

SECTION **DLK** DOOR & LOCK

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

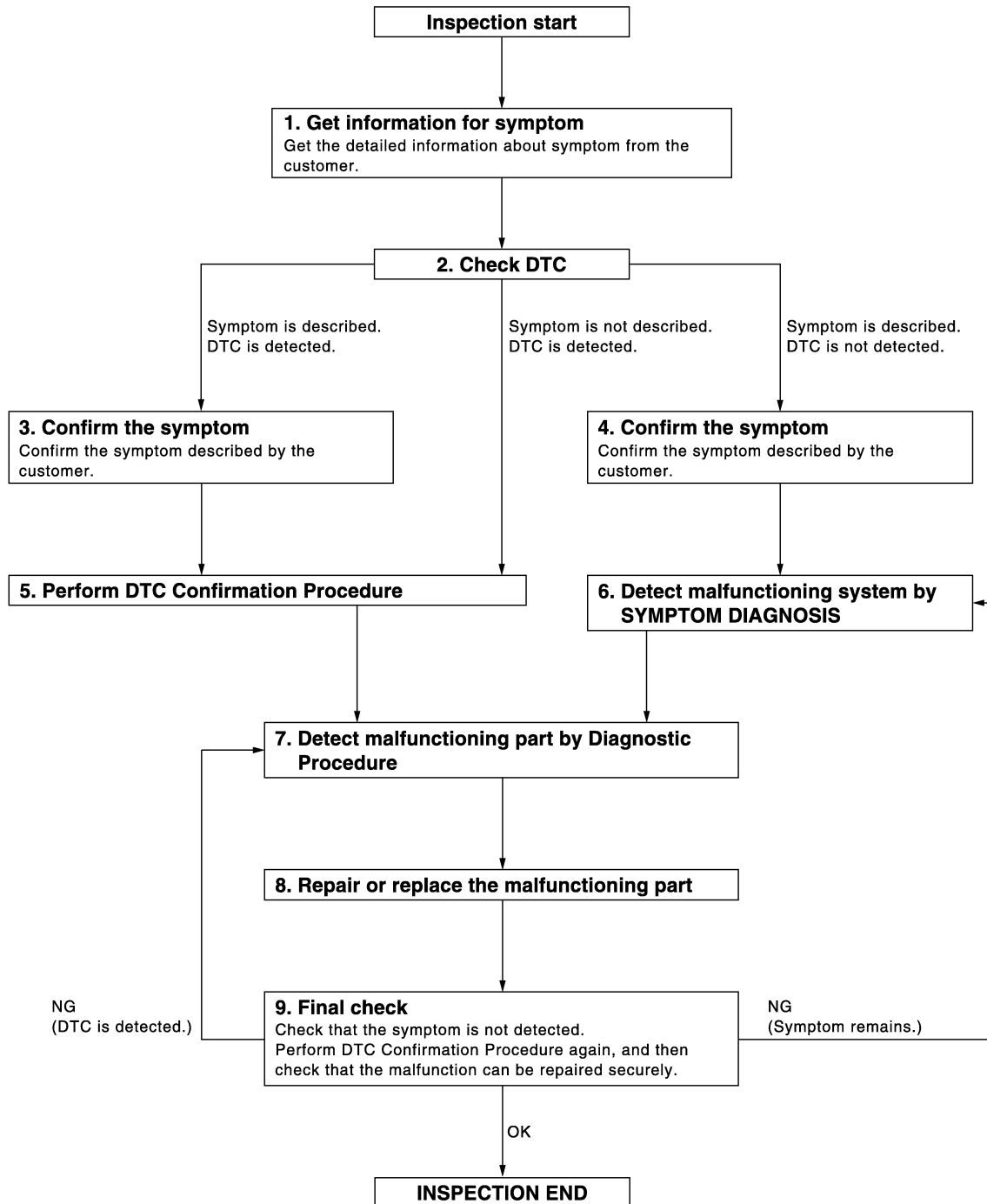
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000008797803

OVERALL SEQUENCE



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DETAILED FLOW

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2

2.CHECK DTC

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

Is any symptom described and any DTC detected?

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

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

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT to the vehicle in "DATA MONITOR " mode and check real time diagnosis results.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.

At this time, always connect CONSULT to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to [DLK-65, "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-40, "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:

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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

Is malfunctioning part detected?

YES >> GO TO 8

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

8.REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9

9.FINAL CHECK

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

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

Is the inspection result normal?

NO (DTC is detected)>>GO TO 7

NO (Symptom remains)>>GO TO 6

YES >> Inspection End.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000008797804

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:000000008797805

Refer to [DLK-54. "ID Code Entry Procedure"](#) (with CONSULT) or [DLK-55. "ID Code Entry Procedure"](#) (without CONSULT).

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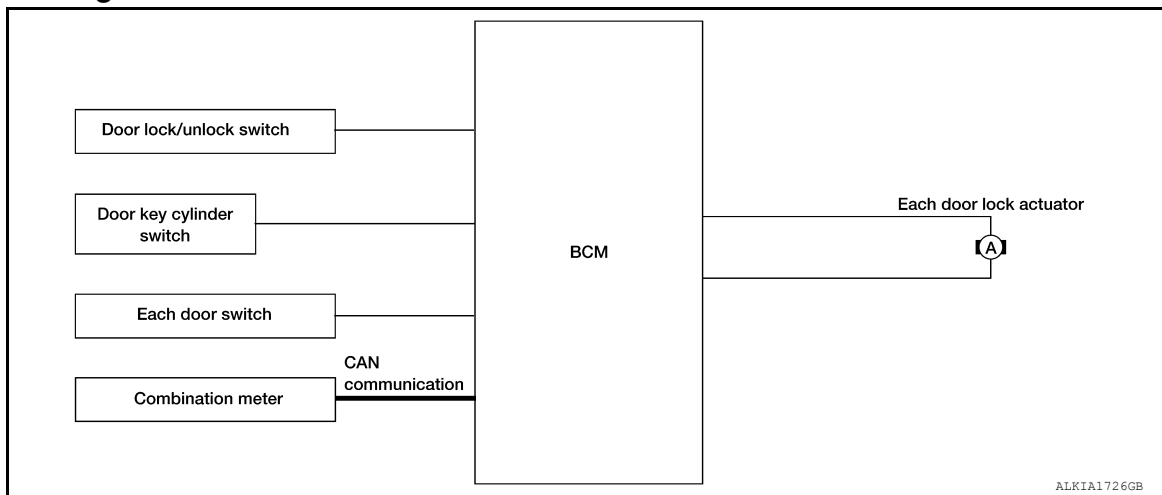
AUTOMATIC DOOR LOCKS

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

AUTOMATIC DOOR LOCKS

System Diagram



System Description

INFOID:000000008797807

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	

DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door or Back Door

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

Selective Unlock Operation

- When driver door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When driver door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.
- When back door key cylinder is unlocked, back door lock actuator is unlocked.
- When back 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-18, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

AUTOMATIC DOOR LOCKS

< SYSTEM DESCRIPTION >

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

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

Setting change of Automatic Door Locks (LOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-18, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

IGN OFF Interlock Door Unlock*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

With CONSULT

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT. Refer to [DLK-18, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Without CONSULT

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

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

OFF → ON : 2 blinks

ON → OFF : 1 blink

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

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

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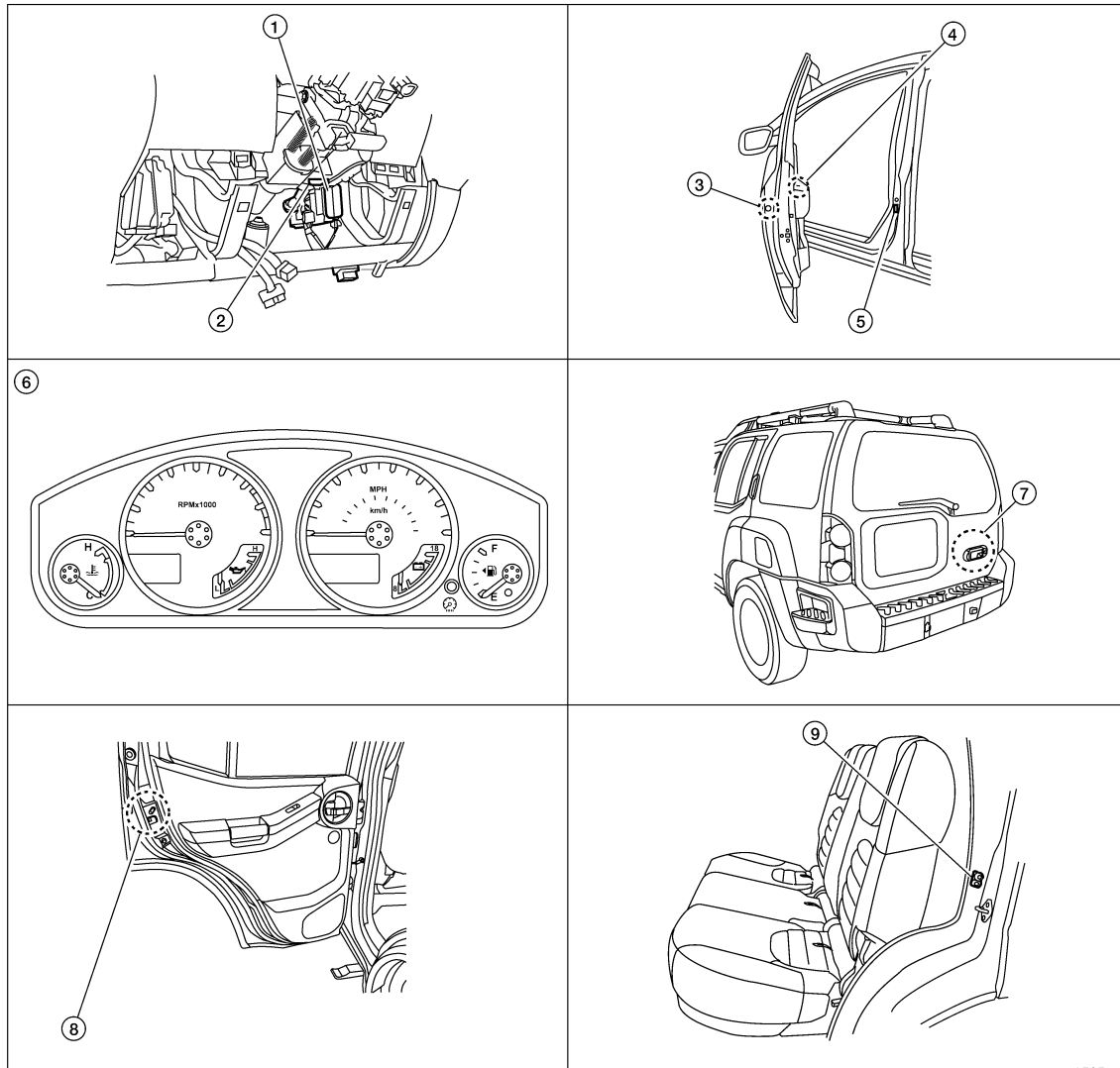
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AUTOMATIC DOOR LOCKS

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:000000008797808



- | | | |
|---|--|--|
| 1. BCM M18, M19, M20
(view with lower instrument panel LH removed) | 2. Key switch M27 | 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
Power window and door lock/unlock switch RH D105 | 5. Front door switch
LH B8
RH B108 | 6. Combination meter M24 |
| 7. Back door switch D502
Back door key cylinder switch D505
Back door lock actuator D508 | 8. Rear door lock actuator
LH D205
RH D305 | 9. Rear door switch
LH B18
RH B116 |

Component Description

INFOID:000000008797809

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

AUTOMATIC DOOR LOCKS

< SYSTEM DESCRIPTION >

Item	Function
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	Transmits shift position signal to BCM via CAN communication line.

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DOOR LOCK FUNCTION

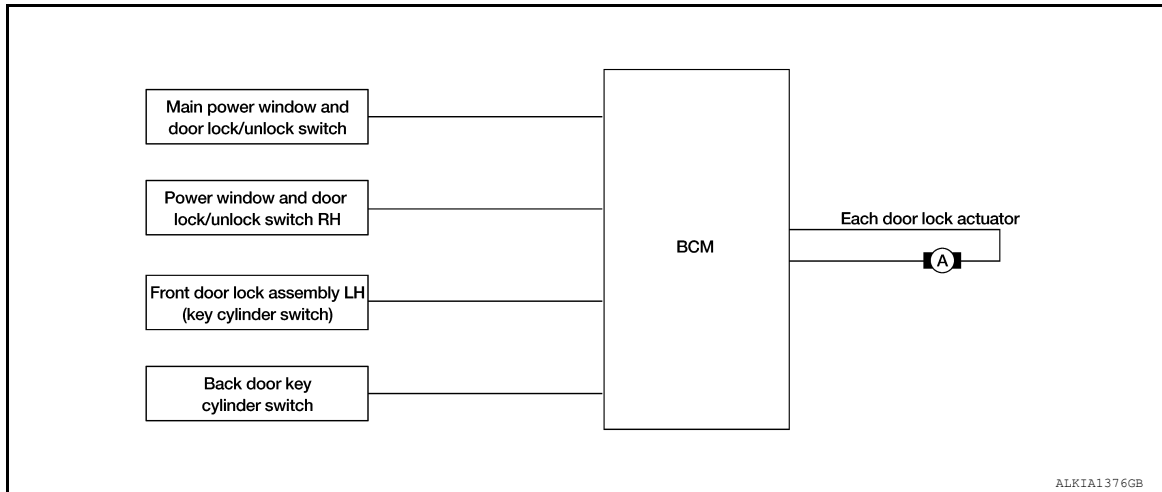
< SYSTEM DESCRIPTION >

DOOR LOCK FUNCTION

DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram

INFOID:000000008797810



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DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000008797811

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			
Front door key cylinder switch			
Back door key cylinder switch			

DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door or Back Door

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

Selective Unlock Operation

- When driver door key cylinder is unlocked, door lock actuator driver side is unlocked.
- When driver door key cylinder is unlocked for the second time within 5 seconds after the first operation, door lock actuators on all doors are unlocked.
- When back door key cylinder is unlocked, back door lock actuator is unlocked.
- When back 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-18, "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

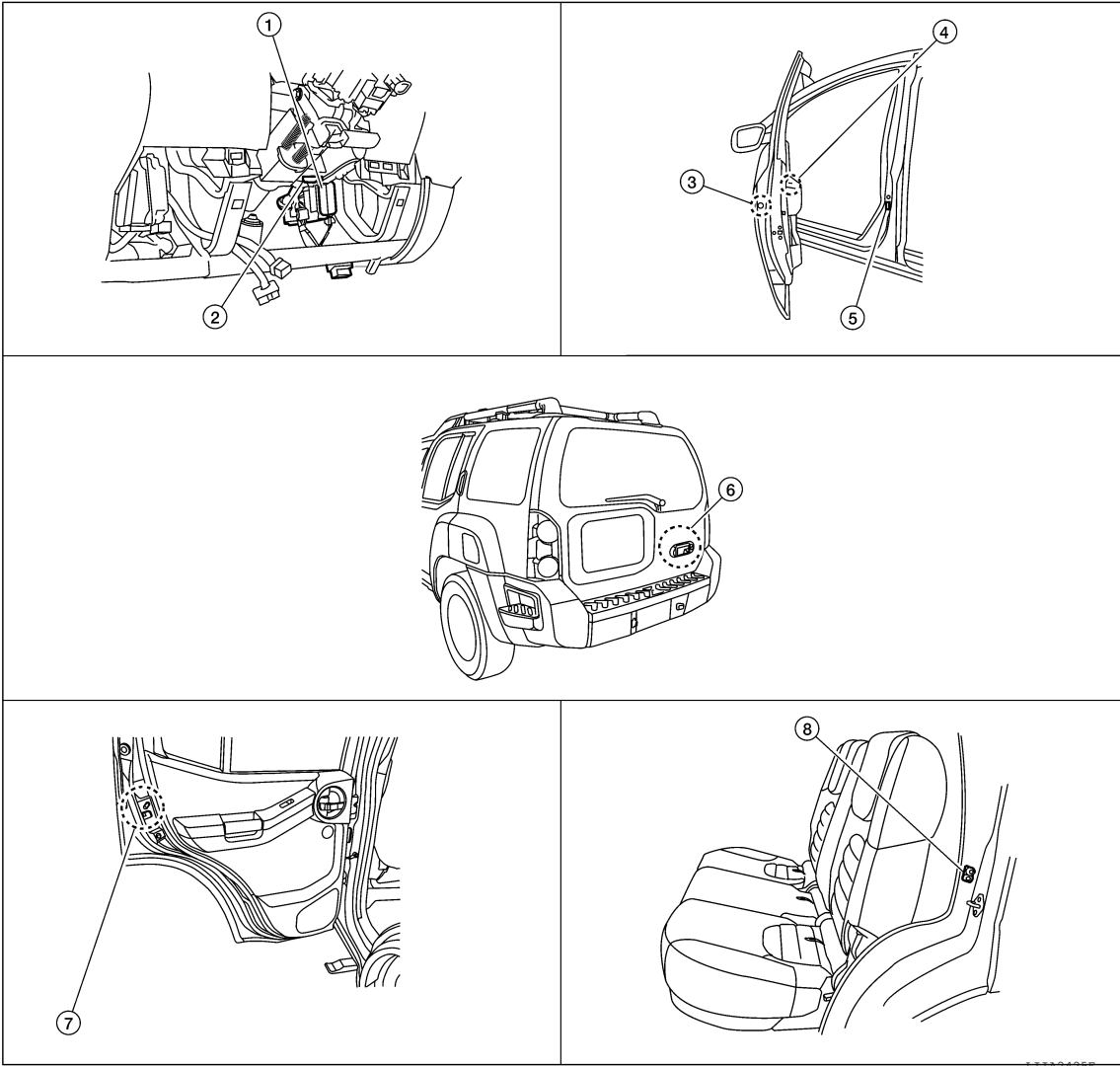
Refer to [DLK-51, "Diagnosis Procedure"](#).

DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000008797812



- 1. BCM M18, M19, M20 (view with lower instrument panel LH removed)
- 2. Key switch M27
- 3. Front door lock assembly LH (key cylinder switch) D14
- 4. Main power window and door lock/unlock switch D7
- 5. Front door switch LH B8
- 6. Back door switch D502
- 7. Rear door lock actuator LH D205
- 8. Rear door switch LH B18

DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000008797813

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

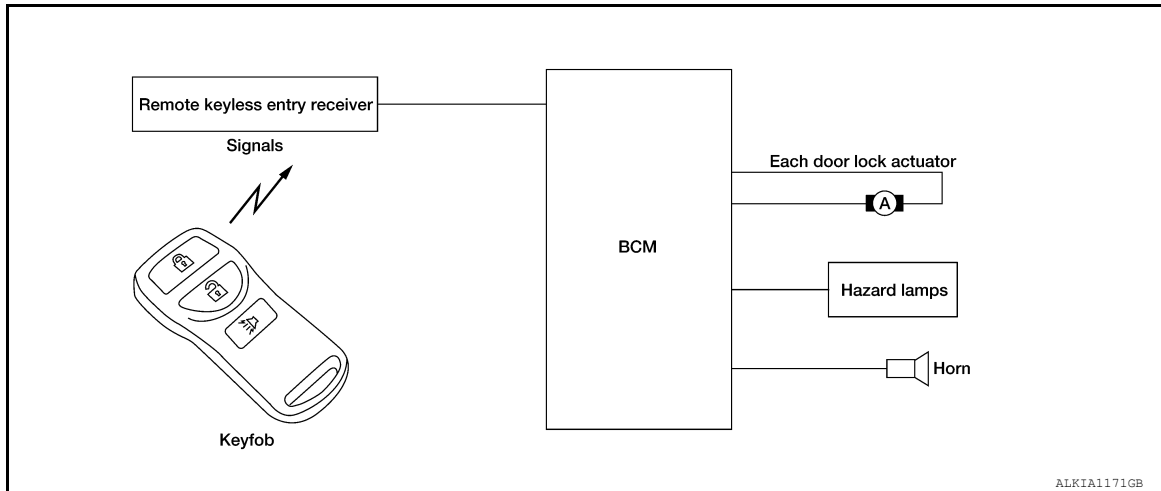
DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

REMOTE KEYLESS ENTRY

REMOTE KEYLESS ENTRY : System Diagram

INFOID:000000008797814



REMOTE KEYLESS ENTRY : System Description

INFOID:000000008797815

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 LOCK FUNCTION

Operation Description

- Unless the key is inserted into the ignition key cylinder, one of the doors is opened, or the keyfob is operated within 1 minute after a door lock is unlocked by keyfob operation, all the doors are automatically locked.

DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

The 1 minute timer count is executed by the BCM and after 1 minute, the BCM sends the lock signal to all doors.

Lock operations are the same as for the remote control entry function.

ACTIVE CHECK FUNCTION

Operation Description

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

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

Operating function of hazard and horn reminder

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

HAZARD AND HORN REMINDER

BCM output to IPDM E/R for horn reminder signal as DATA LINE (CAN-H line and CAN-L line).

The hazard and horn reminder has C mode (horn chirp mode) and S mode (non-horn chirp mode).

How to change hazard and horn reminder mode

With CONSULT

Hazard and horn reminder can be changed using "WORK SUPPORT" mode in "MULTI ANSWER BACK SET". Refer to [DLK-18, "MULTI REMOTE ENT : CONSULT Function \(BCM - MULTI REMOTE ENT\)".](#)

Without CONSULT

Refer to Owner's Manual for instructions.

INTERIOR LAMP OPERATION

When the following input signals are both supplied:

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

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

PANIC ALARM OPERATION

When key switch is OFF (when ignition key is not inserted in key cylinder), remote keyless entry system turns on and off horn and headlamp intermittently with input of PANIC ALARM signal from keyfob.

The alarm automatically turns off after 25 seconds or when BCM receives any signal from keyfob.

KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

When keyfob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be ON continuously for more than 1 second, the driver's door and passenger's door power windows are simultaneously opened.

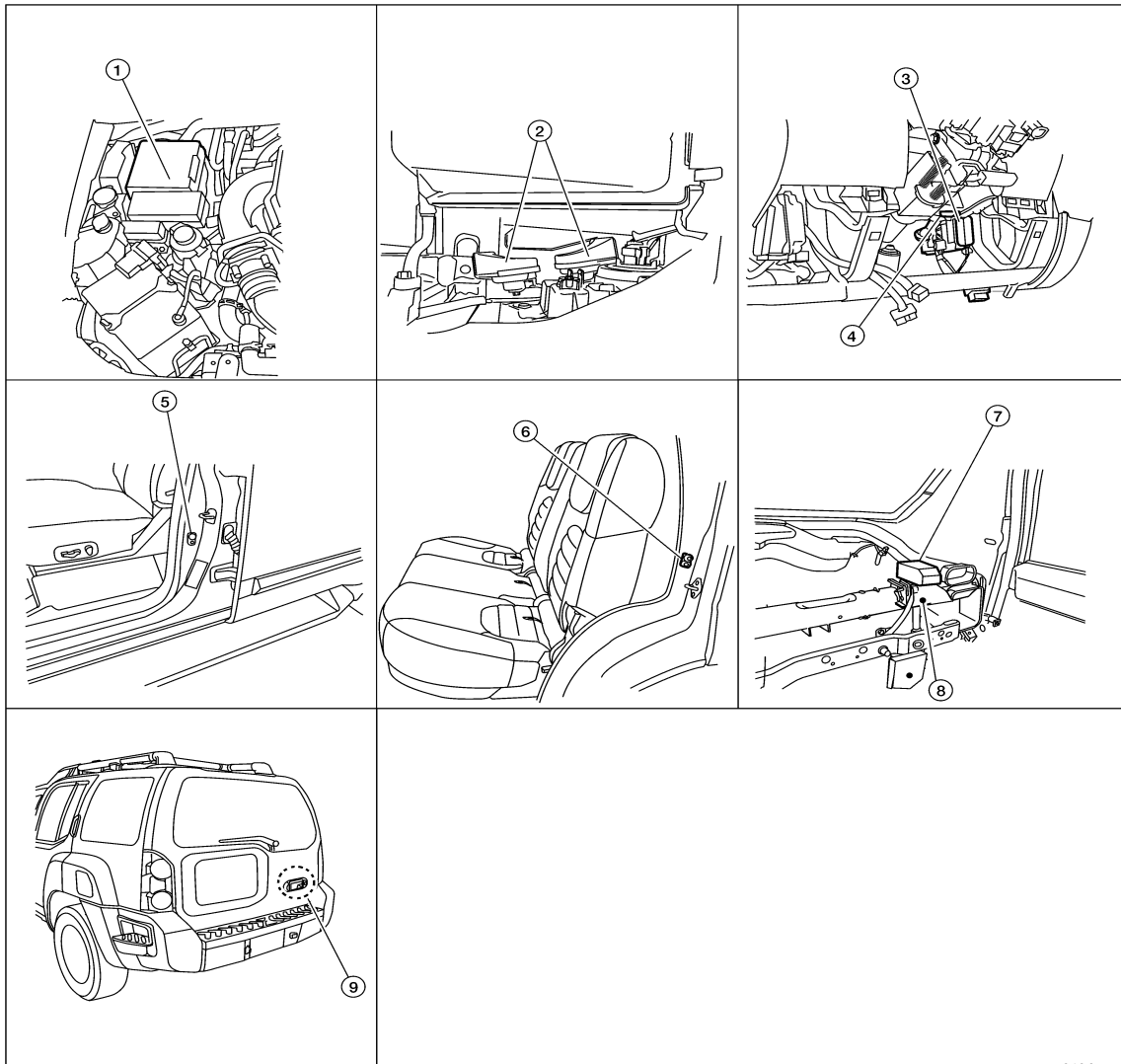
Power window is operated to open and the operation continues as long as the keyfob unlock switch is pressed.

DOOR LOCK FUNCTION

< SYSTEM DESCRIPTION >

REMOTE KEYLESS ENTRY : Component Parts Location

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- | | | |
|--|---|---|
| 1. IPDM E/R E122, E124 | 2. Horns E6
(behind front combination lamp LH) | 3. BCM M18, M19, M20
(view with lower instrument panel LH removed) |
| 4. Key switch M27 | 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. Steering member | 9. Back door switch D502 |

REMOTE KEYLESS ENTRY : Component Description

INFOID:000000008797817

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.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000009290368

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	- The vehicle specification can be read and saved. - The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

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

DOOR LOCK

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:000000009290369

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

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

* : Initial setting

MULTI REMOTE ENT

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

INFOID:000000009290370

DATA MONITOR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
HORN CHIRP SET	Off	Horn chirp function can be changed in this mode.
	On*	
HAZARD LAMP SET	MODE4*	Lock and Unlock
	MODE3	Lock Only
	MODE2	Unlock Only
	MODE1	OFF
MULTI ANSWER BACK SET	MODE2	Lock
		Unlock
	MODE1*	Lock
		Unlock
AUTO LOCK SET	MODE3	1 min
	MODE2	OFF
	MODE1*	5 min
PANIC ALRM SET	MODE3	1.5 sec
	MODE2	OFF
	MODE1*	0.5 sec
REMO CONT ID REGIST	—	Keyfob ID code can be registered.
REMO CONT ID ERASUR	—	Keyfob ID code can be erased.
REMO CONT ID CONFIR	—	Keyfob ID code registration is displayed.

*: Initial setting

U1000 CAN COMM CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description

INFOID:000000008797821

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-47, "CAN Communication Signal Chart"](#).

DTC Logic

INFOID:000000008797822

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000008797823

1.PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to [LAN-5, "CAN Communication Control Circuit"](#).
NO >> Refer to [GI-40, "Intermittent Incident"](#).

U1010 CONTROL UNIT (CAN)

< DTC/CIRCUIT DIAGNOSIS >

U1010 CONTROL UNIT (CAN)

DTC Logic

INFOID:0000000008797824

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000008797825

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM. Refer to [BCS-50, "Removal and Installation"](#).

>> Replace BCM.

Special Repair Requirement

INFOID:0000000008797826

1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to [BCS-50, "Removal and Installation"](#) for BCM configuration.

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

>> Work End.

DLK

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000009290372

Regarding Wiring Diagram information, refer to [BCS-44. "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	21 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

Is the fuse blown?

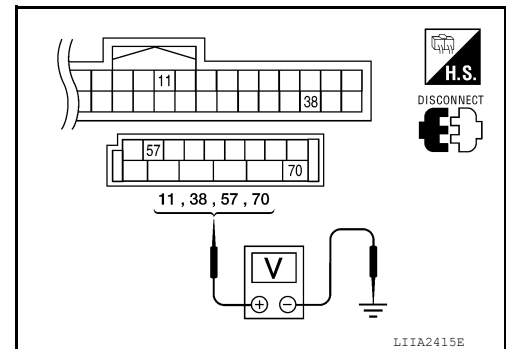
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

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

POWER SUPPLY AND GROUND CIRCUIT

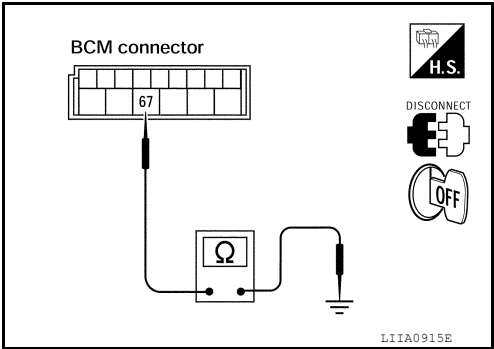
< DTC/CIRCUIT DIAGNOSIS >

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.



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DLK

DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR SWITCH

Description

INFOID:000000008797828

Detects door open/close condition.

Component Function Check

INFOID:000000008797829

1.CHECK FUNCTION

With CONSULT

Check door switches in data monitor mode with CONSULT.

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

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [DLK-24, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000008797830

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

1.CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT

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

- When doors are open:

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

- When doors are closed:

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

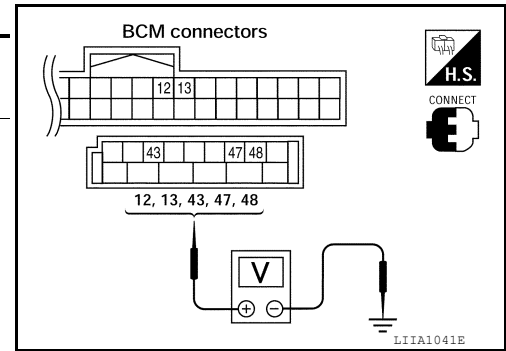
Without CONSULT

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

DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

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



Is the inspection result normal?

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

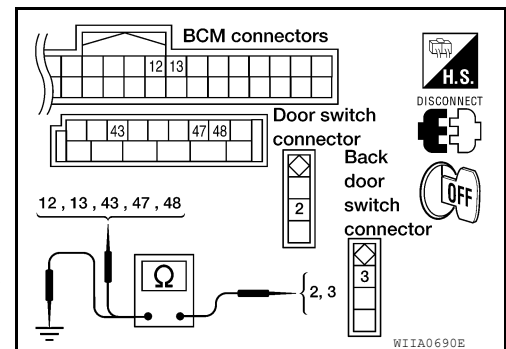
2.CHECK DOOR SWITCH CIRCUIT

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

- Check continuity between door switch connector B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector D502 terminal 3 and ground.

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



Is the inspection result normal?

- YES >> GO TO 3 (front and rear door).
YES >> GO TO 4 (back door).
NO >> Repair or replace harness.

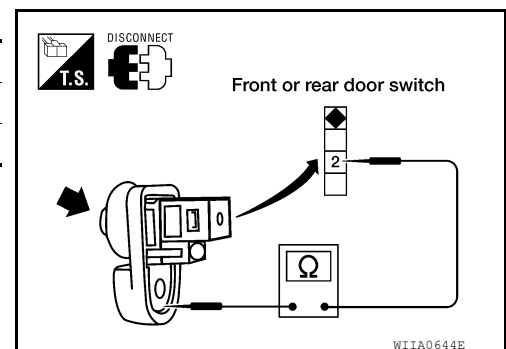
3.CHECK FRONT AND REAR DOOR SWITCHES

Check continuity between door switch terminal 2 and exposed metal of switch while pressing and releasing switch.

Switch	Terminals	Condition	Continuity
Door switch (front and rear)	2 – Ground	Released	Yes
		Pressed	No

Is the inspection result normal?

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



DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

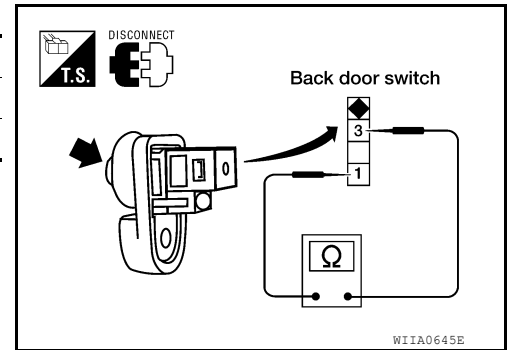
4.CHECK BACK DOOR SWITCH

Check continuity between door switch terminals.

Switch	Terminals	Condition	Continuity
Back door switch	1 – 3	Released	Yes
		Pressed	No

Is the inspection result normal?

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



DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR LOCK AND UNLOCK SWITCH

Description

INFOID:000000008797831

Transmits door lock/unlock operation to BCM.

Component Function Check

INFOID:000000008797832

1.CHECK FUNCTION

With CONSULT

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> refer to [DLK-27. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000008797833

Regarding Wiring Diagram information, refer to [DLK-68. "Wiring Diagram"](#).

1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT

Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT. Refer to [DLK-18. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

- When door lock/unlock switch is turned to LOCK:

CDL LOCK SW : ON

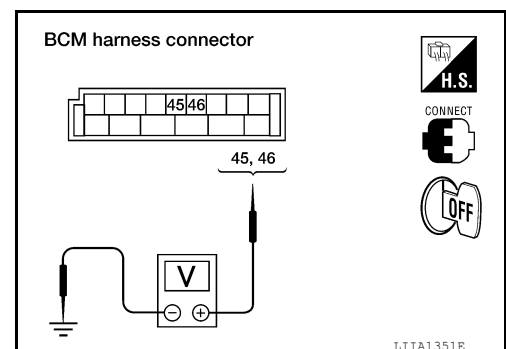
- When door lock/unlock switch is turned to UNLOCK:

CDL UNLOCK SW : ON

Without CONSULT

Check voltage between BCM connector M19 terminals 45, 46 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	46	Ground	Door lock/unlock switch is neutral.	Battery voltage
			Door lock/unlock switch is turned to UNLOCK.	0
	45	Ground	Door lock/unlock switch is neutral.	Battery voltage
			Door lock/unlock switch is turned to LOCK.	0



Is the inspection result normal?

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

DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 2

2.CHECK DOOR LOCK/UNLOCK SWITCH

1. Turn ignition switch OFF.
2. Disconnect door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch terminals 10, 11 and 14.

Terminal		Condition	Continuity
10	14	Lock	Yes
		Unlock/Neutral	No
11		Unlock	Yes
		Lock/Neutral	No

4. Check continuity between power window and door lock/unlock switch RH terminals 1, 2 and 3.

Terminal		Condition	Continuity
1	3	Lock	Yes
		Unlock/Neutral	No
2		Unlock	Yes
		Lock/Neutral	No

Is the inspection result normal?

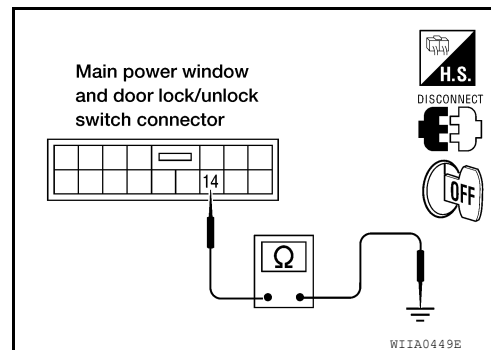
YES >> GO TO 3

NO >> Replace door lock/unlock switch.

3.CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

1. Disconnect main power window and door lock/unlock switch or power window and door lock/unlock switch RH.
2. Check continuity between main power window and door lock/unlock switch connector D7 terminal 14 and ground.

14 - Ground : Continuity should exist.



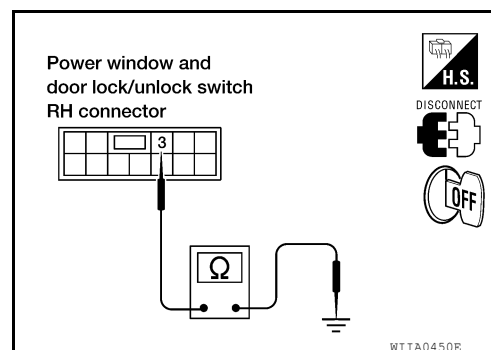
3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 3 and ground

3 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.



4.CHECK DOOR LOCK SWITCH CIRCUIT

1. Disconnect BCM.
2. Check continuity between BCM connector M19 terminal 45 and main power window and door lock/unlock switch connector D7 terminal 10 or power window and door lock/unlock switch RH connector D105 terminal 1.

DOOR LOCK AND UNLOCK SWITCH

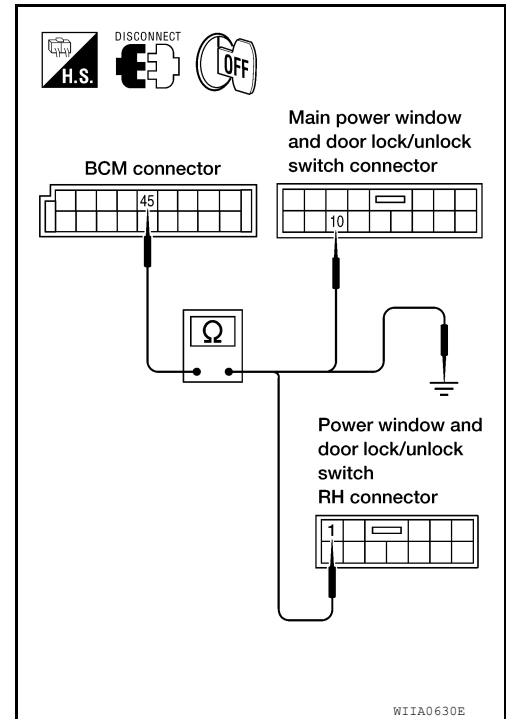
< DTC/CIRCUIT DIAGNOSIS >

1 - 45 : Continuity should exist.

10 - 45 : Continuity should exist.

3. Check continuity between BCM connector M19 terminal 45 and ground.

45 - Ground : Continuity should not exist.



4. Check continuity between BCM connector M19 terminal 46 and main power window and door lock/unlock switch LH connector D7 terminal 11 or power window and door lock/unlock switch RH connector D105 terminal 2.

2 - 46 : Continuity should exist.

11 - 46 : Continuity should exist.

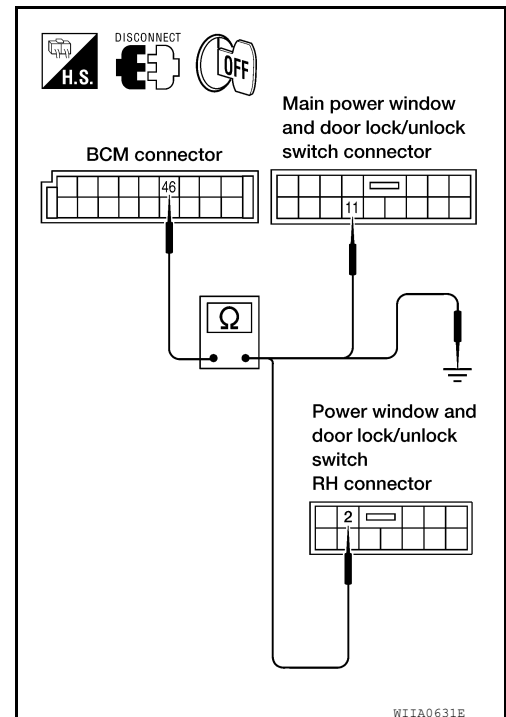
5. Check continuity between BCM connector M19 terminal 46 and ground.

46 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.



5. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM.

DOOR LOCK AND UNLOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

2. Check voltage between BCM connector M19 terminals 45, 46 and ground.

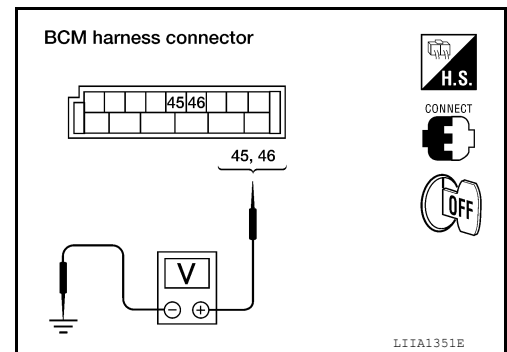
45 - Ground : Battery voltage

46 - Ground : Battery voltage

Is the inspection result normal?

YES >> Check condition of the harness and connector.

NO >> Replace BCM. Refer to [BCS-50. "Removal and Installation"](#).



KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

KEY CYLINDER SWITCH

DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000008797834

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.

DRIVER SIDE : Component Function Check

INFOID:000000008797835

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to [DLK-31. "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:000000008797836

Regarding Wiring Diagram information, refer to [DLK-68. "Wiring Diagram"](#).

1.CHECK DOOR KEY CYLINDER SWITCH LH

① With CONSULT

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT. Refer to [DLK-18. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

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

KEY CYL LK-SW : ON

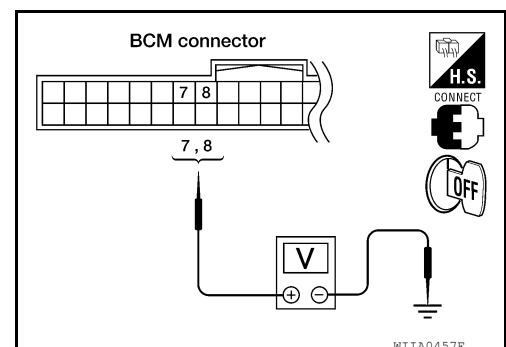
- When key inserted in front key cylinder is turned to UNLOCK:

KEY CYL UN-SW : ON

② Without CONSULT

Check voltage between BCM connector M18 terminals 7, 8 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	7	Ground	Neutral/Lock	1.5
			Unlock	0
	8		Neutral/Unlock	1.5
			Lock	0



KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Front door lock assembly LH (key cylinder switch) signal is OK.
NO >> GO TO 2

2.CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

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 terminals 3, 4 and 5.

Terminals	Condition	Continuity
4 - 5	Key is turned to LOCK.	Yes
	Key is in N position or turned to UN-LOCK	No
3 - 4	Key is turned to UNLOCK.	Yes
	Key is in N position or turned to LOCK	No

Is the inspection result normal?

- YES >> GO TO 3
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-109, "Removal and Installation"](#).

3.CHECK FRONT DOOR LOCK ASSEMBLY LH HARNESS

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminals 7, 8 and front door lock assembly LH connector D14 terminals 3, 5.

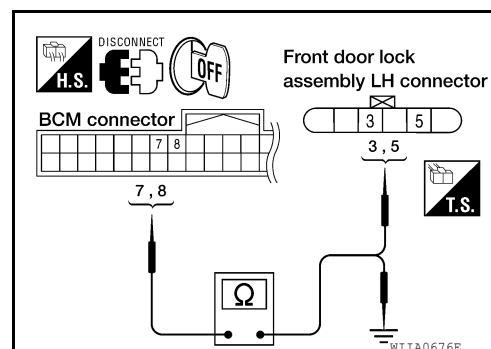
7 - 3 : Continuity should exist.

8 - 5 : Continuity should exist.

3. Check continuity between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Continuity should not exist.

8 - Ground : Continuity should not exist.



Is the inspection result normal?

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

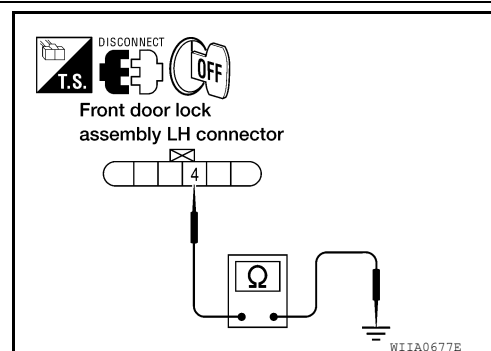
4.CHECK FRONT DOOR LOCK ASSEMBLY LH GROUND

Check continuity between front door lock assembly LH connector D14 terminal 4 and ground.

4 - Ground : Continuity should exist.

Is the inspection result normal?

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



5.CHECK BCM OUTPUT VOLTAGE

1. Connect BCM.

KEY CYLINDER SWITCH

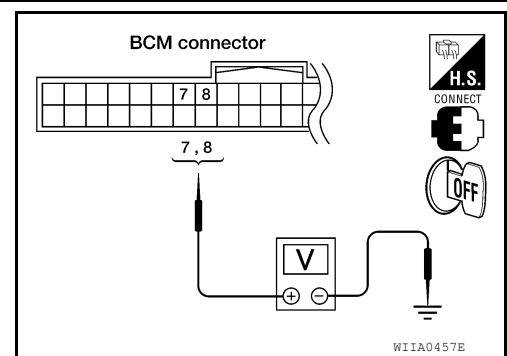
< DTC/CIRCUIT DIAGNOSIS >

2. Check voltage between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Approx. 1.5V
8 - Ground : Approx. 1.5V

Is the inspection result normal?

- YES >> Check condition of the harness and connector.
NO >> Replace BCM. Refer to [BCS-50. "Removal and Installation"](#).



BACK DOOR

BACK DOOR : Description

INFOID:000000008797837

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.

BACK DOOR : Component Function Check

INFOID:000000008797838

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

- YES >> Key cylinder switch is OK.
NO >> Refer to [DLK-33. "BACK DOOR : Diagnosis Procedure"](#).

BACK DOOR : Diagnosis Procedure

INFOID:000000008797839

Regarding Wiring Diagram information, refer to [DLK-68. "Wiring Diagram"](#).

1.CHECK BACK DOOR KEY CYLINDER SWITCH

① With CONSULT

Check back door key cylinder switch ("KEY CYL LK-SW") and ("KEY CYL UN-SW") in DATA MONITOR mode in CONSULT. Refer to [DLK-18. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

- When key inserted in back door key cylinder is turned to LOCK:

KEY CYL LK-SW : ON

- When key inserted in back door key cylinder is turned to UNLOCK:

KEY CYL UN-SW : ON

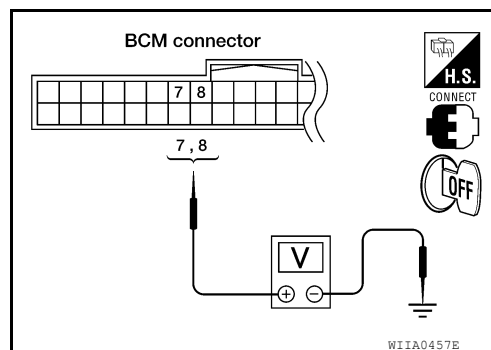
② Without CONSULT

KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Check voltage between BCM connector M18 terminals 7, 8 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M18	7	Ground	Neutral/Lock	1.5
			Unlock	0
	8		Neutral/Unlock	1.5
			Lock	0



Is the inspection result normal?

YES >> Back door key cylinder switch signal is OK.

NO >> GO TO 2

2.CHECK BACK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect back door key cylinder switch.
3. Check continuity between back door key cylinder switch terminals 1, 2 and 3.

Terminals	Condition	Continuity
1 - 2	Key is turned to LOCK.	Yes
	Key is in N position or turned to UNLOCK	No
3 - 2	Key is turned to UNLOCK.	Yes
	Key is in N position or turned to LOCK	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Replace back door key cylinder switch.

3.CHECK BACK DOOR KEY CYLINDER SWITCH HARNESS

1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminals 7, 8 and back door key cylinder switch connector D505 terminals 3, 1.

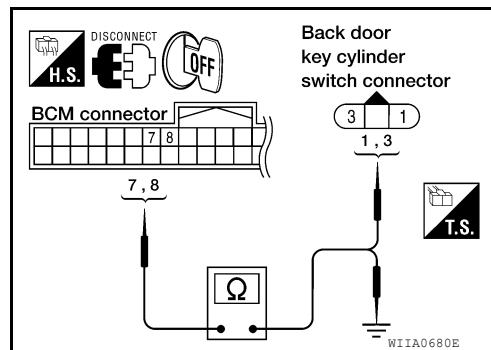
7 - 3 : Continuity should exist.

8 - 1 : Continuity should exist.

3. Check continuity between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Continuity should not exist.

8 - Ground : Continuity should not exist.



Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK BACK DOOR KEY CYLINDER SWITCH GROUND

KEY CYLINDER SWITCH

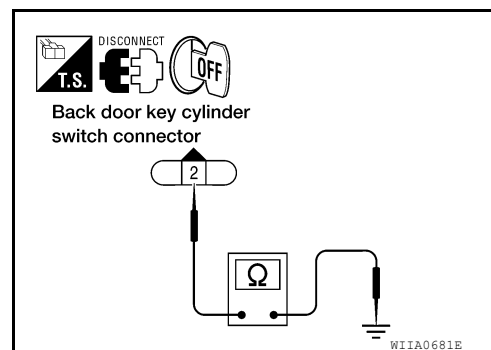
< DTC/CIRCUIT DIAGNOSIS >

Check continuity between back door key cylinder switch connector D505 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

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



5. CHECK BCM OUTPUT VOLTAGE

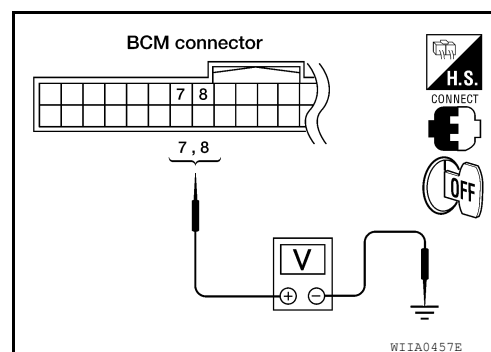
1. Connect BCM.
2. Check voltage between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Approx. 1.5V

8 - Ground : Approx. 1.5V

Is the inspection result normal?

- YES >> Check condition of the harness and connector.
NO >> Replace BCM. Refer to [BCS-50. "Removal and Installation"](#).



DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

DOOR LOCK ACTUATOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000008797840

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE : Component Function Check

INFOID:000000008797841

1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.
NO >> Refer to [DLK-36, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

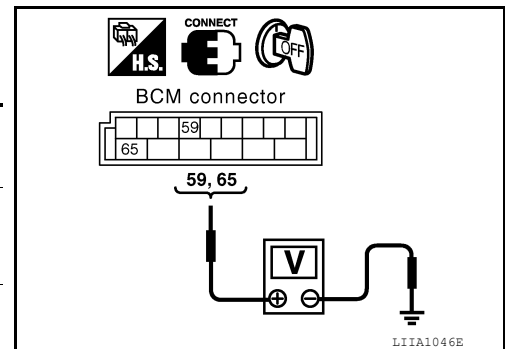
INFOID:000000008797842

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



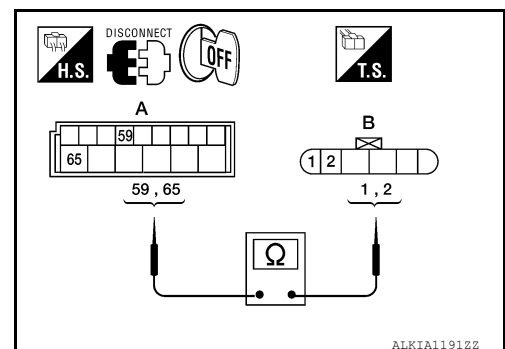
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

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

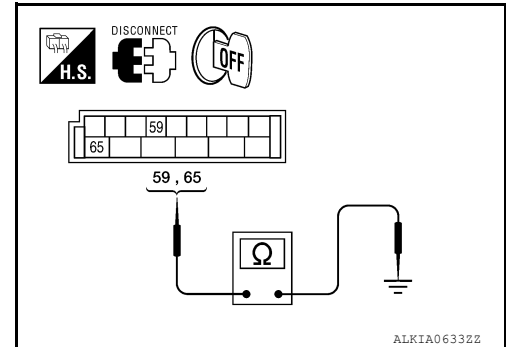
DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

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-50, "Removal and Installation"](#).

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000008797843

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000008797844

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-37, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000008797845

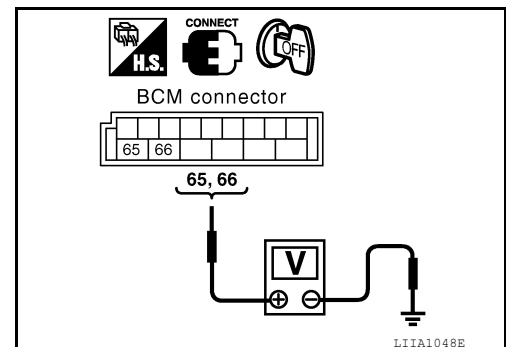
DLK

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

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

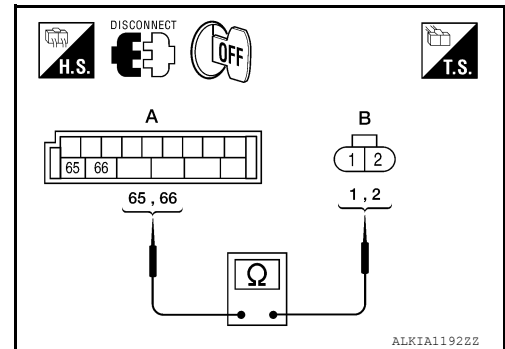
DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

2.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminal		Continuity
65	2	Yes
66	1	



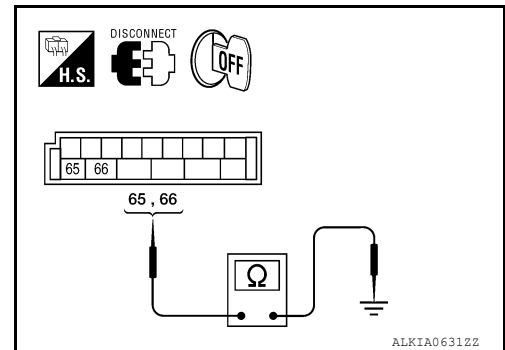
Is the inspection result normal?

- YES >> Replace front door lock actuator RH. Refer to [DLK-109, "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-50, "Removal and Installation"](#).
NO >> Repair or replace harness.

REAR LH

REAR LH : Description

INFOID:000000008797846

Locks/unlocks the door with the signal from BCM.

REAR LH : Component Function Check

INFOID:000000008797847

1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.
NO >> Refer to [DLK-38, "REAR LH : Diagnosis Procedure"](#).

REAR LH : Diagnosis Procedure

INFOID:000000008797848

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

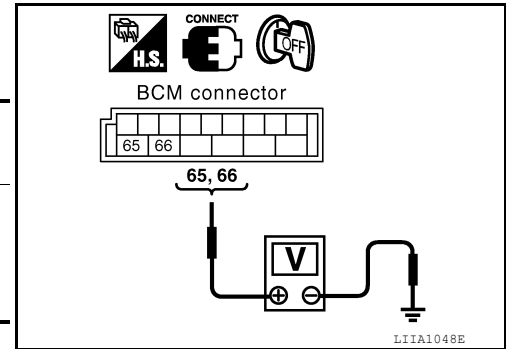
1.CHECK DOOR LOCK ACTUATOR SIGNAL

DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

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

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



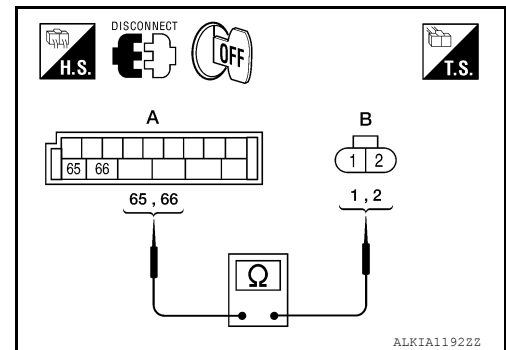
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator LH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator LH connector (B) D205 terminals 1, 2.

Terminals		Continuity
65	2	Yes
66	1	



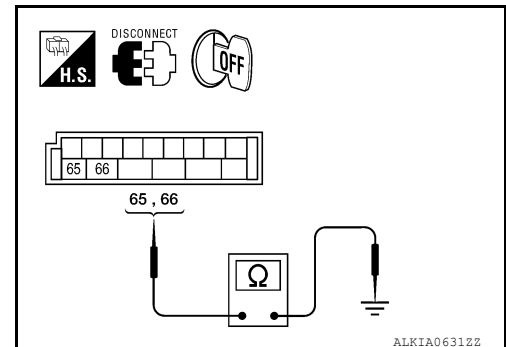
Is the inspection result normal?

- YES >> Replace rear door lock actuator LH.
NO >> Repair or replace harness.

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-50. "Removal and Installation"](#).
NO >> Repair or replace harness.

REAR RH

REAR RH : Description

Locks/unlocks the door with the signal from BCM.

INFOID:000000008797849

DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

REAR RH : Component Function Check

INFOID:000000008797850

1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.
NO >> Refer to [DLK-40, "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

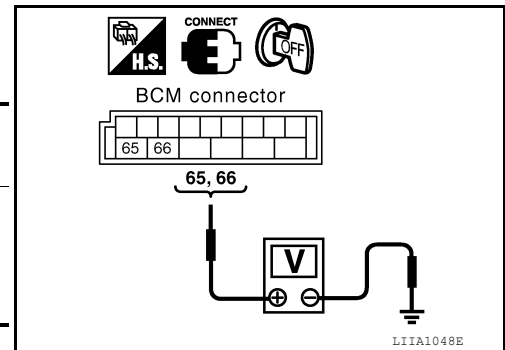
INFOID:000000008797851

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

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	



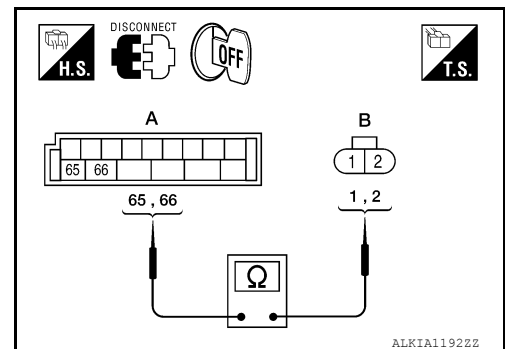
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and 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.

3.CHECK DOOR LOCK ACTUATOR HARNESS

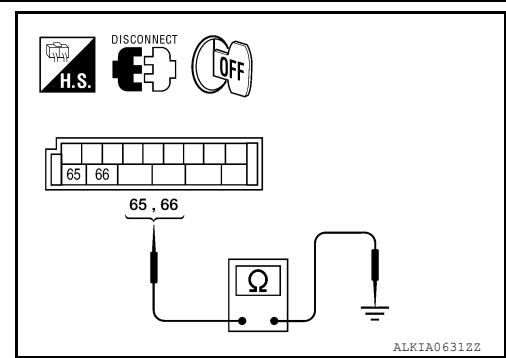
1. Disconnect BCM and rear door lock actuator RH.

DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

- 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-50, "Removal and Installation"](#).

NO >> Repair or replace harness.

BACK DOOR

BACK DOOR : Description

INFOID:000000008797852

Locks/unlocks the door with the signal from BCM.

BACK DOOR : Component Function Check

INFOID:000000008797853

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-41, "BACK DOOR : Diagnosis Procedure"](#).

BACK DOOR : Diagnosis Procedure

INFOID:000000008797854

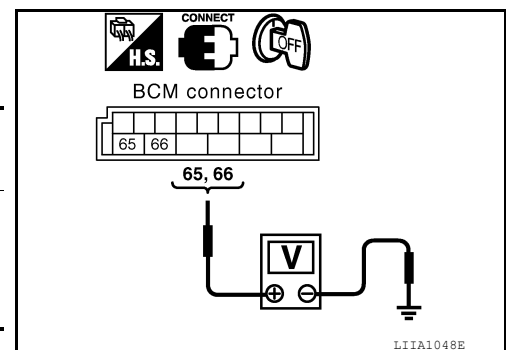
Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

DLK

1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 3

2.CHECK DOOR LOCK ACTUATOR HARNESS

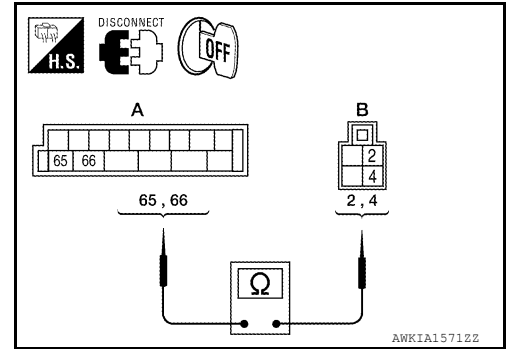
- Disconnect BCM and back door lock actuator.

DOOR LOCK ACTUATOR

< DTC/CIRCUIT DIAGNOSIS >

- Check continuity between BCM connector (A) M20 terminals 65, 66 and back door lock actuator connector (B) D508 terminals 2, 4.

Terminals		Continuity
65	2	Yes
66	4	



Is the inspection result normal?

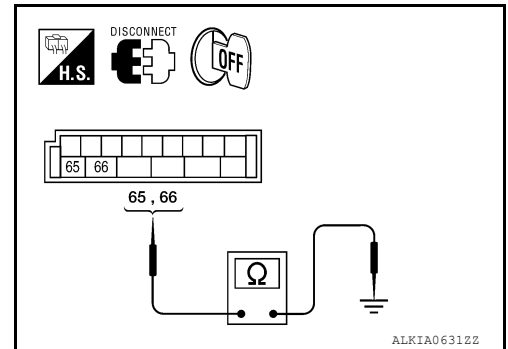
YES >> Replace door lock actuator.

NO >> Repair or replace harness.

3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-50, "Removal and Installation"](#).

NO >> Repair or replace harness.

REMOTE KEYLESS ENTRY RECEIVER

< DTC/CIRCUIT DIAGNOSIS >

REMOTE KEYLESS ENTRY RECEIVER

Description

INFOID:000000008797855

Receives keyfob operation and transmits to BCM.

Component Function Check

INFOID:000000008797856

1.CHECK FUNCTION

With CONSULT

Check remote keyless entry receiver "MULTI REMOTE ENT" in Data Monitor mode with CONSULT. Refer to [BCS-18, "MULTI REMOTE ENT : CONSULT Function \(BCM - MULTI REMOTE ENT\)"](#).

Monitor item	Condition
KEYLESS LOCK	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK	Indicates condition of unlock signal from keyfob.
KEYLESS PANIC	Indicates condition of panic signal from keyfob.

Is the inspection result normal?

- YES >> Remote keyless entry receiver is OK.
NO >> Refer to [DLK-43, "Diagnosis Procedure"](#).

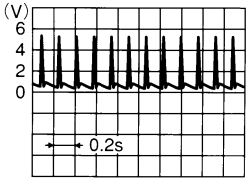
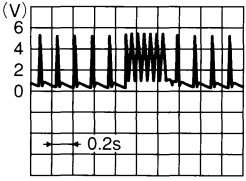
Diagnosis Procedure

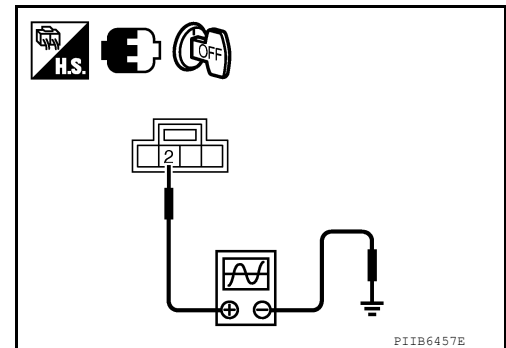
INFOID:000000008797857

Regarding Wiring Diagram information, refer to [DLK-68, "Wiring Diagram"](#).

1.CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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

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



Is the inspection result normal?

- YES >> GO TO 2

REMOTE KEYLESS ENTRY RECEIVER

< DTC/CIRCUIT DIAGNOSIS >

NO >> GO TO 4

2.REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

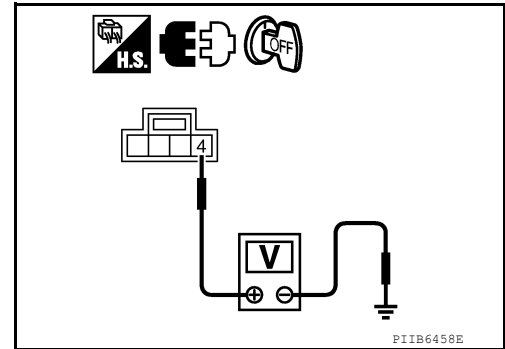
Check voltage between remote keyless entry receiver connector M120 terminal 4 and ground.

4 - Ground : Approx. 5 volt.

Is the inspection result normal?

YES >> GO TO 3

NO >> GO TO 4



3.REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

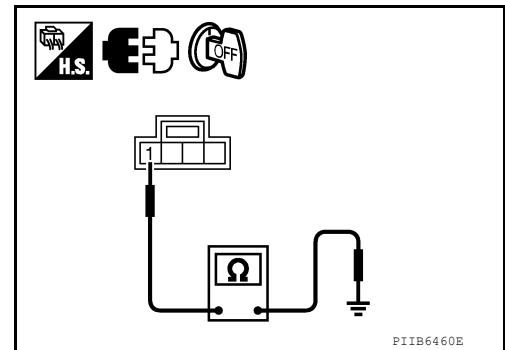
Check continuity between remote keyless entry receiver connector M120 terminal 1 and ground.

1 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to [SEC-73, "Removal and Installation"](#).

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.

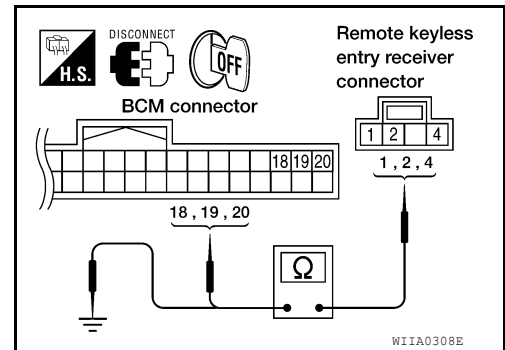
2 - Ground : Continuity should not exist.

4 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to [SEC-73, "Removal and Installation"](#).

NO >> Repair or replace the harness between the remote keyless entry receiver and BCM.



KEYFOB BATTERY AND FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

KEYFOB BATTERY AND FUNCTION

Description

INFOID:000000008797858

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:000000008797859

NOTE:

The Signal Tech II Tool (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

1.CHECK FUNCTION

With CONSULT

Check remote keyless entry receiver "MULTI REMOTE ENT" in Data Monitor mode with CONSULT. Refer to [BCS-18, "MULTI REMOTE ENT : CONSULT Function \(BCM - MULTI REMOTE ENT\)"](#).

Monitor item	Condition
KEYLESS LOCK	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK	Indicates condition of unlock signal from keyfob.
KEYLESS PANIC	Indicates condition of panic signal from keyfob.

Is the inspection result normal?

YES >> Key fob is OK.

NO >> Refer to [DLK-45, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000008797860

NOTE:

The Signal Tech II Tool (J-50190) can be used to test the remote keyless entry keyfob relative signal strength. Refer to the Signal Tech II User Guide for additional information.

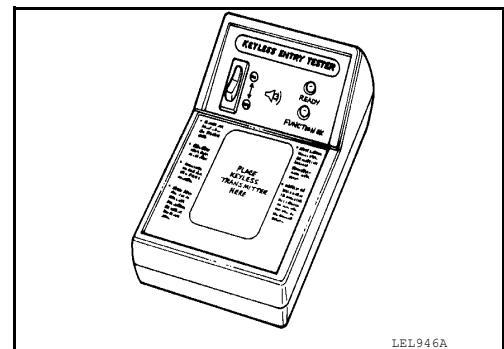
1.CHECK KEYFOB FUNCTION

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

Does the test pass?

YES >> Key fob is OK.

NO >> GO TO 2



2. CHECK KEY FOB COMPONENTS

KEYFOB BATTERY AND FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

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-43](#).

"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:

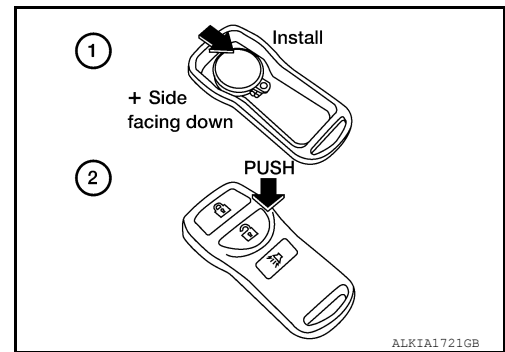
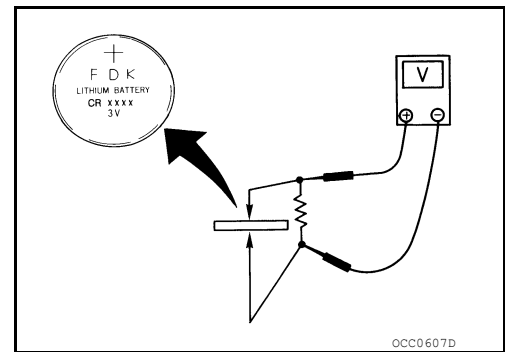
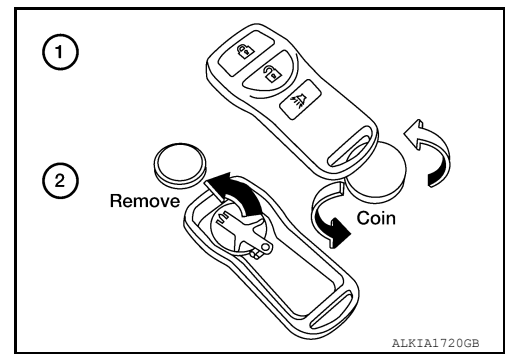
- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

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-43](#).
"Component Function Check".



HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

HORN FUNCTION

Description

INFOID:000000008797861

Perform answer-back for each operation with horn.

Component Function Check

INFOID:000000008797862

1.CHECK FUNCTION

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

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

Is the operation normal?

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

Diagnosis Procedure

INFOID:000000008797863

Regarding Wiring Diagram information, refer to [DLK-79. "Wiring Diagram"](#).

1.CHECK HORN FUNCTION

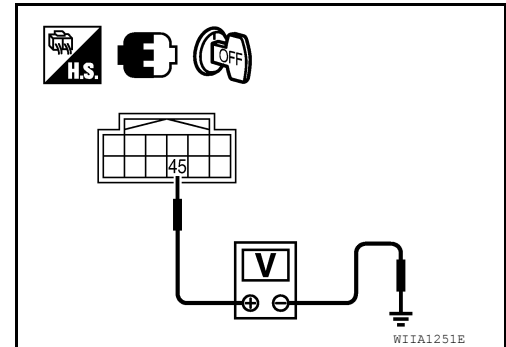
Check horn function with horn switch.

Does the horn sound?

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

2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT.
3. Using an oscilloscope or analog voltmeter, check voltage between 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.

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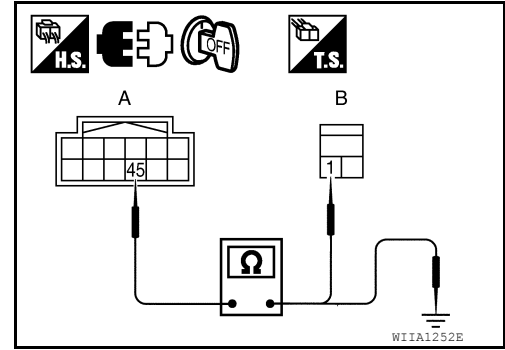
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HORN FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

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-40, "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-28, "Removal and Installation"](#).
 NO >> Repair or replace the malfunctioning part.

WARNING CHIME FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

WARNING CHIME FUNCTION

Description

INFOID:0000000008797864

Performs operation method guide and warning with buzzer.

Component Function Check

INFOID:0000000008797865

1.CHECK FUNCTION

With CONSULT

Check the operation of "INSIDE BUZZER" in the Active Test. Refer to [MWI-4, "Work Flow"](#).

Is the inspection result normal?

Yes >> Warning buzzer into combination meter is OK.

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

Diagnosis Procedure

INFOID:0000000008797866

1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to [MWI-84, "Removal and Installation"](#).

>> Inspection End.

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HAZARD FUNCTION

< DTC/CIRCUIT DIAGNOSIS >

HAZARD FUNCTION

Description

INFOID:000000008797867

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

Component Function Check

INFOID:000000008797868

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-50, "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000008797869

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-50, "Removal and Installation"](#).
- NO >> Repair or replace hazard warning switch circuit. Refer to [EXL-109, "Wiring Diagram"](#).

KEY SWITCH (BCM INPUT)

< DTC/CIRCUIT DIAGNOSIS >

KEY SWITCH (BCM INPUT)

Diagnosis Procedure

INFOID:000000008797870

Regarding Wiring Diagram information, refer to [DLK-68. "Wiring Diagram"](#).

1. CHECK KEY SWITCH INPUT SIGNAL

 With CONSULT

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT. Refer to [DLK-18. "DOOR LOCK : CONSULT Function \(BCM - DOOR LOCK\)"](#).

- When key is inserted to ignition key cylinder:

KEY ON SW : ON

- When key is removed from ignition key cylinder:

KEY ON SW : OFF

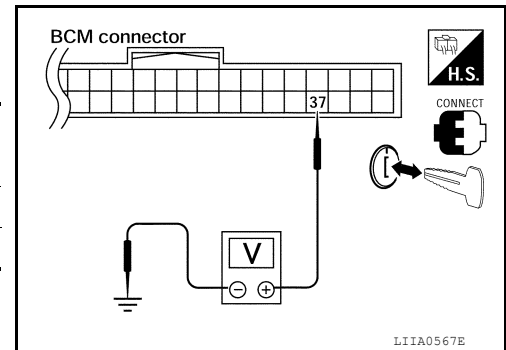
 Without CONSULT

Check voltage between BCM connector M18 terminal 37 and ground.

Connector	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)

- Turn ignition switch OFF.
- Disconnect key switch connector.
- 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

< DTC/CIRCUIT DIAGNOSIS >

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:000000008797871

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

< DTC/CIRCUIT DIAGNOSIS >

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

Diagnosis Procedure

INFOID:000000008797872

1.CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.

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

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KEYFOB ID SET UP WITH CONSULT

< DTC/CIRCUIT DIAGNOSIS >

KEYFOB ID SET UP WITH CONSULT

ID Code Entry Procedure

INFOID:000000008797873

KEYFOB ID SET UP WITH CONSULT

NOTE:

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

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

NOTE:

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

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

KEYFOB ID SET UP WITHOUT CONSULT

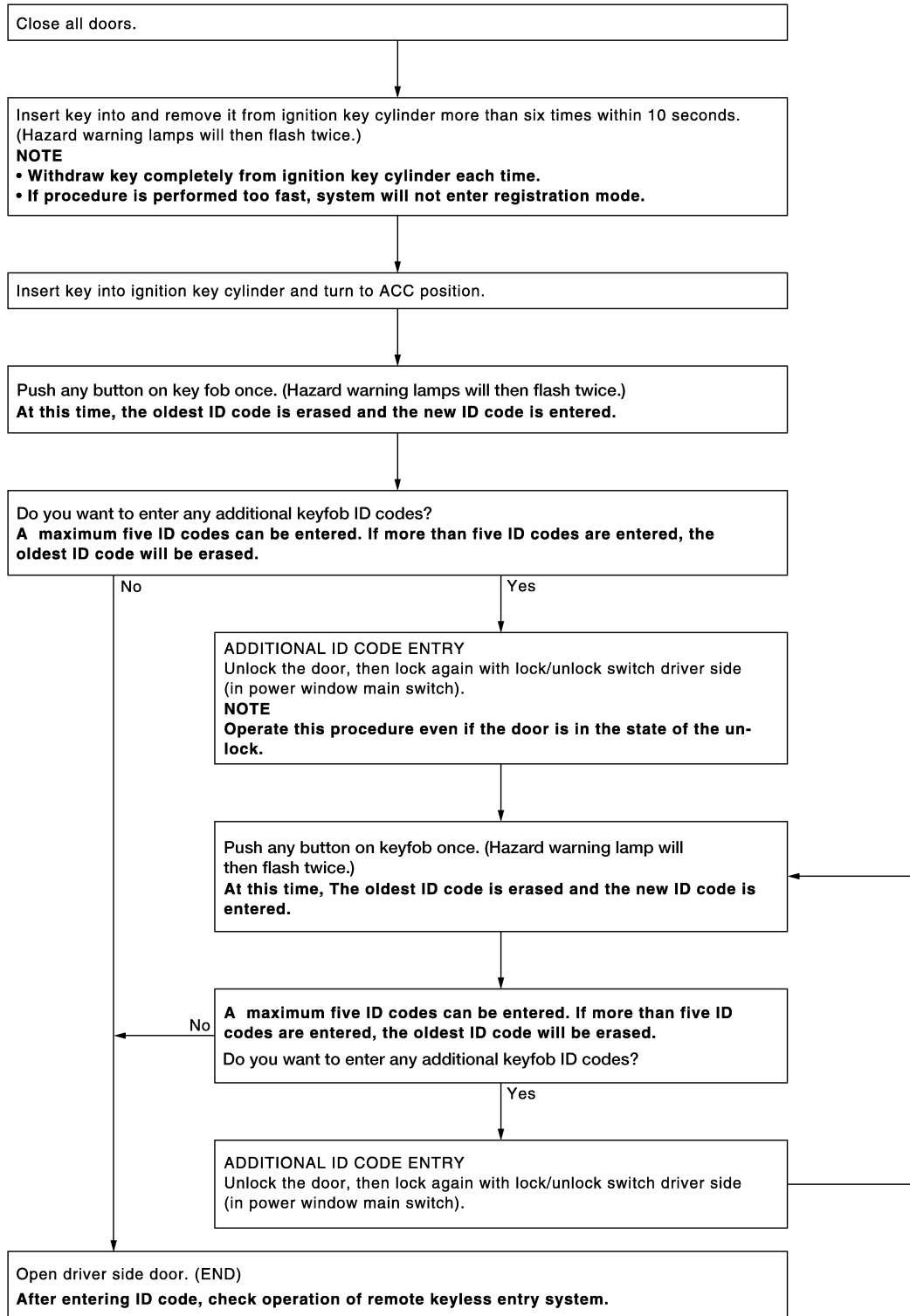
< DTC/CIRCUIT DIAGNOSIS >

KEYFOB ID SET UP WITHOUT CONSULT

ID Code Entry Procedure

INFOID:000000008797874

KEYFOB ID SET UP WITHOUT CONSULT



NOTE:

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

KEYFOB ID SET UP WITHOUT CONSULT

< DTC/CIRCUIT DIAGNOSIS >

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.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000009290373

NOTE:

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

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

VALUES ON THE DIAGNOSIS TOOL

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
FAN ON SIG	Blower motor fan switch OFF	Off
	Blower motor fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
	Front washer switch ON	On
FR WIPER LOW	Front wiper switch OFF	Off
	Front wiper switch LO	On
FR WIPER HI	Front wiper switch OFF	Off
	Front wiper switch HI	On
FR WIPER INT	Front wiper switch OFF	Off
	Front wiper switch INT	On
FR WIPER STOP	Any position other than front wiper stop position	Off
	Front wiper stop position	On
HAZARD SW	When hazard switch is not pressed	Off
	When hazard switch is pressed	On
HEAD LAMP SW 1	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HEAD LAMP SW 2	Headlamp switch OFF	Off
	Headlamp switch 1st	On
HI BEAM SW	High beam switch OFF	Off
	High beam switch HI	On
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID REGST FR1	ID registration of front right tire incomplete	YET
	ID registration of front right tire complete	DONE
ID REGST RL1	ID registration of rear left tire incomplete	YET
	ID registration of rear left tire complete	DONE
ID REGST RR1	ID registration of rear right tire incomplete	YET
	ID registration of rear right tire complete	DONE
IGN ON SW	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
IGN SW CAN	Ignition switch OFF or ACC	Off
	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
KEY CYL LK-SW	Door key cylinder LOCK position	Off
	Door key cylinder other than LOCK position	On
KEY CYL UN-SW	Door key cylinder UNLOCK position	Off
	Door key cylinder other than UNLOCK position	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
	Mechanical key is inserted to key cylinder	On
KEYLESS LOCK	LOCK button of key fob is not pressed	Off
	LOCK button of key fob is pressed	On

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

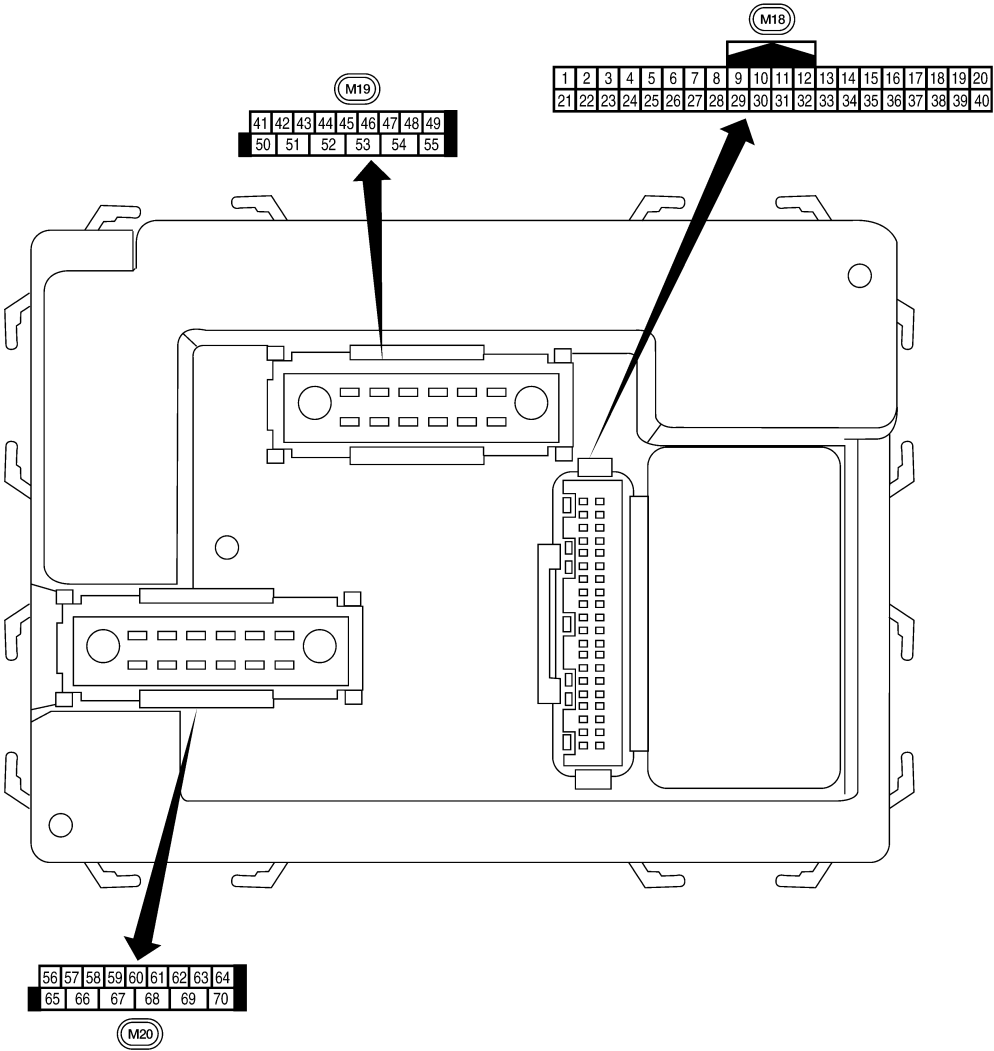
Monitor Item	Condition	Value/Status	
KEYLESS PANIC	PANIC button of key fob is not pressed	Off	A
	PANIC button of key fob is pressed	On	
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	Off	B
	UNLOCK button of key fob is pressed	On	
LIGHT SW 1ST	Lighting switch OFF	Off	C
	Lighting switch 1st	On	
OIL PRESS SW	- Ignition switch OFF or ACC - Engine running	Off	D
	Ignition switch ON	On	
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5V	E
	Dark outside of the vehicle	Close to 0V	
PASSING SW	Other than lighting switch PASS	Off	F
	Lighting switch PASS	On	
REAR DEF SW	Rear window defogger switch OFF	Off	G
	Rear window defogger switch ON	On	
RR WASHER SW	Rear washer switch OFF	Off	H
	Rear washer switch ON	On	
RR WIPER INT	Rear wiper switch OFF	Off	I
	Rear wiper switch INT	On	
RR WIPER ON	Rear wiper switch OFF	Off	J
	Rear wiper switch ON	On	
RR WIPER STOP	Rear wiper stop position	Off	DLK
	Other than rear wiper stop position	On	
TURN SIGNAL L	Turn signal switch OFF	Off	L
	Turn signal switch LH	On	
TURN SIGNAL R	Turn signal switch OFF	Off	M
	Turn signal switch RH	On	
VEHICLE SPEED	While driving	Equivalent to speedometer reading	N
WARNING LAMP	Low tire pressure warning lamp in combination meter OFF	Off	O
	Low tire pressure warning lamp in combination meter ON	On	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Terminal Layout

INFOID:000000009290374



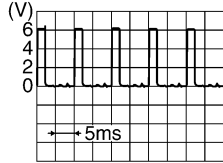
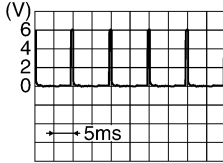
Physical Values

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INFOID:000000009290375

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

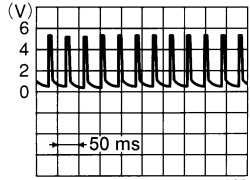
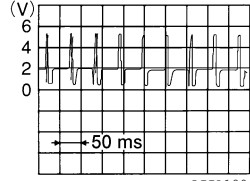
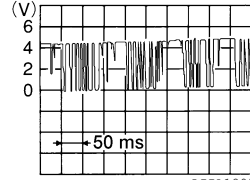
Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 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				
7	GR	Front door lock assembly LH (key cylinder switch) and back door key cylinder switch (unlock)	Input	OFF	ON (open, 2nd turn)	Momentary 1.5V
					OFF (closed)	0V
8	SB	Front door lock assembly LH (key cylinder switch) and back door key cylinder switch (lock)	Input	OFF	ON (open)	Momentary 1.5V
					OFF (closed)	0V
9	LG	Stop lamp switch	Input	OFF	Brake pedal depressed	Battery voltage
					Brake pedal released	0V
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

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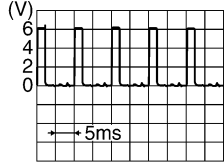
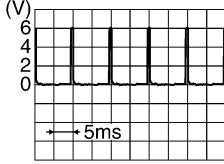
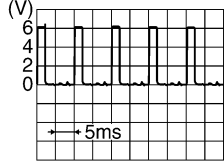
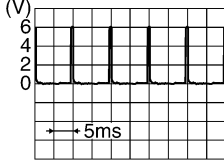
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
15	W	Tire pressure warning check connector	Input	OFF	—	5V
18	BR	Remote keyless entry receiver (ground)	Output	OFF	—	0V
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LI1A1893E
20	G	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 LI1A1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LI1A1895E
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.
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	R	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
31	R	Off-road lamps switch	Input	ON	ON	0V
					OFF	5V

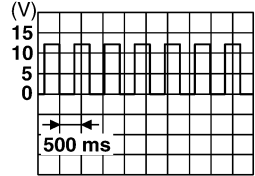
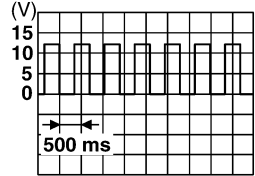
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

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	B	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
41	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
42	L	Off-road lamps	Output	ON	Off-road lamps switch ON	0V
					Off-road lamps switch OFF	Battery voltage
43	Y	Back door switch	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

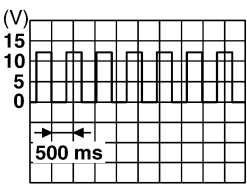
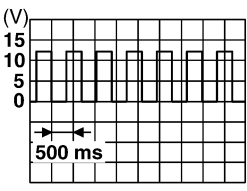
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

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
45	V	Lock switch	Input	OFF	ON (lock)	0V
					OFF	Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)	0V
					OFF	Battery voltage
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
50	W	Off-road lamps relay	Output	ON	Off-road lamps switch ON	0V
					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
55	W	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/Y	Battery saver output	Output	OFF	10 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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
59	GR	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
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 back door 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
70	W	Battery power supply	Input	OFF	—	Battery voltage

Fail Safe

INFOID:000000009290376

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:000000009290377

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

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
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:000000009290378

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	Low tire pressure warning lamp ON	Reference page
No DTC is detected. further testing may be required.	—	—	—
U1000: CAN COMM CIRCUIT	X	—	BCS-27
B2190: NATS ANTENNA AMP	—	—	SEC-18
B2191: DIFFERENCE OF KEY	—	—	SEC-21
B2192: ID DISCORD BCM-ECM	—	—	SEC-22
B2193: CHAIN OF BCM-ECM	—	—	SEC-24
C1708: [NO DATA] FL	—	X	WT-14
C1709: [NO DATA] FR	—	X	WT-14
C1710: [NO DATA] RR	—	X	WT-14
C1711: [NO DATA] RL	—	X	WT-14

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Low tire pressure warning lamp ON	Reference page
C1712: [CHECKSUM ERR] FL	—	X	WT-16
C1713: [CHECKSUM ERR] FR	—	X	WT-16
C1714: [CHECKSUM ERR] RR	—	X	WT-16
C1715: [CHECKSUM ERR] RL	—	X	WT-16
C1716: [PRESSDATA ERR] FL	—	X	WT-18
C1717: [PRESSDATA ERR] FR	—	X	WT-18
C1718: [PRESSDATA ERR] RR	—	X	WT-18
C1719: [PRESSDATA ERR] RL	—	X	WT-18
C1720: [CODE ERR] FL	—	X	WT-16
C1721: [CODE ERR] FR	—	X	WT-16
C1722: [CODE ERR] RR	—	X	WT-16
C1723: [CODE ERR] RL	—	X	WT-16
C1724: [BATT VOLT LOW] FL	—	X	WT-16
C1725: [BATT VOLT LOW] FR	—	X	WT-16
C1726: [BATT VOLT LOW] RR	—	X	WT-16
C1727: [BATT VOLT LOW] RL	—	X	WT-16
C1729: VHCL SPEED SIG ERR	—	X	WT-20
C1735: IGNITION SIGNAL	—	X	WT-21

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POWER DOOR LOCK SYSTEM

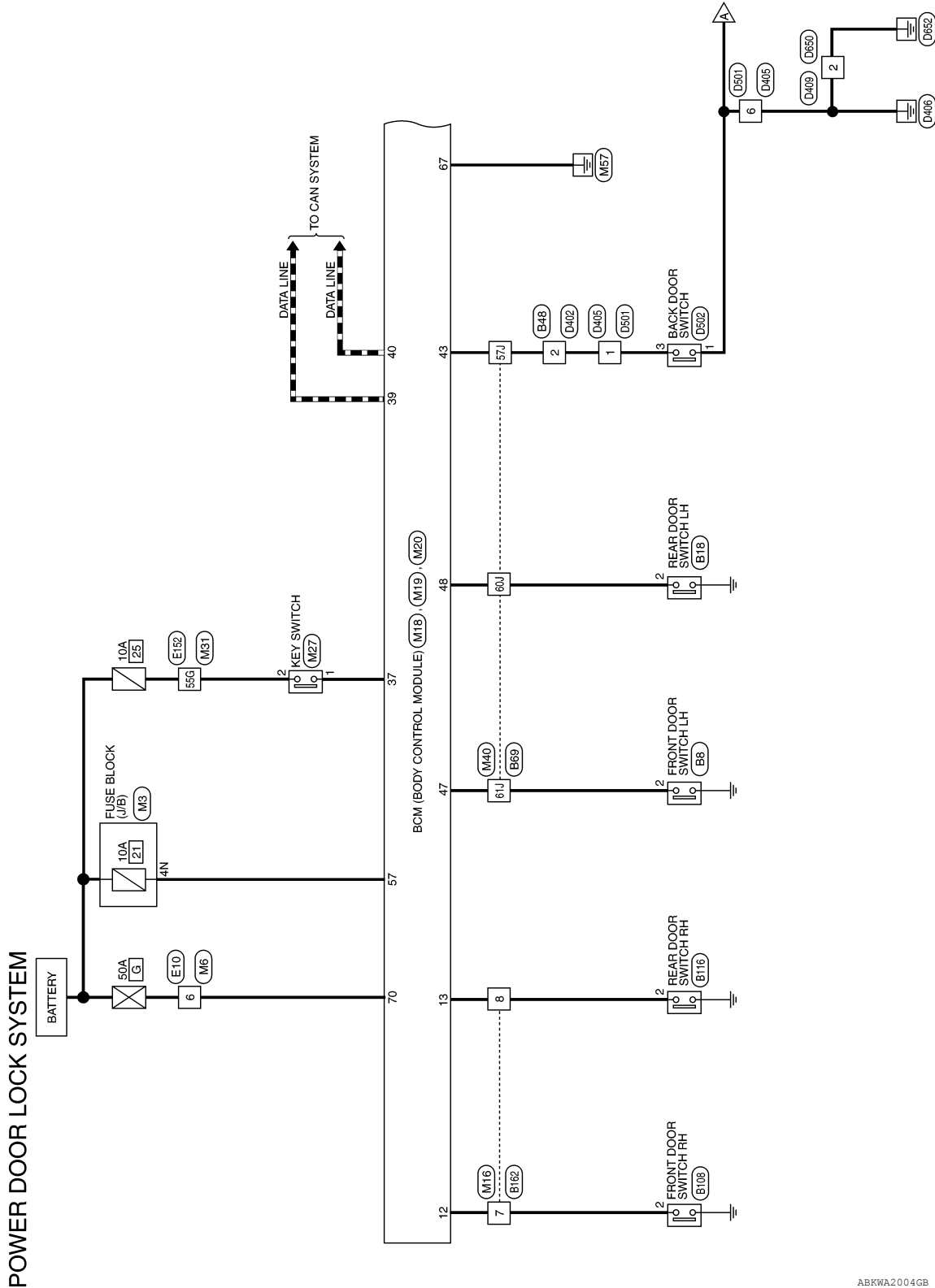
< WIRING DIAGRAM >

WIRING DIAGRAM

POWER DOOR LOCK SYSTEM

Wiring Diagram

INFOID:000000008797881



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< WIRING DIAGRAM >

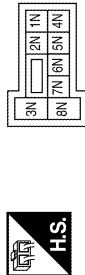


POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

POWER DOOR LOCK SYSTEM CONNECTORS

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



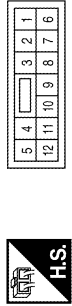
Terminal No.	Color of Wire	Signal Name
4N	R/Y	--

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



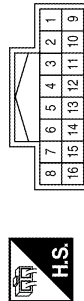
Terminal No.	Color of Wire	Signal Name
6	W	--

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



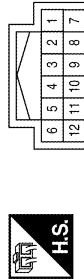
Terminal No.	Color of Wire	Signal Name
7	GR	--
8	V	--
9	B	--

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



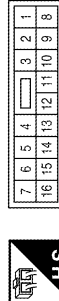
Terminal No.	Color of Wire	Signal Name
9	GR	--
10	SB	--
11	LG	--
12	V	--

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7	LG	--
8	L	--

Connector No.	M17
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
13	SB	--
14	V	--

POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

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

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



Terminal No.	Color of Wire	Signal Name
43	Y	BACK DOOR SW
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

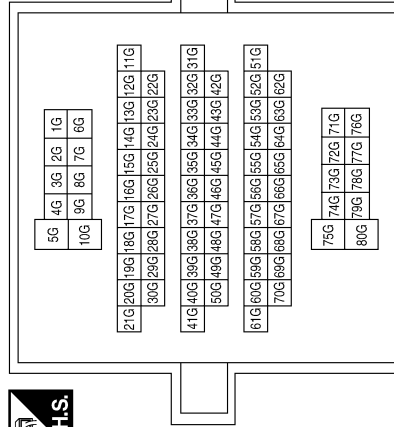
Terminal No.	Color of Wire	Signal Name
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
37	B	KEY SW
39	L	CAN-H
40	P	CAN-L

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



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

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



Terminal No.	Color of Wire	Signal Name
55G	Y	-

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE



2	1
---	---

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

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



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

Terminal No.	Color of Wire	Signal Name
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)

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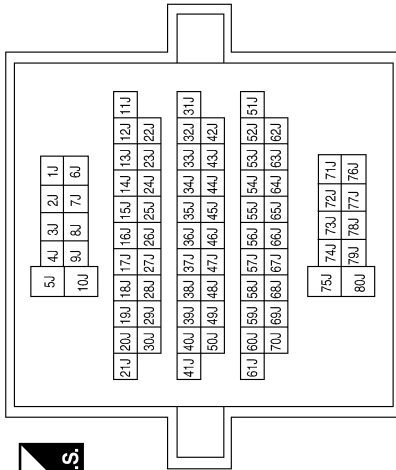
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POWER DOOR LOCK SYSTEM

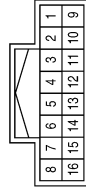
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Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



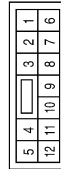
Terminal No.	Color of Wire	Signal Name
52J	GR	-
53J	SB	-
57J	Y	-
60J	P	-
61J	GR	-
71J	L	-
72J	V	-

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



Terminal No.	Color of Wire	Signal Name
4	LG	-
5	P	-

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

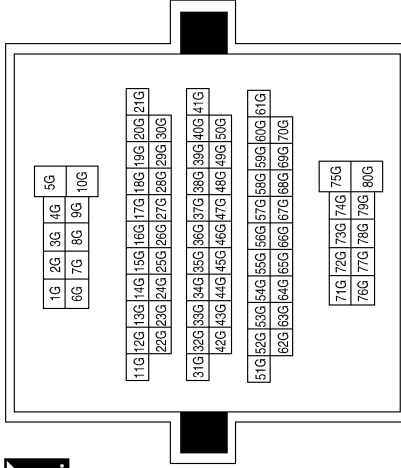


Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

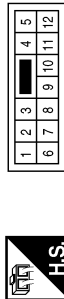


Terminal No.	Color of Wire	Signal Name
55G	Y	-

POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

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



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

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



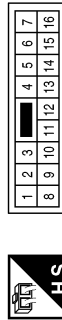
Terminal No.	Color of Wire	Signal Name
2	GR	-

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



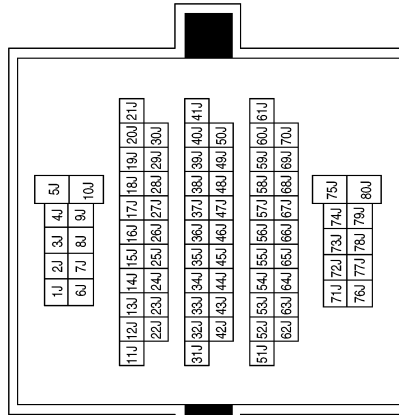
Terminal No.	Color of Wire	Signal Name
2	P	-

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



Terminal No.	Color of Wire	Signal Name
2	Y	-
3	SB	-
4	G	-
12	GR	-
13	V	-

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



Terminal No.	Color of Wire	Signal Name
52J	GR	-
53J	SB	-
57J	Y	-
60J	P	-
61J	GR	-
71J	L	-
72J	V	-

POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

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

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

1	2	3
---	---	---



Terminal No.	Color of Wire	Signal Name
2	LG	-

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

1	2	3
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Terminal No.	Color of Wire	Signal Name
2	L	-

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
7	LG	-
8	L	-

Connector No.	B163
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
13	SB	-
14	V	-

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

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



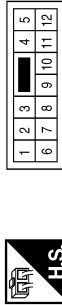
Terminal No.	Color of Wire	Signal Name
9	R/W	-
10	SB	-
11	W	-
12	LG	-

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POWER DOOR LOCK SYSTEM

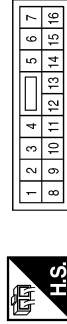
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Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN



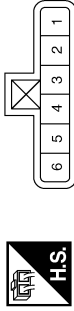
Terminal No.	Color of Wire	Signal Name
7	G	-
8	V	-
9	B	-

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



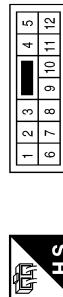
Terminal No.	Color of Wire	Signal Name
10	LG	-
11	W	-
14	B	-

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



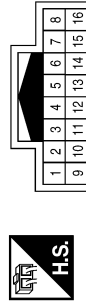
Terminal No.	Color of Wire	Signal Name
1	V	-
2	G	-
3	R/W	-
4	B	-
5	SB	-
6	-	-

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



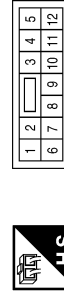
Terminal No.	Color of Wire	Signal Name
2	V	-
3	G/Y	-
12	B	-

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



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

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



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

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POWER DOOR LOCK SYSTEM

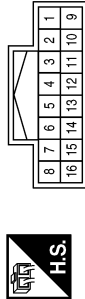
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Connector No.	D114
Connector Name	FRONT DOOR LOCK ACTUATOR RH
Connector Color	WHITE



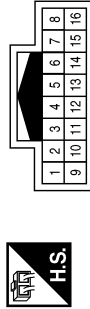
Terminal No.	Color of Wire	Signal Name
1	G/Y	—
2	V	—

Connector No.	D150
Connector Name	WIRE TO WIRE
Connector Color	WHITE



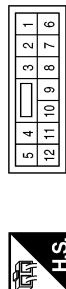
Terminal No.	Color of Wire	Signal Name
4	P	—
5	W	—

Connector No.	D151
Connector Name	WIRE TO WIRE
Connector Color	WHITE



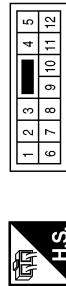
Terminal No.	Color of Wire	Signal Name
4	P	—
5	W	—

Connector No.	D152
Connector Name	WIRE TO WIRE
Connector Color	WHITE



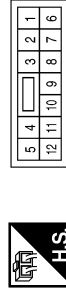
Terminal No.	Color of Wire	Signal Name
2	V	—
3	L	—
12	B	—

Connector No.	D153
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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



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

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POWER DOOR LOCK SYSTEM

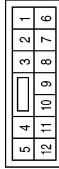
< WIRING DIAGRAM >

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



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

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



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

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



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

Connector No.	D409
Connector Name	WIRE TO WIRE
Connector Color	WHITE



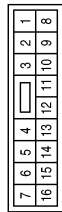
Terminal No.	Color of Wire	Signal Name
2	B	—

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



Terminal No.	Color of Wire	Signal Name
1	Y	—
2	SB	—
3	G	—
6	B	—
7	GR	—
8	V	—

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



Terminal No.	Color of Wire	Signal Name
2	Y	—
3	SB	—
4	G	—
12	GR	—
13	V	—

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POWER DOOR LOCK SYSTEM

< WIRING DIAGRAM >

Connector No.	D505
Connector Name	BACK DOOR KEY CYLINDER SWITCH
Connector Color	BROWN



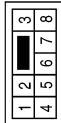
Terminal No.	Color of Wire	Signal Name
1	SB	-
2	B	-
3	GR	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
3	Y	-

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



Terminal No.	Color of Wire	Signal Name
1	Y	-
2	SB	-
3	G	-
6	B	-
7	GR	-
8	V	-

Connector No.	D650
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	-

Connector No.	D508
Connector Name	BACK DOOR LOCK ACTUATOR
Connector Color	WHITE



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

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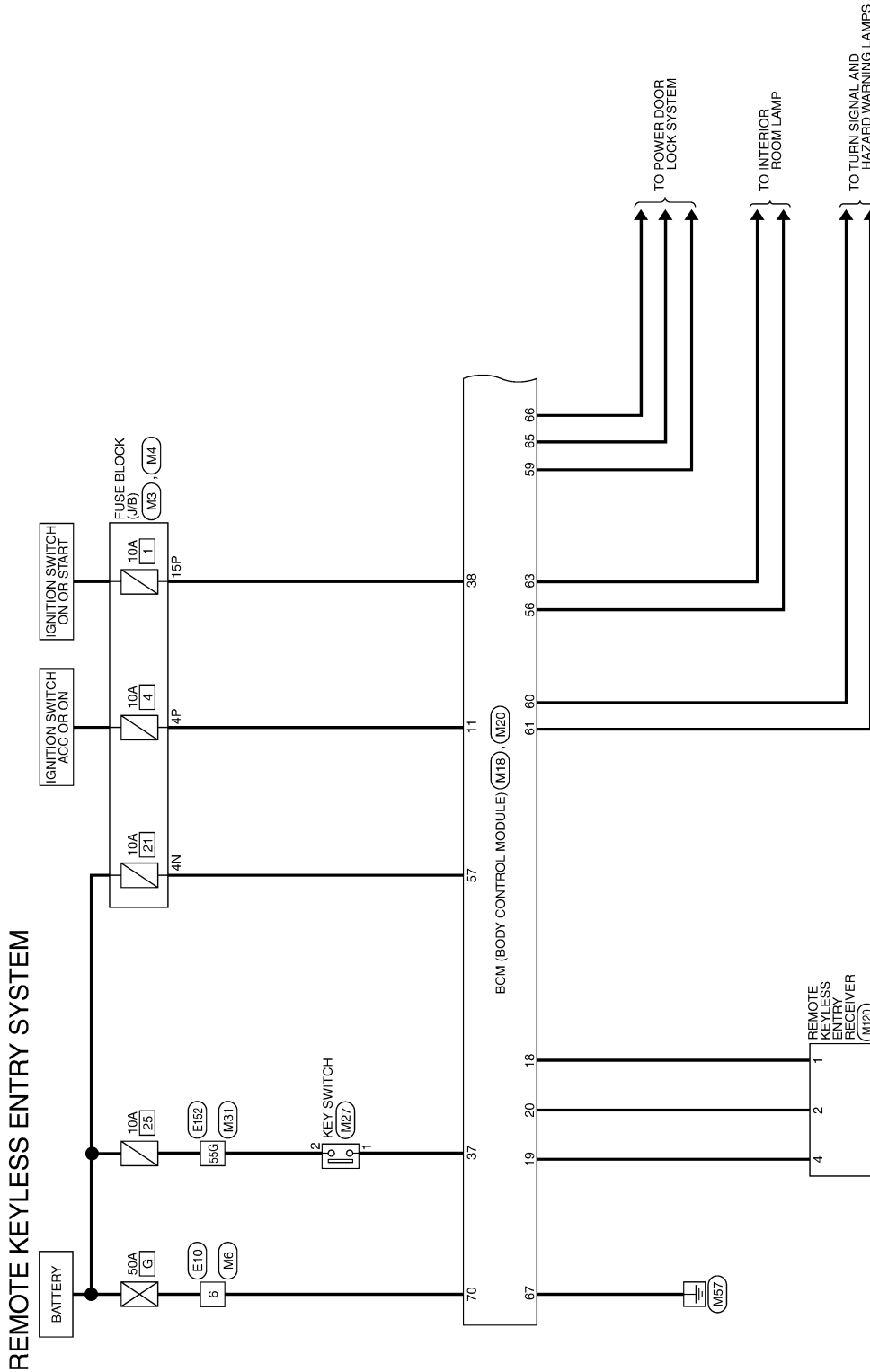
REMOTE KEYLESS ENTRY SYSTEM

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REMOTE KEYLESS ENTRY SYSTEM

Wiring Diagram

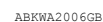
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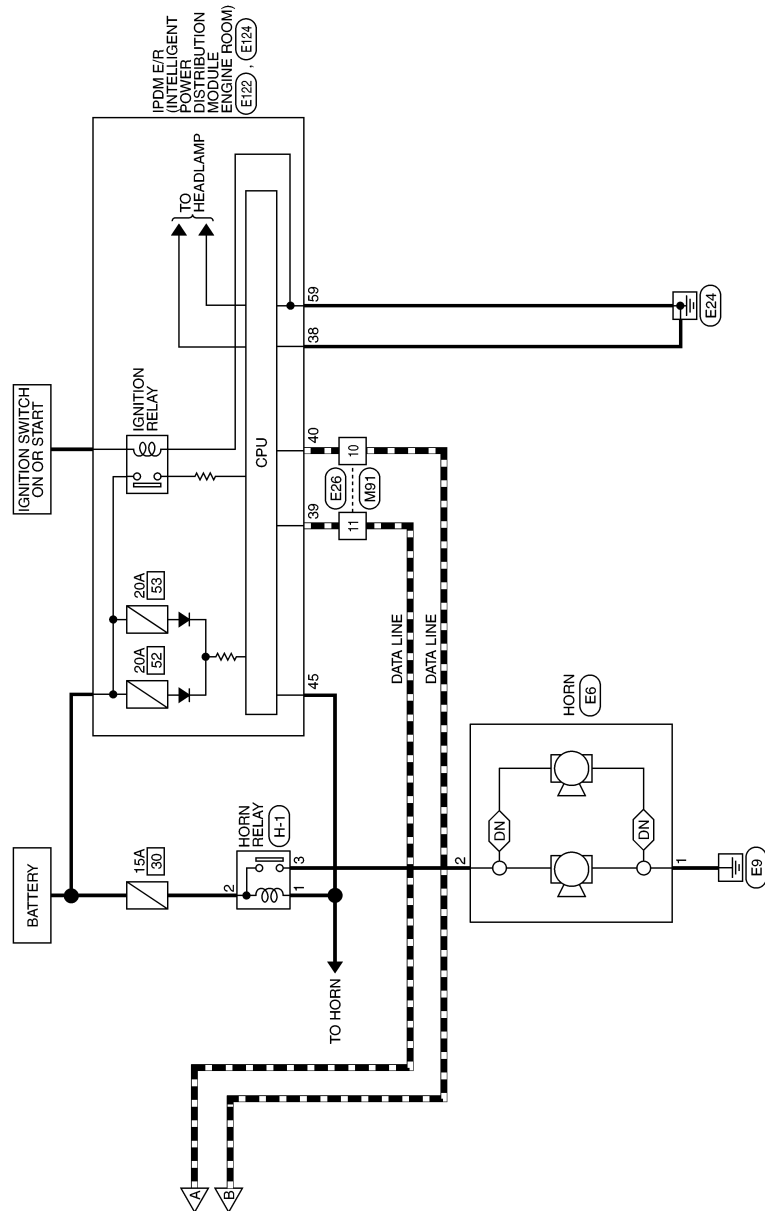
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REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

⬇ : WITH DUAL NOTE HORN



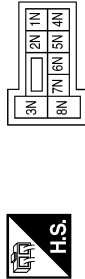
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REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

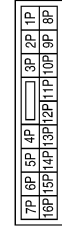
REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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



Terminal No.	4N	Color of Wire	R/Y	Signal Name	-
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Connector No.	M4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



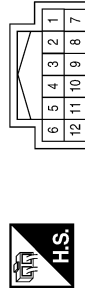
Terminal No.	4P	Color of Wire	G/B	Signal Name	-
15P		W/R			-

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



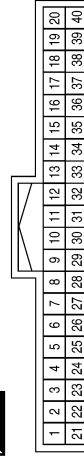
Terminal No.	6	Color of Wire	W	Signal Name	-
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Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	7	Color of Wire	LG	Signal Name	-
8		L			-

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



Terminal No.	11	Color of Wire	G/B	Signal Name	ACC SW
12		LG		DOOR SW (AS)	
13		L		DOOR SW (RR)	
18		BR		KEYLESS & 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	

REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

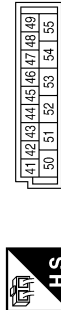
Terminal No.	Color of Wire	Signal Name
60	LG	FLASHER OUTPUT (LEFT)
61	G	FLASHER OUTPUT (RIGHT)
63	BR	ROOM LAMP OUTPUT
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W	BAT (F/L)

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



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

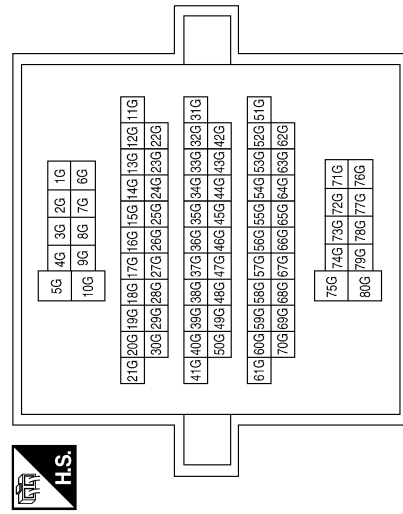
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
43	Y	BACK DOOR SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)

Terminal No.	Color of Wire	Signal Name
55G	Y	-

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



Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE



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

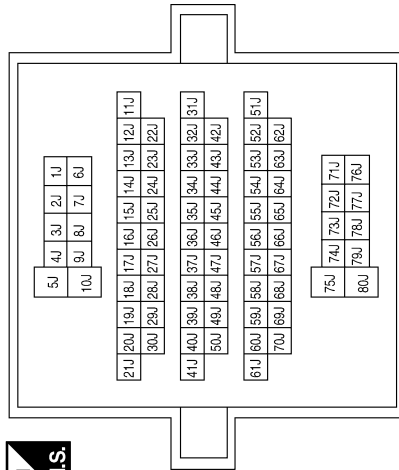
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REMOTE KEYLESS ENTRY SYSTEM

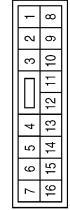
< WIRING DIAGRAM >

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



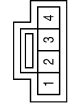
Terminal No.	Color of Wire	Signal Name
57J	Y	-
60J	P	-
61J	GR	-

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



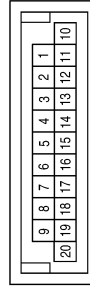
Terminal No.	Color of Wire	Signal Name
10	P	-
11	L	-

Connector No.	M120
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	BR	-
2	G	-
3	-	-
4	V	-

Connector No.	M167
Connector Name	JOINT CONNECTOR-M02
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	P	-
10	L	-
11	L	-

Connector No.	E6
Connector Name	HORN
Connector Color	BLACK



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

REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

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

1	2	3
4	5	6



Terminal No.	Color of Wire	Signal Name
6	W	-

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

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



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

42	41	40	39	38	37
48	47	46	45	44	43



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L
45	LG	ANT THEFT HORN

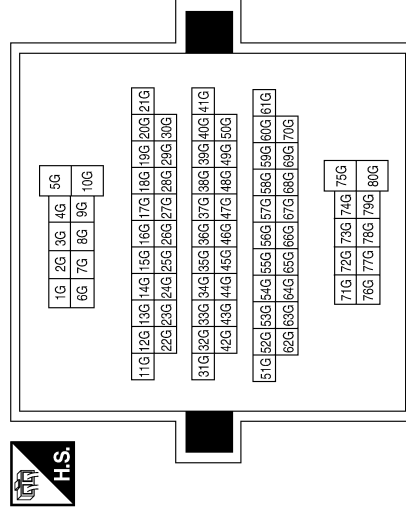
Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

59	58	57
62	61	60



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

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



Terminal No.	Color of Wire	Signal Name
55G	Y	-

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REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

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



1	2	3
---	---	---

Terminal No.	2
Color of Wire	GR
Signal Name	—

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



1	2	3
---	---	---

Terminal No.	2
Color of Wire	P
Signal Name	—

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



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

Terminal No.	2
Color of Wire	Y
Signal Name	—

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



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		

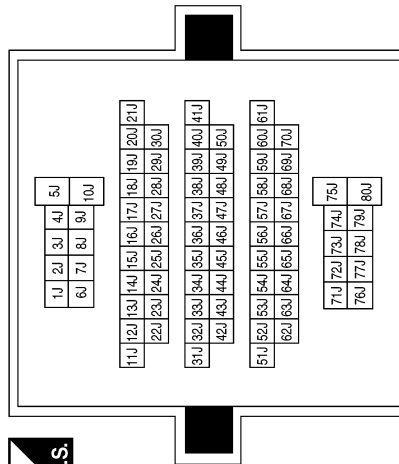
71J	72J	73J	74J	75J
76J	77J	78J	79J	80J

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



1	2	3
---	---	---

Terminal No.	2
Color of Wire	LG
Signal Name	—



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REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

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



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

Terminal No.	2
Color of Wire	Y
Signal Name	—

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	7	8
Color of Wire	LG	L
Signal Name	—	—

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



1	2	3
---	---	---

Terminal No.	2
Color of Wire	L
Signal Name	—

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



1	2	3	
4	5	6	7
		8	

Terminal No.	1	6
Color of Wire	Y	B
Signal Name	—	—

Connector No.	D409
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
---	---

Terminal No.	2
Color of Wire	B
Signal Name	—

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



3		2	1	
8	7	6	5	4

Terminal No.	1	6
Color of Wire	Y	B
Signal Name	—	—

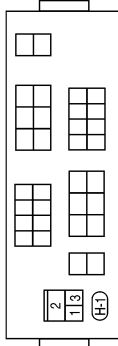
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REMOTE KEYLESS ENTRY SYSTEM

< WIRING DIAGRAM >

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



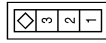
Terminal No.	Color of Wire	Signal Name
1	R	-
2	O	-
3	G	-

Connector No.	D650
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	B	-

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



Terminal No.	Color of Wire	Signal Name
1	B	-
3	Y	-

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DOOR LOCK

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

DOOR LOCK

Symptom Table

INFOID:000000008797883

DOOR LOCK SYSTEM

NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to [DLK-4, "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-24
	2. Key switch (Insert) check	DLK-51
	3. Replace BCM.	BCS-50
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-27
	2. Door lock/unlock switch check (passenger side)	DLK-27
Specific door lock actuator does not operate.	1. Door lock actuator check (Front LH)	DLK-36
	2. Door lock actuator check (Front RH)	DLK-37
	3. Door lock actuator check (Rear LH)	DLK-38
	4. Door lock actuator check (Rear RH)	DLK-40
	5. Back door	DLK-41
Power door lock does not operate with front door key cylinder LH or back door key cylinder operation.	1. Front door lock assembly LH (key cylinder switch) check	DLK-31
	2. Back door key cylinder switch check	DLK-33
	3. Replace BCM.	BCS-50
Power door lock does not operate.	1. BCM power supply and ground circuit check	BCS-28
	2. Door lock/unlock switch check (driver)	DLK-27
	3. Door lock/unlock switch check (passenger)	DLK-27
Vehicle speed sensing auto LOCK operation does not operate.	1. Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-18
	2. Check combination meter vehicle speed signal.	MWI-29
	3. Check intermittent incident.	GI-40
Ignition OFF interlock door UNLOCK function does not operate.	1. Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-18
	2. Check BCM for DTCs.	DLK-65
	3. Check intermittent incident.	GI-40

DLK

REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

REMOTE KEYLESS ENTRY SYSTEM

Symptom Table

INFOID:000000008797884

REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-45
	2. Check BCM and remote keyless entry receiver.	DLK-43
The new ID of keyfob cannot be entered.	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-45
	2. Key switch (insert) check	DLK-51
	3. Door switch check	DLK-24
	4. ACC power check	BCS-28
	5. Replace BCM.	BCS-50
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system)	1. Keyfob battery and function check (use Remote Keyless Entry Tester J-43241 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-14
	2. Replace BCM.	BCS-50
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	1. Check hazard and horn reminder mode with CONSULT NOTE: Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	DLK-14
	2. Door switch check	DLK-24
	3. Replace BCM.	BCS-50
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob. (Horn reminder OK)	1. Check hazard reminder mode with CONSULT NOTE: Hazard reminder mode can be changed. First check the hazard reminder mode setting.	DLK-14
	2. Check hazard function with hazard switch	—
	3. Replace BCM.	BCS-50
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	1. Check horn reminder mode with CONSULT NOTE: Horn reminder mode can be changed. First check the horn reminder mode setting.	DLK-14
	2. Check horn function with horn switch	—
	3. IPDM E/R operation check	DLK-47
	4. Replace BCM.	BCS-50
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-24
	4. Replace BCM.	BCS-50

REMOTE KEYLESS ENTRY SYSTEM

< SYMPTOM DIAGNOSIS >

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 or Signal Tech II Tool J-50190) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-45
	2. Key switch (insert) check	DLK-51
	3. Replace BCM.	BCS-50
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	1. Check auto door lock operation mode with CONSULT NOTE: Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	DLK-12
	2. Replace BCM.	BCS-50

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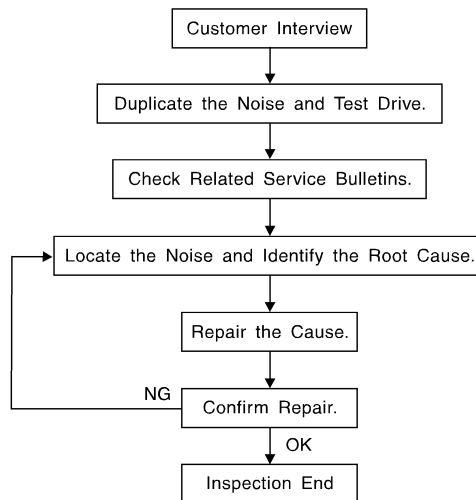
SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:000000009273054



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-96, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by test driving the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics are provided so the customer, service adviser and technician are all speaking the same language when defining the noise.
- Squeak —(Like tennis shoes on a clean floor)
Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces = higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping.
- Creak—(Like walking on an old wooden floor)
Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle—(Like shaking a baby rattle)
Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock —(Like a knock on a door)
Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick—(Like a clock second hand)
Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump—(Heavy, muffled knock noise)
Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz—(Like a bumble bee)
Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon the person. A noise that you may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

DUPLICATE THE NOISE AND TEST DRIVE

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when you confirm the repair.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
 - 2) Tap or push/pull around the area where the noise appears to be coming from.
 - 3) Rev the engine.
 - 4) Use a floor jack to recreate vehicle "twist".
 - 5) At idle, apply engine load (electrical load, half-clutch on M/T model, drive position on CVT and A/T models).
 - 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
 - If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
 - removing the components in the area that you suspect the noise is coming from.
Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.
 - tapping or pushing/pulling the component that you suspect is causing the noise.
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
 - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
 - placing a piece of paper between components that you suspect are causing the noise.
 - looking for loose components and contact marks.Refer to [DLK-94, "Generic Squeak and Rattle Troubleshooting"](#).

REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
 - separate components by repositioning or loosening and retightening the component, if possible.
 - insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A NISSAN Squeak and Rattle Kit (J-43980) is available through your authorized NISSAN Parts Department.

CAUTION:

Do not use excessive force as many components are constructed of plastic and may be damaged.

Always check with the Parts Department for the latest parts information.

The following materials are contained in the NISSAN Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100×135 mm (3.94×5.31 in)/76884-71L01: 60×85 mm (2.36×3.35 in)/76884-71L02: 15×25 mm (0.59×0.98 in)

INSULATOR (Foam blocks)

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick, 50×50 mm (1.97×1.97 in)/73982-50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97×1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30×50 mm (1.18×1.97 in)

FELT CLOTH TAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

68370-4B000: 15×25 mm (0.59×0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll. The following materials not found in the kit can also be used to repair squeaks and rattles.

UHMW (TEFLON) TAPE

Insulates where slight movement is present. Ideal for instrument panel applications.

SILICONE GREASE

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

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:000000009273055

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. Cluster lid A and the instrument panel
2. Acrylic lens and combination meter housing
3. Instrument panel to front pillar finisher
4. Instrument panel to windshield
5. Instrument panel pins
6. Wiring harnesses behind the combination meter
7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicone spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

CAUTION:

Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair.

CENTER CONSOLE

Components to pay attention to include:

1. Shift selector assembly cover to finisher
2. A/C control unit and cluster lid C
3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

DOORS

Pay attention to the:

1. Finisher and inner panel making a slapping noise
2. Inside handle escutcheon to door finisher
3. Wiring harnesses tapping
4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. You can usually insulate the areas with felt cloth tape or insulator foam blocks from the NISSAN Squeak and Rattle Kit (J-43980) to repair the noise.

TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner.

In addition look for:

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
2. Sun visor shaft shaking in the holder
3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

OVERHEAD CONSOLE (FRONT AND REAR)

Overhead console noises are often caused by the console panel clips not being engaged correctly. Most of these incidents are repaired by pushing up on the console at the clip locations until the clips engage.

In addition look for:

1. Loose harness or harness connectors.
2. Front console map/reading lamp lens loose.
3. Loose screws at console attachment points.

SEATS

When isolating seat noise it's important to note the position the seat is in and the load placed on the seat when the noise is present. These conditions should be duplicated when verifying and isolating the cause of the noise.

Cause of seat noise include:

1. Headrest rods and holder
2. A squeak between the seat pad cushion and frame
3. The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

1. Any component installed to the engine wall
2. Components that pass through the engine wall
3. Engine wall mounts and connectors
4. Loose radiator installation pins
5. Hood bumpers out of adjustment
6. Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine rpm or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

A
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DLK

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

INFOID:000000008797887

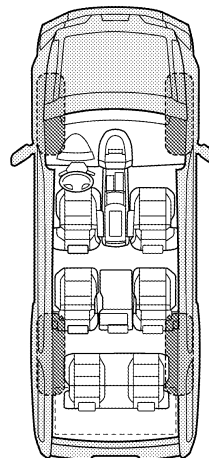
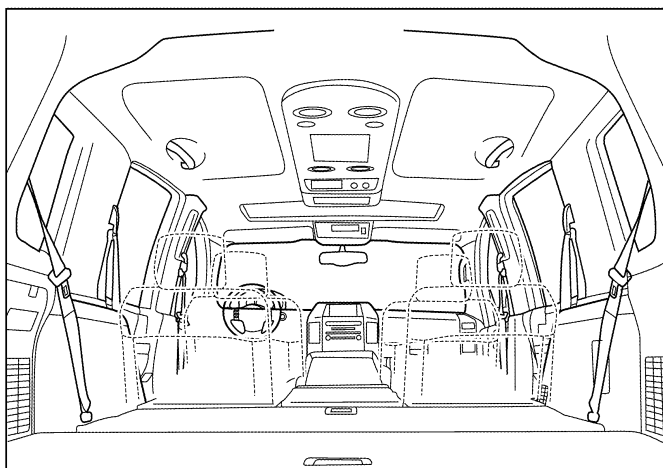
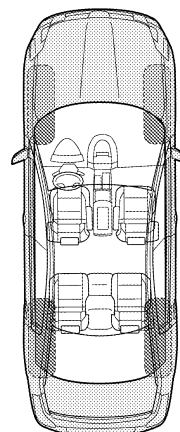
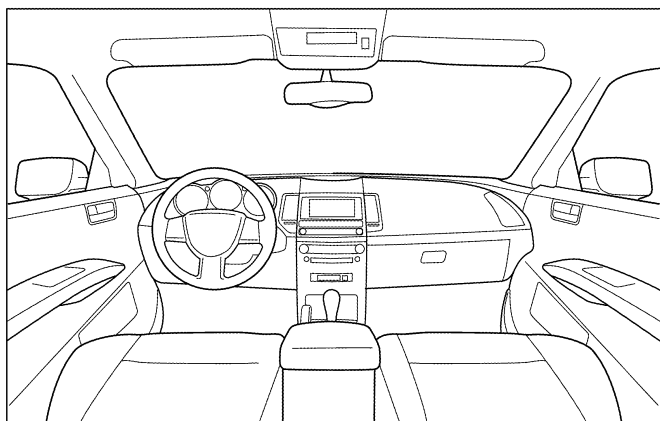
Dear Customer:

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

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

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 | ☐ After sitting out in the rain |
| ☐ 1st time in the morning | ☐ When it is raining or wet |
| ☐ Only when it is cold outside | ☐ Dry or dusty conditions |
| ☐ Only when it is hot outside | ☐ 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

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:000000008797888

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 Servicing Doors and locks

INFOID:000000009273053

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

PREPARATION

< PREPARATION >

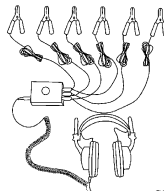
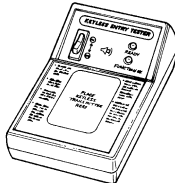
PREPARATION

PREPARATION

Special Service Tool

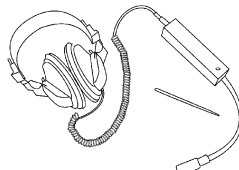
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The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name		Description
— (J-39570) Chassis Ear		Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit		Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester		Used to test keyfobs
— (J-50190) Signal Tech II		• Activate and display TPMS transmitter IDs • Display tire pressure reported by the TPMS transmitter • Read TPMS DTCs • Register TPMS transmitter IDs • Test remote keyless entry keyfob relative signal strength

Commercial Service Tool

INFOID:000000008797891

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

HOOD

< REMOVAL AND INSTALLATION >

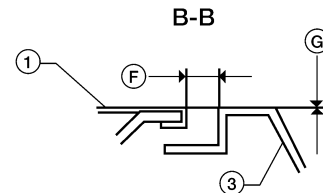
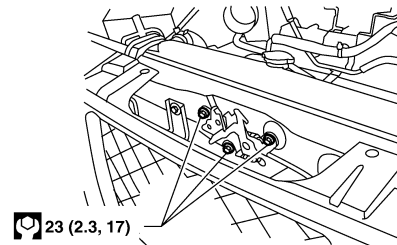
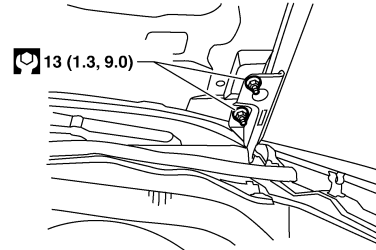
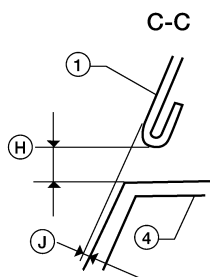
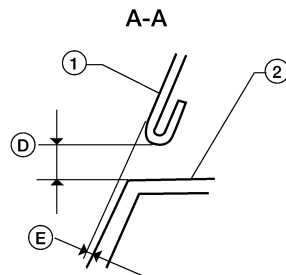
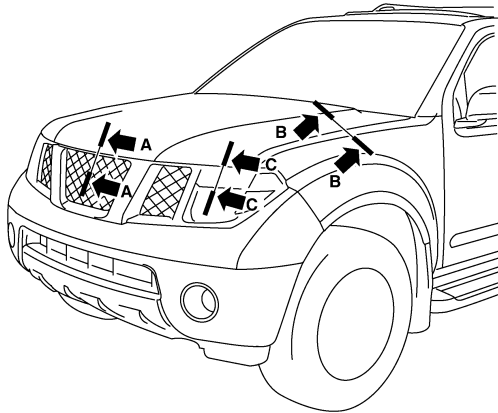
REMOVAL AND INSTALLATION

HOOD

Fitting Adjustment

INFOID:000000008797892

SEC.650



AWKIA04862Z

- | | | |
|---|---|---|
| 1. Hood | 2. Front grille | 3. Front fender |
| 4. Front combination lamp | D. 6.0 ± 2.3 mm (0.24 ± 0.09 in) | E. 0.0 ± 2.4 mm (0.0 ± 0.09 in) |
| F. 4.6 ± 1.0 mm (0.18 ± 0.04 in) | G. 0.0 ± 1.0 mm (0.0 ± 0.04 in) | H. 6.0 ± 2.0 mm (0.24 ± 0.08 in) |
| J. 0.0 ± 2.0 mm (0.0 ± 0.08 in) | | |

CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-19. "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.

HOOD

< REMOVAL AND INSTALLATION >

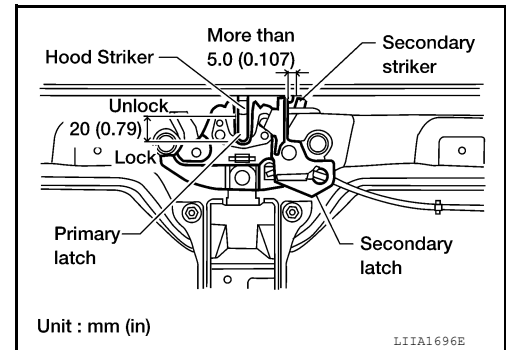
5. Tighten the bolts to specification.
6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
7. Install the front grille. Refer to [EXT-19, "Removal and Installation"](#).

HOOD LOCK ADJUSTMENT

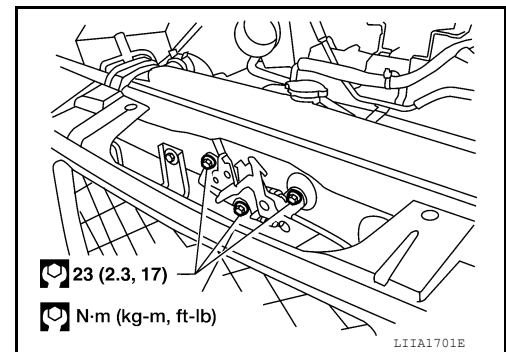
1. Remove the front grille. Refer to [EXT-19, "Removal and Installation"](#).
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 29 N (3 kg-f, 6.5 ft-lb).

CAUTION:

Do not drop the hood from 300 mm (11.81 in) height or higher.



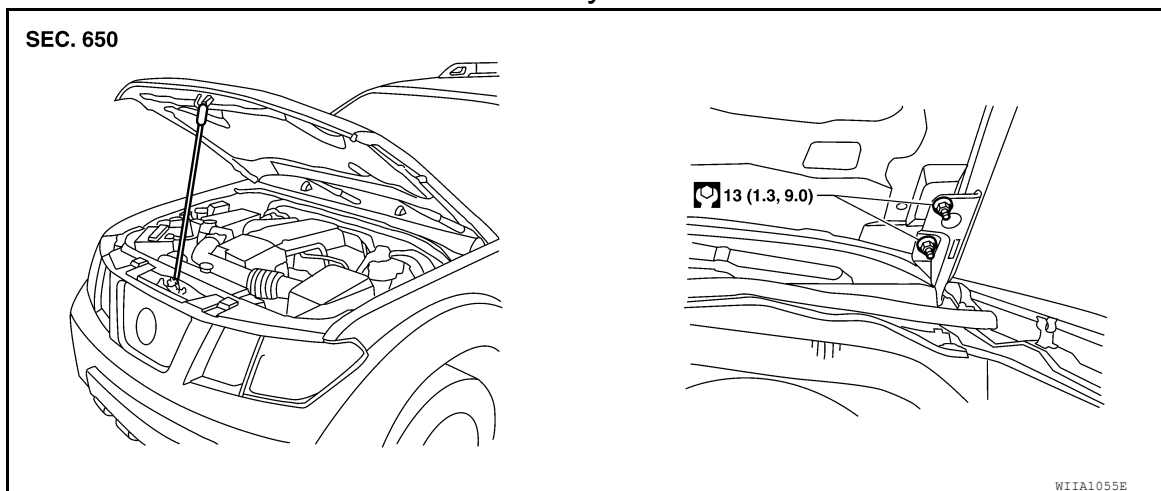
4. After adjusting hood lock, tighten the lock bolts to the specified torque.



5. Install the front grille. Refer to [EXT-19, "Removal and Installation"](#).

Removal and Installation of Hood Assembly

INFOID:000000008797893



REMOVAL

1. Support the hood striker with suitable tool to prevent it from falling.

CAUTION:

Two technicians should be used to avoid damaging the hood during removal.

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

HOOD

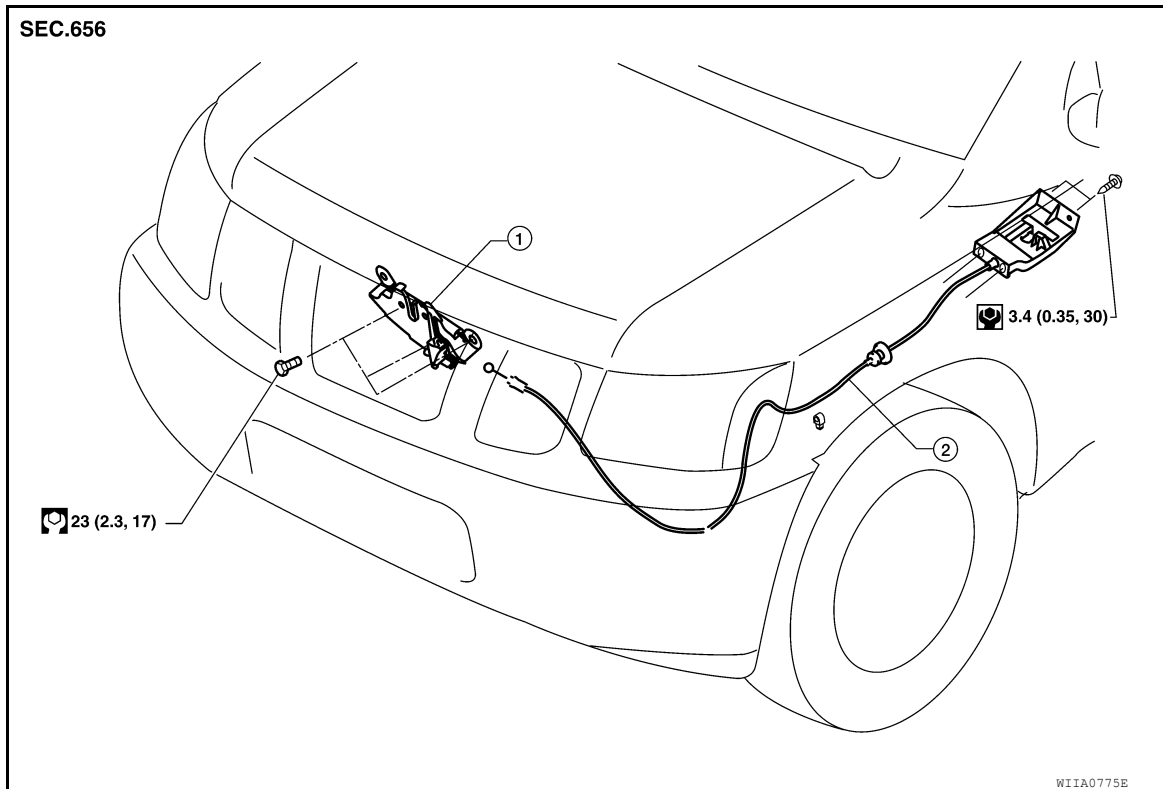
< REMOVAL AND INSTALLATION >

INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation of Hood Lock Control

INFOID:000000008797894



1. Hood lock assembly 2. Hood lock control cable

REMOVAL

1. Remove the bolts and the hood lock assembly.
2. Disconnect the hood lock control cable from the hood lock, and unclip it from the radiator core support upper and hoodedge.
3. Remove the bolts and the hood release handle.
4. Separate the grommet from the lower dash panel. Pull the hood lock control cable out through the passenger compartment.

CAUTION:

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

INSTALLATION

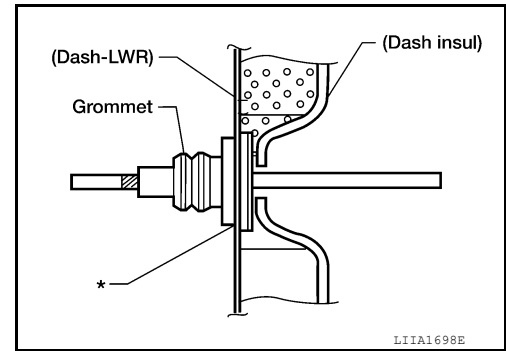
1. Pull the hood lock control cable through the lower dash panel hole into the engine room.

HOOD

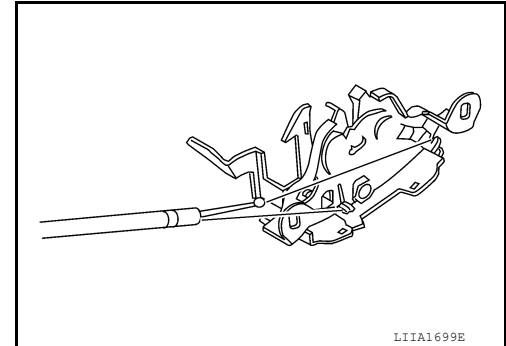
< REMOVAL AND INSTALLATION >

Be careful not to bend the cable too much, keep the radius 100 mm (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 hood lock.
5. Install the hood lock assembly and tighten the bolts to specification.
6. Adjust the hood lock. Refer to [DLK-103. "Hood Lock Control Inspection"](#).



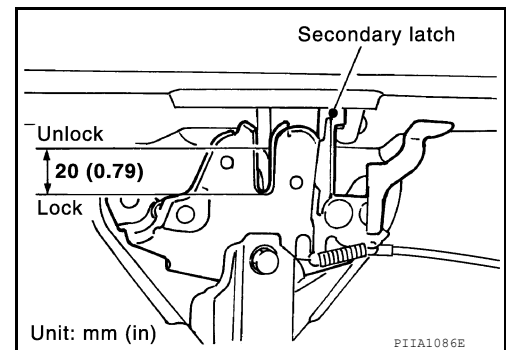
Hood Lock Control Inspection

INFOID:000000008797895

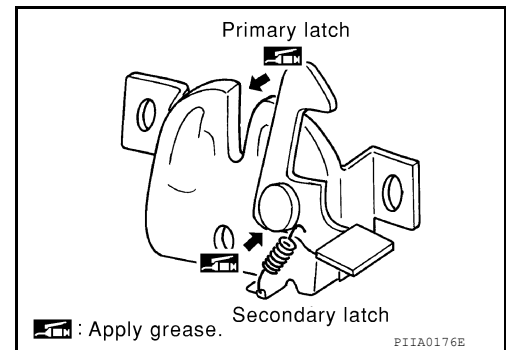
CAUTION:

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

1. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
2. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



3. Check the hood lock lubrication condition. If necessary, apply "body grease" to the points shown.



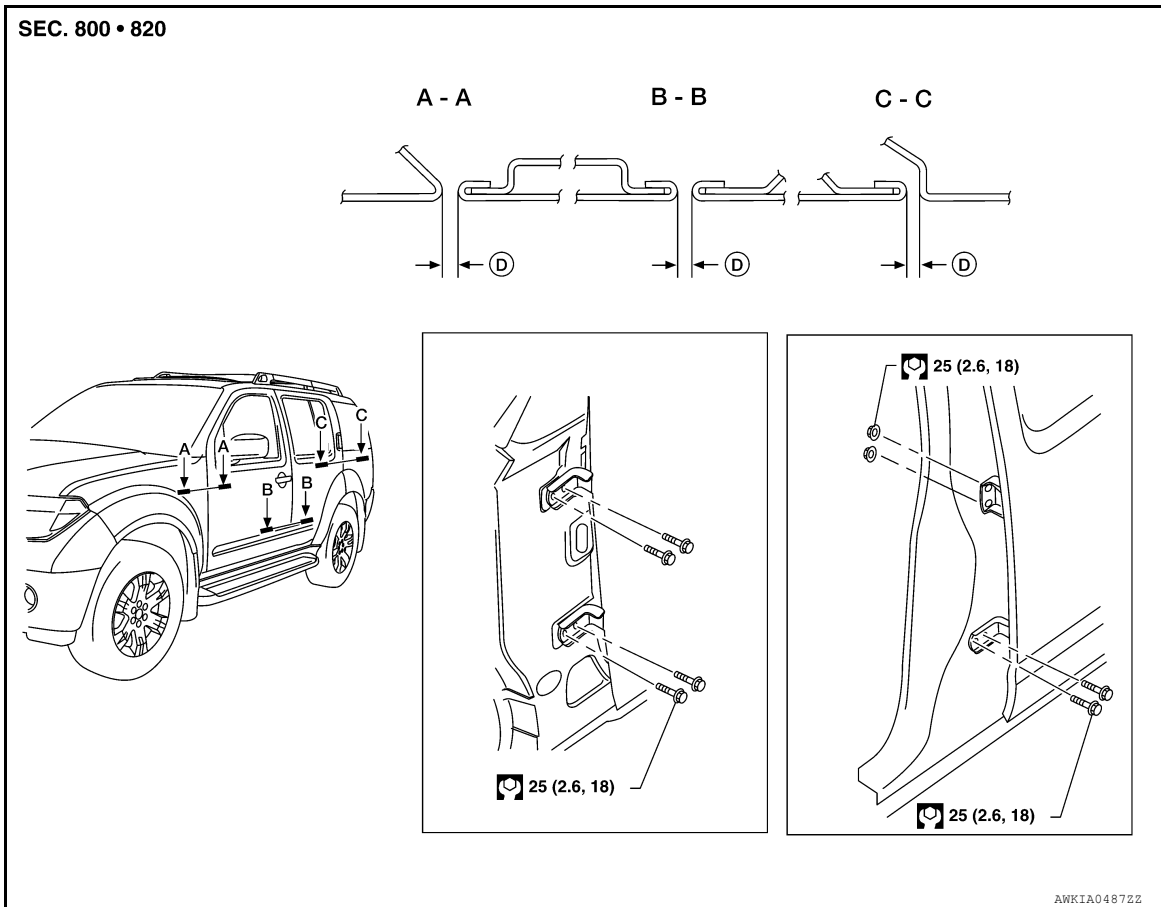
DOOR

< REMOVAL AND INSTALLATION >

DOOR

Fitting Adjustment

INFOID:000000008797896



D. 4.5 ± 1.0 mm (0.177 ± 0.039 in)

FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

1. Remove the fender. Refer to [EXT-21, "Removal and Installation"](#).
2. Loosen the hinge bolts.
3. Raise or lower the front door at rear end to adjust.
4. Tighten the hinge bolts to specification.
5. Install the fender. Refer to [EXT-21, "Removal and Installation"](#).

REAR DOOR

Longitudinal clearance and surface height adjustment at front end

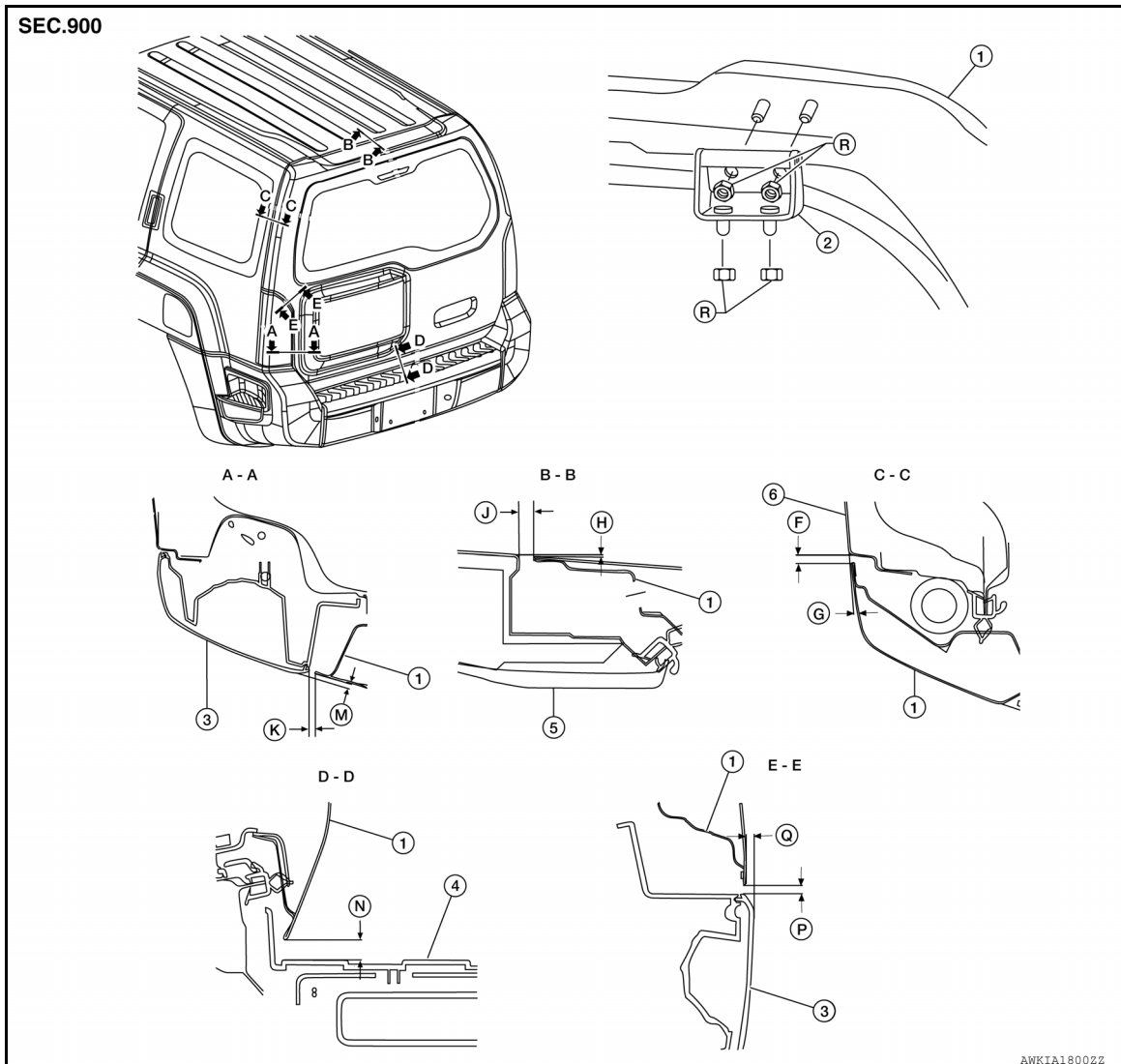
1. Remove the center pillar upper finisher. Refer to [INT-18, "Removal and Installation"](#).
2. Loosen the lower hinge bolts.
3. From inside the vehicle, loosen the upper hinge nuts.
4. Open the door, and raise or lower the rear end of the door to adjust.
5. Tighten the hinge nuts and bolts to specification.
6. Install the center pillar lower finisher. Refer to [INT-18, "Removal and Installation"](#).

BACK DOOR

Longitudinal clearance and surface height adjustment

DOOR

< REMOVAL AND INSTALLATION >



- | | | |
|--|---|---|
| 1. Back door | 2. Back door hinge | 3. Rear combination lamp |
| 4. Rear bumper fascia | 5. Roof | 6. Side window glass |
| F. 6.0 mm (0.24 in) | G. 0.0 mm (0.00 in) | H. 1.0 mm (0.04 in) |
| J. 8.0 mm (0.31 in) | K. 5.0 ± 2.0 mm (0.20 ± 0.08 in) | M. 0.8 ± 1.0 mm (0.03 ± 0.04 in) |
| N. 12.0 ± 5.0 mm (0.47 ± 0.20 in) | P. 5.0 ± 2.0 mm (0.20 ± 0.08 in) | Q. 0.8 ± 1.0 mm (0.03 ± 0.04 in) |
| R. 20.6 N·m (2.1 kg-m, 15 ft-lb) | | |

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.

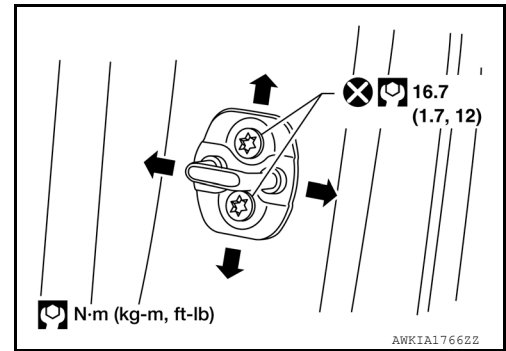
STRIKER ADJUSTMENT

Body Side Doors

DOOR

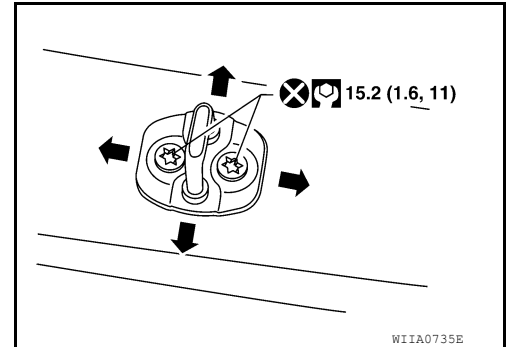
< REMOVAL AND INSTALLATION >

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



Back Door

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



Removal and Installation

INFOID:000000008797897

CAUTION:

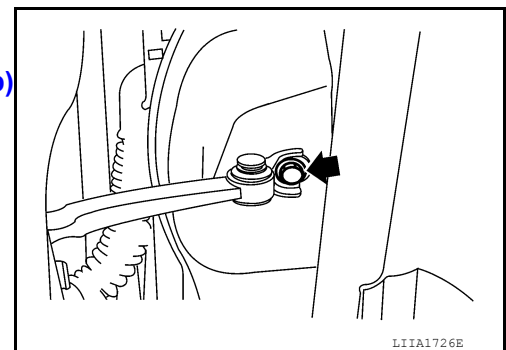
- When removing and installing a door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing a door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating point for poor lubrication. If necessary, apply "body grease".

FRONT DOOR

Removal

1. Remove the front door glass and regulator. Refer to [GW-14, "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)



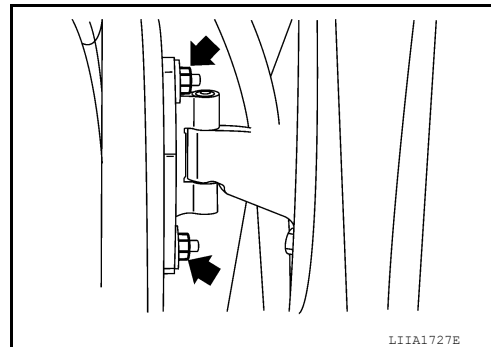
4. Remove the door-side hinge nuts and the door assembly.

DOOR

< REMOVAL AND INSTALLATION >

Door hinge nuts

25.8 N·m (2.6 kg-m, 19 ft-lb)



Installation

Installation is in the reverse order of removal.

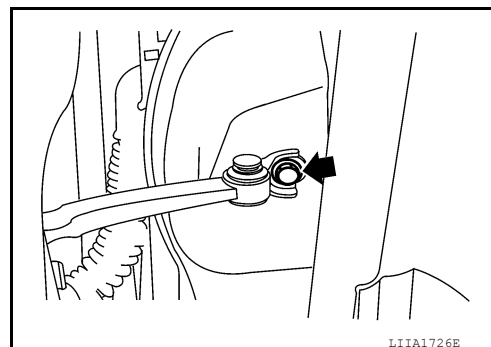
- Align the front door. Refer to [DLK-104, "Fitting Adjustment"](#).

REAR DOOR

Removal

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-18, "Rear Door Glass Regulator"](#).
4. Remove the door harness.
5. Remove the check link bolt from the hinge pillar.

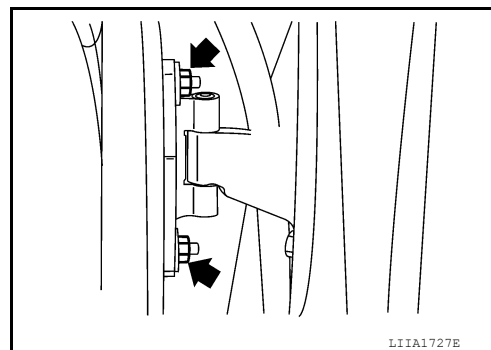
Check link to hinge pillar bolt **14.7 N·m (1.5 kg-m, 11 ft-lb)**



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

Door hinge nuts

25.8 N·m (2.6 kg-m, 19 ft-lb)



Installation

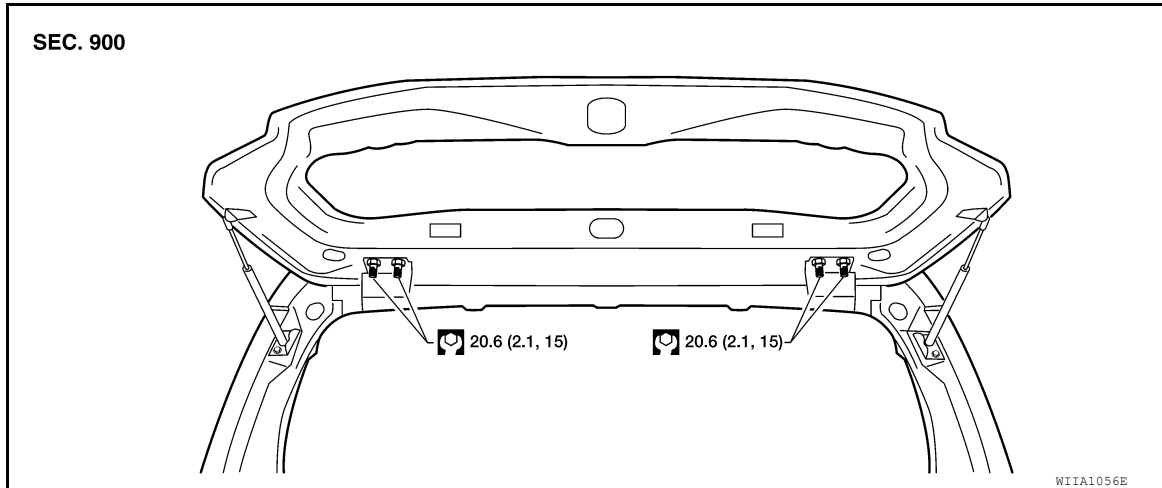
Installation is in the reverse order of removal.

- Align the rear door. Refer to [DLK-104, "Fitting Adjustment"](#).

DOOR

< REMOVAL AND INSTALLATION >

BACK DOOR



Removal

1. Remove the glass hatch.
2. Remove the back door lock assembly. Refer to [DLK-113, "Component Structure"](#).
3. Remove the back door wire harness.
4. Remove the rear washer nozzle and hose from the back door. Refer to [WW-76, "Removal and Installation"](#).
5. Support the back door.
6. Remove the back door stays.
7. Remove the door side nuts and the back door assembly.

CAUTION:

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

Installation

Installation is in the reverse order of removal.

- Align the back door. Refer to [DLK-104, "Fitting Adjustment"](#).

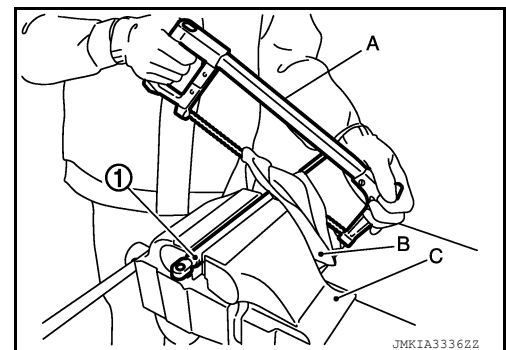
Back Door Stay Disposal

INFOID:000000008797898

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

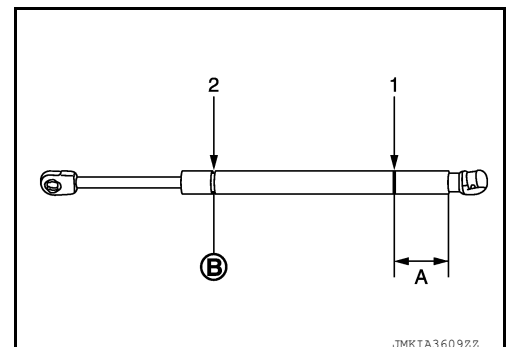
CAUTION:

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



A: 20 mm (0.787 in)

B: Cut at the groove.



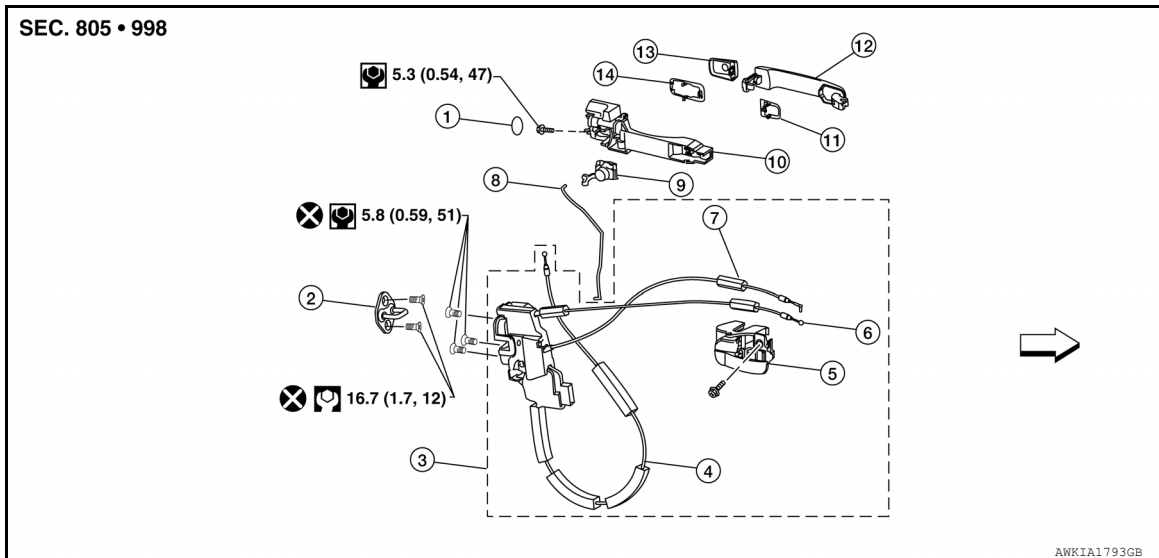
FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

FRONT DOOR LOCK

Component Structure

INFOID:000000008797899



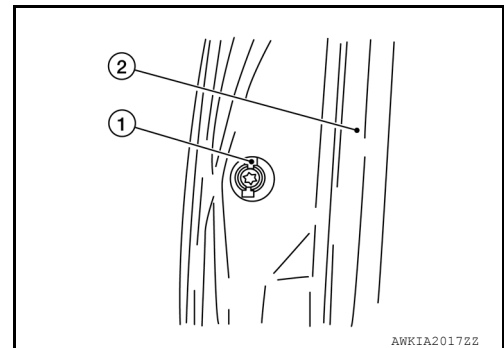
- | | | |
|--|--|------------------------|
| 1. Grommet | 2. Front door striker | 3. Door lock assembly |
| 4. Outside handle cable | 5. Inside handle assembly | 6. Inside handle cable |
| 7. Door lock cable | 8. Key cylinder rod (Driver side only) | 9. Door key cylinder |
| 10. Outside handle bracket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

Removal and Installation

INFOID:000000008797900

REMOVAL

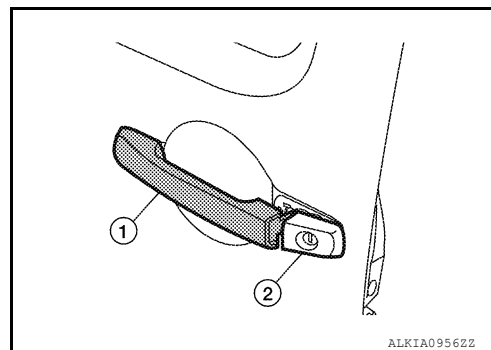
1. Remove the front door finisher. Refer to [INT-14, "Removal and Installation"](#)
2. Remove the front door glass rear run channel.
3. Remove door side grommet and door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts from grommet hole.
(1): Weatherstrip
(2): Bolt



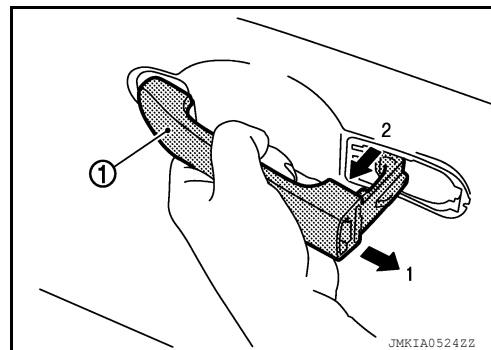
FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

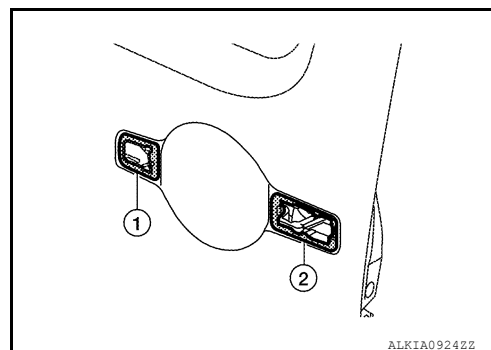
4. While pulling the outside handle (1), remove door key cylinder assembly or escutcheon (2).



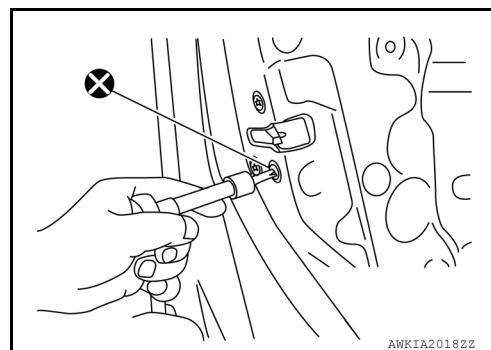
5. Separate the door key cylinder rod from the door key cylinder assembly (if equipped).
6. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



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



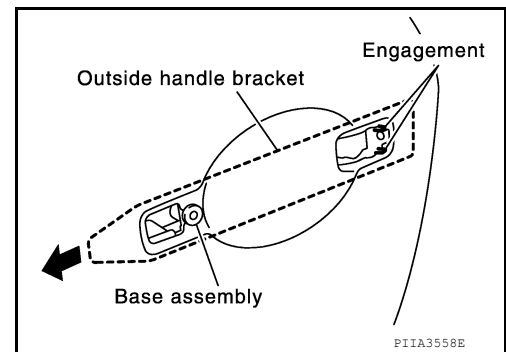
8. Remove the bolts and the door lock assembly.
CAUTION:
Do not reuse bolts.



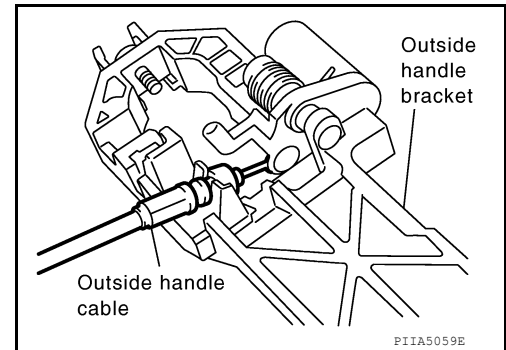
FRONT DOOR LOCK

< REMOVAL AND INSTALLATION >

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 harness connector from door lock actuator.
11. Separate the outside handle cable connection from the outside handle bracket.



INSTALLATION

Installation is in the reverse order of removal.

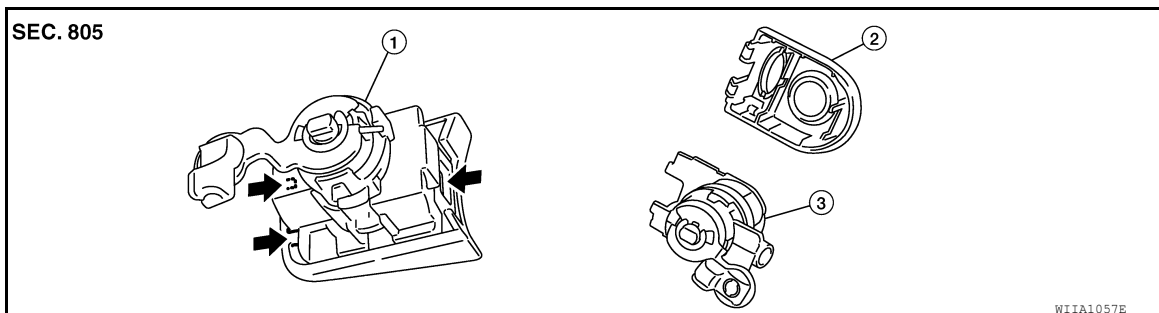
CAUTION:

- To install the key cylinder rod, be sure to rotate the key cylinder rod holder until a click is felt.
- Do not twist the door lock cable when installing the front door lock.

Disassembly and Assembly

INFOID:000000008797901

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.

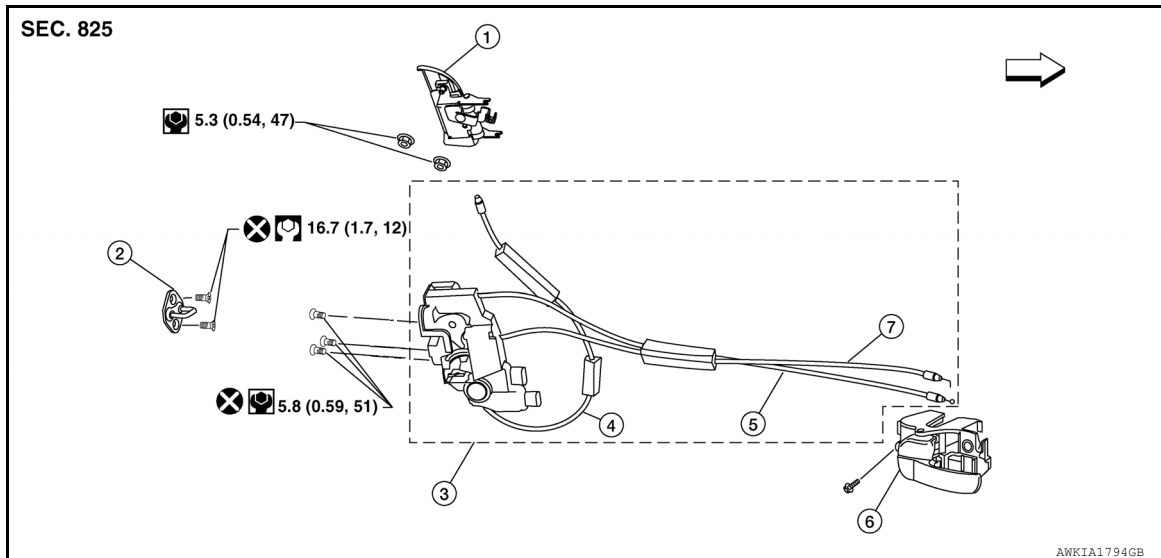
REAR DOOR LOCK

< REMOVAL AND INSTALLATION >

REAR DOOR LOCK

Component Structure

INFOID:000000008797902



- | | | |
|------------------------------|-----------------------------|--------------------------------|
| 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 | ← Front | |

Removal and Installation

INFOID:000000008797903

REMOVAL

1. Remove the rear door finisher. Refer to [INT-14, "Removal and Installation"](#).
2. Position the vapor shield aside.
3. Remove the rear door arm rest bracket.
4. Remove door grommets and outside handle nuts from the hole.
5. Remove outside handle.
6. Disconnect the outside handle cable connection.
7. Remove the inside door handle.
8. Disconnect the door lock and inside door handle cables from the inside door handle.
9. Disconnect the harness connector from door lock actuator and remove the assembly.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Do not twist the outside door handle cable, inside door handle cable and door lock cable during installation.

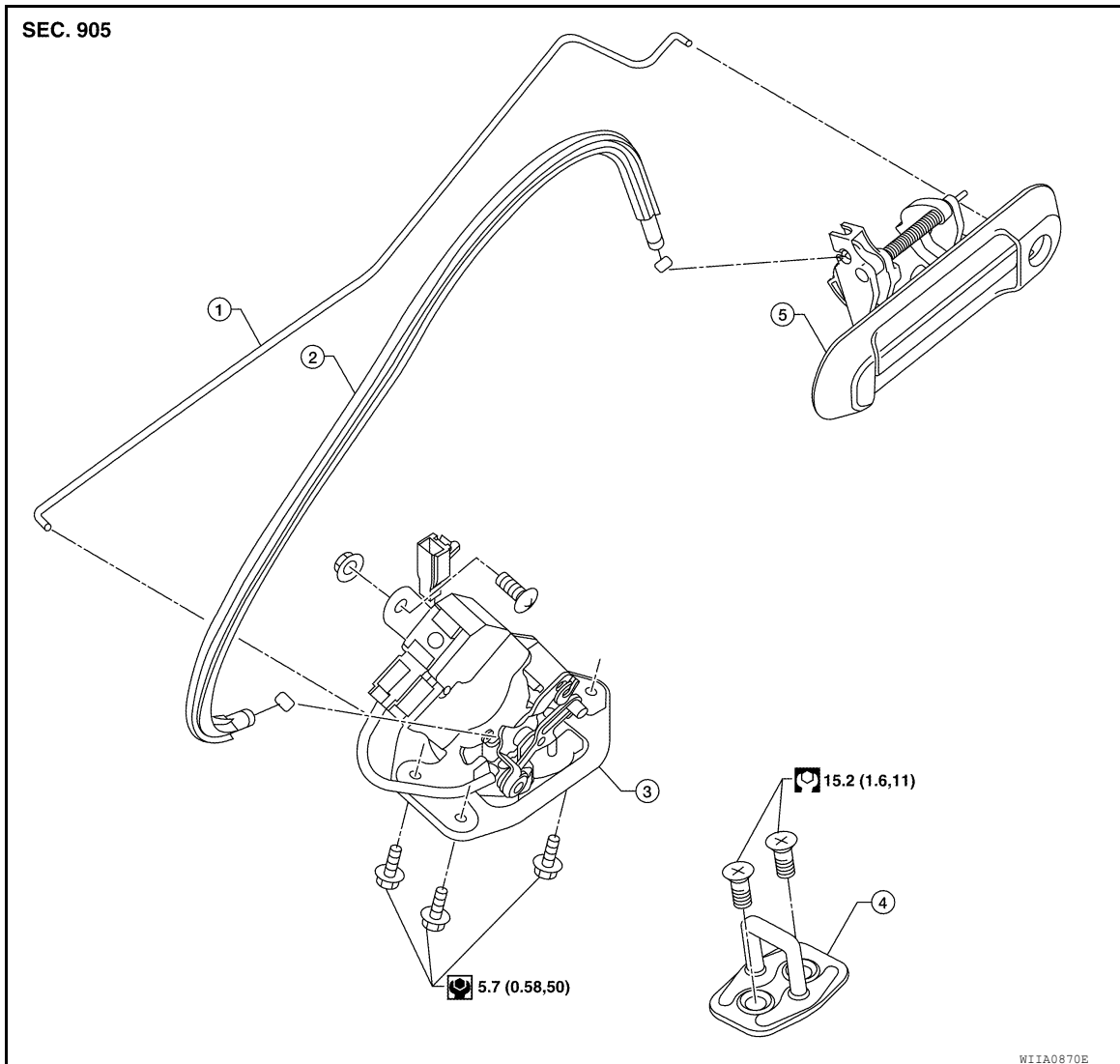
BACK DOOR LOCK

< REMOVAL AND INSTALLATION >

BACK DOOR LOCK

Component Structure

INFOID:000000008797904



1. Back door lock rod

2. Back door latch cable

3. Back door latch

4. Back door striker

5. Back door release handle