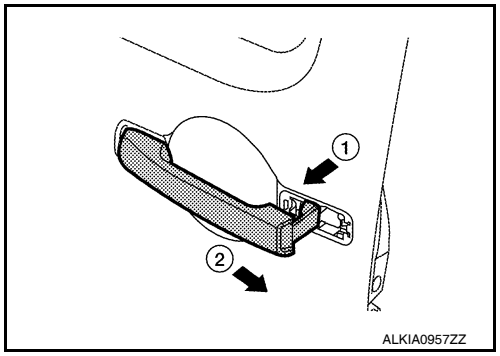
1. Remove the front door window regulator. Refer to GW-15, "Front Door Glass Regulator".
2. Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



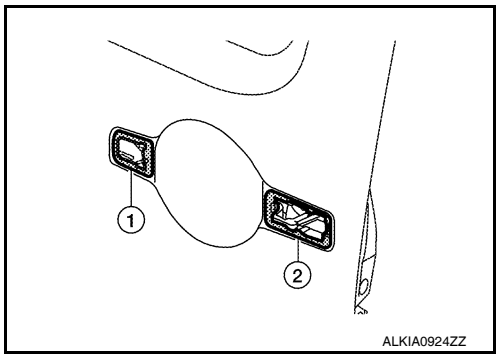
3. While pulling the outside handle (1), remove door key cylinder assembly or escutcheon (2).



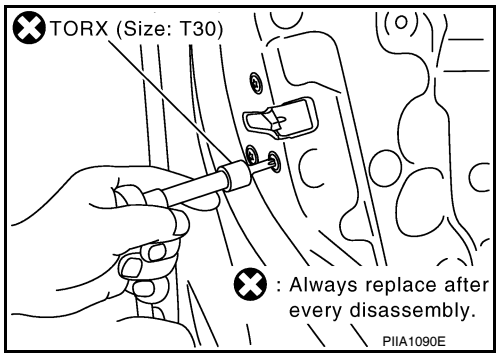
4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.
5. While pulling outside handle (1), slide toward rear of vehicle (2) to remove outside handle.



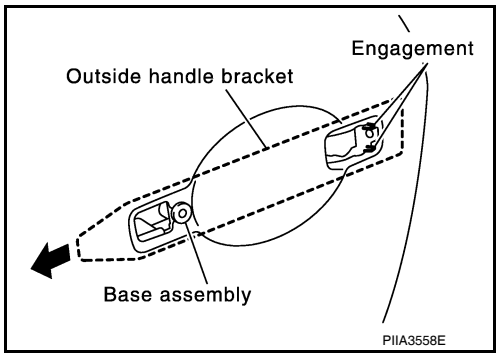
6. Remove the front gasket (1) and rear gasket (2).



7. Remove the TORX bolts (T30), remove the door lock assembly.

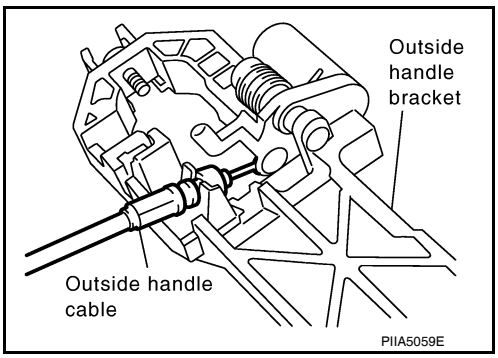


8. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket and door lock assembly as shown.



9. Disconnect the door lock actuator electrical connector.

10. Separate the outside handle cable connection from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

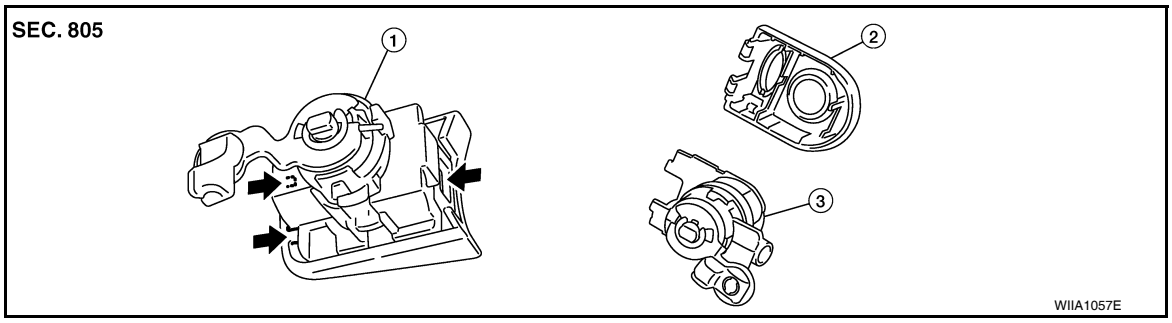
CAUTION:

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

Disassembly and Assembly

INFOID:0000000005260129

DOOR KEY CYLINDER ASSEMBLY



1. Door key cylinder assembly
2. Door key cylinder escutcheon
3. Door key cylinder

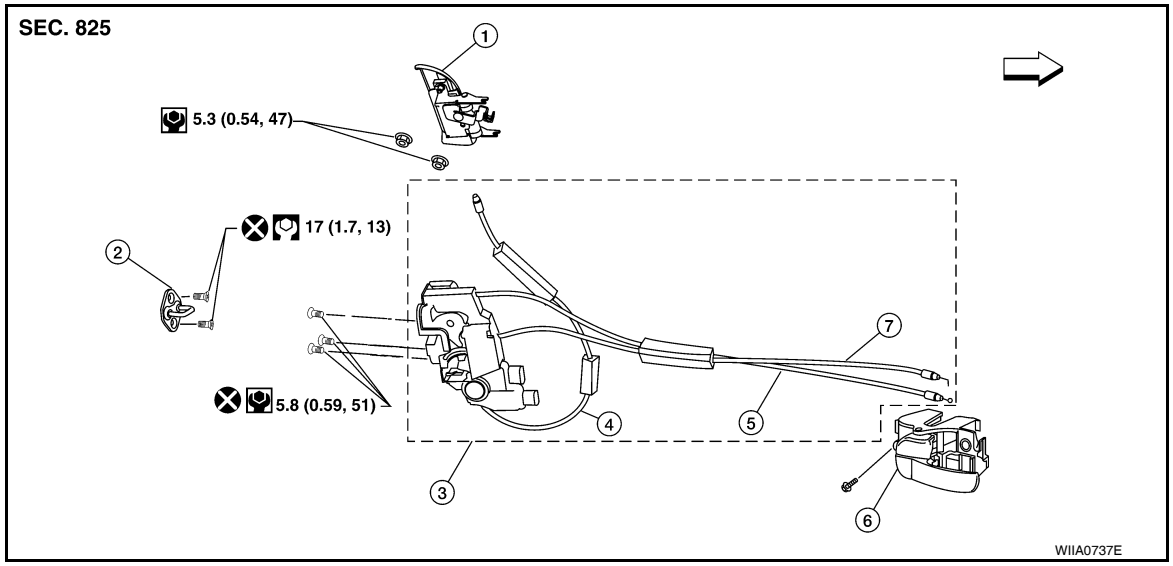
⇐ Pawl

Release the key cylinder escutcheon pawls to remove the door key cylinder.

REAR DOOR LOCK

Component Structure

INFOID:0000000005260130



1. Outside door handle
2. Rear door striker
3. Rear door lock assembly
4. Outside door handle cable
5. Inside door handle cable
6. Inside door handle assembly
7. Door lock cable
⇐ Vehicle front

Removal and Installation

INFOID:0000000005260131

REMOVAL

1. Remove the rear door window regulator. Refer to GW-19, "Rear Door Glass Regulator".
2. Remove door grommets, and remove outside handle nuts from the hole.
3. Remove outside handle.
4. Disconnect the outside handle cable connection.
5. Remove the inside door handle.
6. Disconnect the door lock and inside door handle cables from the inside door handle.
7. Disconnect the door lock actuator connector and remove the assembly.

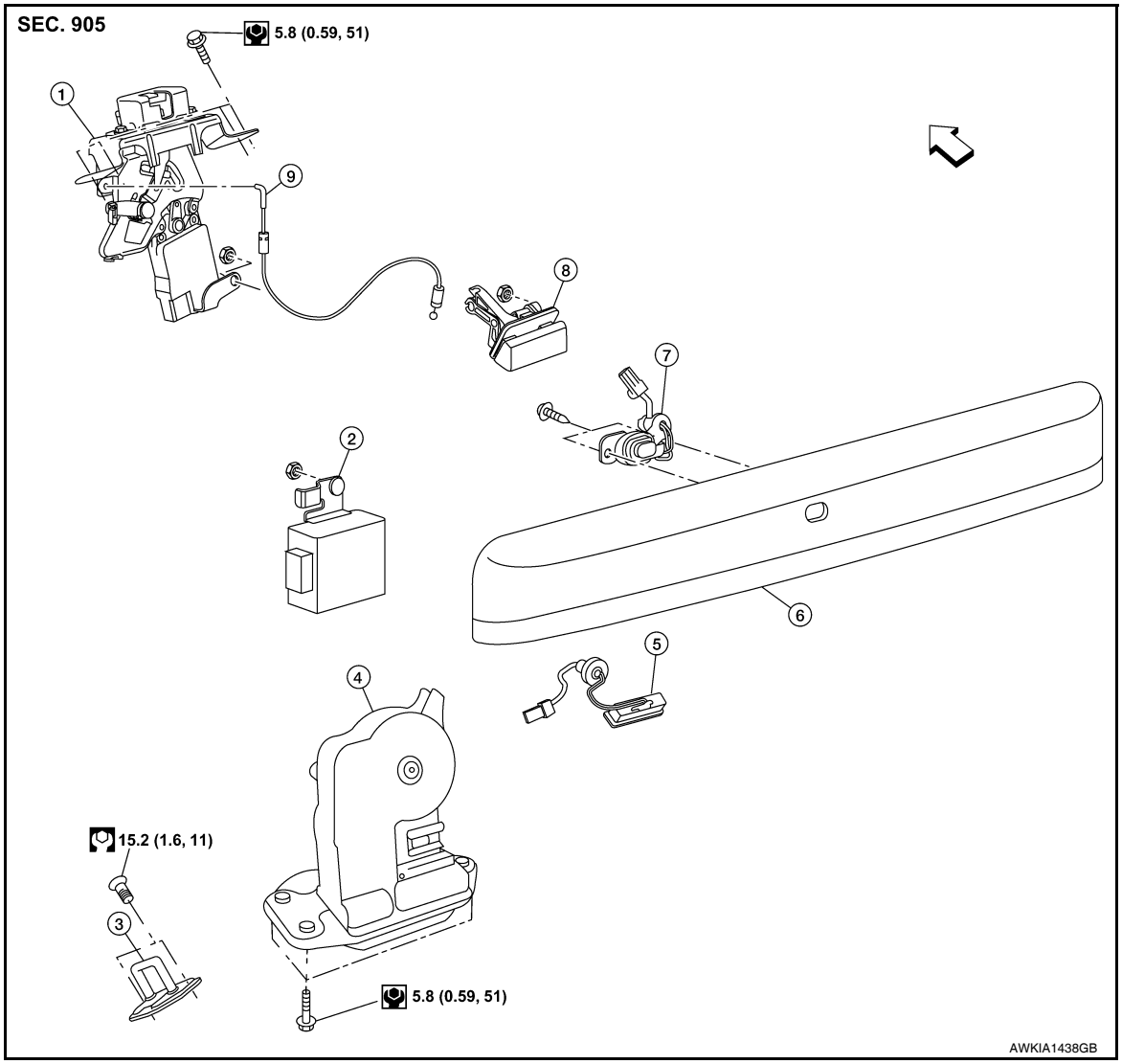
INSTALLATION

Installation is in the reverse order of removal.

BACK DOOR LOCK

Component Structure

INFOID:0000000005260132



1. Glass hatch latch assembly
2. Back door control assembly
3. Back door striker
4. Back door latch assembly
5. Back door release button
6. Back door finisher
7. Glass hatch release handle
8. Glass latch release cable
9. Glass hatch release cable

⇦ Front