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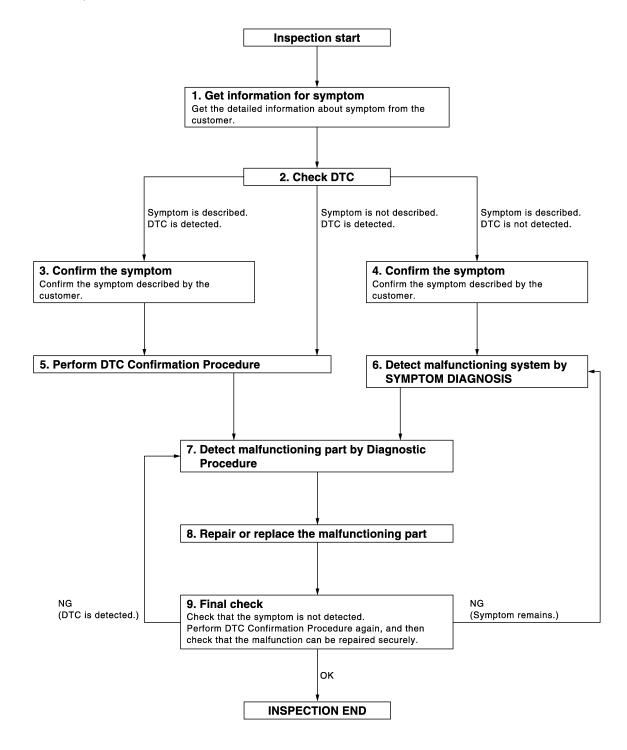
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



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

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

Is any symptom described and any DTC detected?

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

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

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 5

f 4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 6

${f 5}$ PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to DLK-86, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 7

NO >> Refer to GI-37, "Intermittent Incident".

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 7

1. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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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-III.

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

- 1. Repair or replace the malfunctioning part.
- 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 Α ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description В 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:0000000004065226 Refer to the CONSULT-III Operation Manual for the initialization procedure. D

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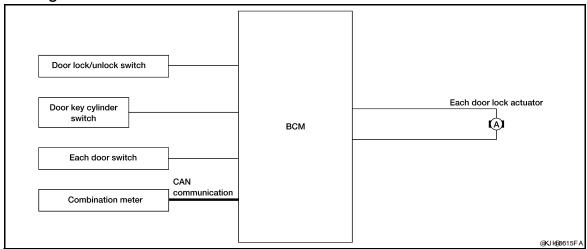
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FUNCTION DIAGNOSIS

AUTOMATIC DOOR LOCKS

System Diagram

INFOID:0000000004455908



System Description

INFOID:0000000004455909

Input	Single	Function	Actuator
Door lock/unlock switch	Door lock/unlock signal	Door lock function	Each door lock actuator
Door key cylinder switch	Door lock/utillock signal	Door lock fullclion	
Each door switch	Door open/close signal	Key reminder function	
	Warning buzzer signal	Rey reminder function	
Combination meter	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 SUP-PORT". Refer to DLK-17, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)".

AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

Vehicle Speed Sensing Auto Door Lock*1

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

AUTOMATIC DOOR LOCKS

< FUNCTION DIAGNOSIS >

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 \rightarrow 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.

(E)With CONSULT-III

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-17, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

Without CONSULT- III

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

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

 $OFF \rightarrow ON$: 2 blinks $ON \rightarrow OFF$: 1 blink

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

AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

IGN OFF Interlock Door Unlock*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

With CONSULT-III

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-17, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

Without CONSULT- III

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

- 1. Close all doors (door switch OFF).
- 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.

 $OFF \rightarrow ON$: 2 blinks $ON \rightarrow OFF$: 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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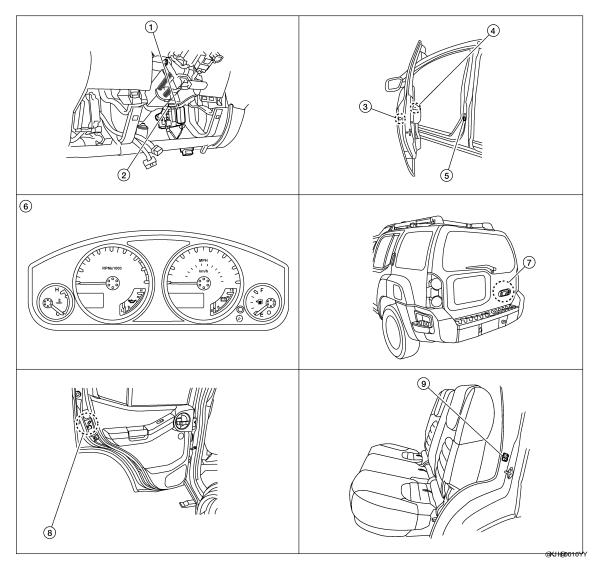
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Component Parts Location

INFOID:0000000004455910



- BCM M18, M19, M20

 (view with lower instrument panel LH removed)
- Main power window and door lock/unlock switch D7
 Power window and door lock/unlock switch RH D105
- Back door switch D502
 Back door key cylinder switch D505
 Back door lock actuator D508
- 2. Key switch M27
- Front door switch LH B8 RH B108
- 8. Rear door lock actuator LH D205 RH D305
- Front door lock assembly LH (key cylinder switch) D14
 Front door lock actuator RH D114
- 6. Combination meter M24
- 9. Rear door switch LH B18 RH B116

Component Description

INFOID:0000000004455911

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

< FUNCTION DIAGNOSIS >

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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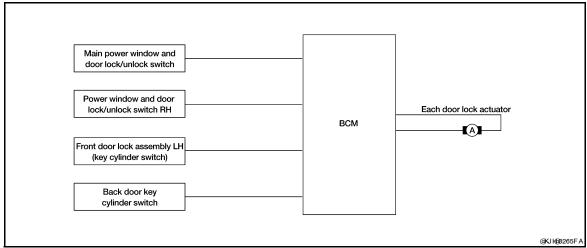
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DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH: System Diagram

INFOID:0000000004065227



DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000004065228

Switch	Input/output signal to BCM	BCM function	Actuator
Main power window and door lock/unlock switch			
Power window and door lock/ unlock switch	Door lock/unlock signal	Door lock/unlock control	Door lock actuator
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 SUP-PORT". Refer to <u>DLK-17</u>, "DOOR LOCK: <u>CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Key Reminder System

Refer to DLK-51, "Diagnosis Procedure".

DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

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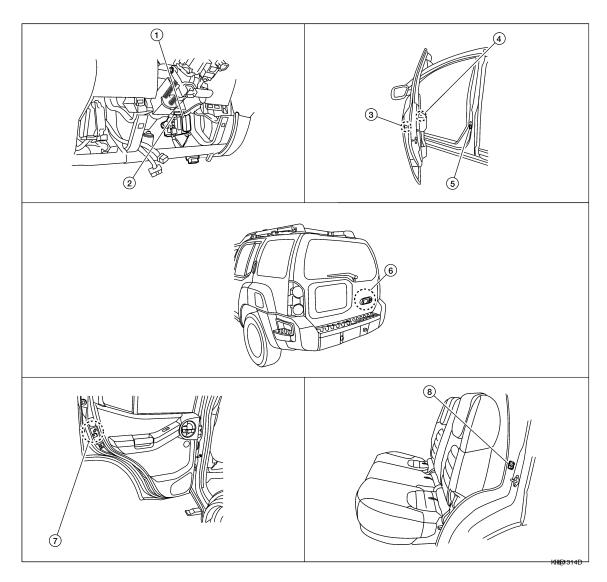
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- BCM M18, M19, M20
 (view with lower instrument panel LH removed)
- Main power window and door lock/unlock switch D7
 Power window and door lock/unlock switch RH D105
- 7. Rear door lock actuator LH D205 RH D305

- 2. Key switch M27
- 5. Front door switch LH B8 RH B108
- 8. Rear door switch LH B18 RH B116

- Front door lock assembly LH (key cylinder switch) D14
 Front door lock actuator RH D114
- Back door switch D502
 Back door key cylinder switch D505
 Back door lock actuator D508

DOOR LOCK AND UNLOCK SWITCH: Component Description

INFOID:0000000004065230

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.

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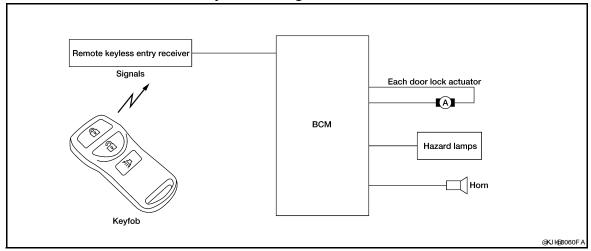
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REMOTE KEYLESS ENTRY

REMOTE KEYLESS ENTRY: System Diagram

INFOID:0000000004065231



REMOTE KEYLESS ENTRY: System Description

INFOID:0000000004065232

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

< FUNCTION DIAGNOSIS >

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

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

ACTIVE CHECK FUNCTION

Operation Description

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

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

Operating function of hazard and horn reminder

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

HAZARD AND HORN REMINDER

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

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

How to change hazard and horn reminder mode

With CONSULT-III

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

Without CONSULT-III

Refer to Owner's Manual for instructions.

INTERIOR LAMP OPERATION

When the following input signals are both supplied:

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

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

PANIC ALARM OPERATION

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

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

KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

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

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

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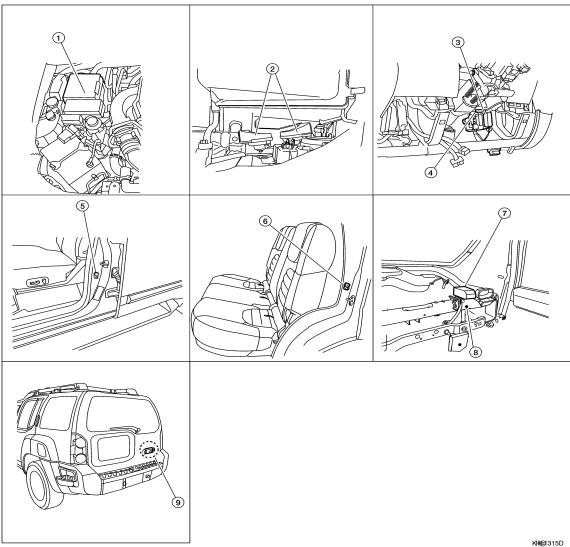
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REMOTE KEYLESS ENTRY: Component Parts Location

INFOID:0000000004065233



- 1. IPDM E/R E122, E124
- 2. Horns E6 (with dual note horn) E3, E162 (with single note horn) (behind front combination lamp LH)

4. Key switch M27

- 5. Front door switch LH B8 **RH B108**
- 7. Remote keyless entry receiver M120 (view with instrument panel RH removed)
- 8. Steering member

- 3. BCM M18, M19, M20 (view with lower instrument panel LH removed)
- 6. Rear door switch LH B18 **RH B116**
- 9. Back door switch D502

REMOTE KEYLESS ENTRY: Component Description

INFOID:0000000004065234

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.

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-53, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	 Enables to read and save the vehicle specification. Enables to write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

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

DOOR LOCK

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

INFOID:0000000004455930

WORK SUPPORT

< FUNCTION DIAGNOSIS >

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

DATA MONITOR

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

MULTIREMOTE ENT

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

INFOID:0000000004455932

WORK SUPPORT

Work Item	Description
HORN CHIRP SET	Horn chirp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
HAZARD LAMP SET	Hazard lamp function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
MULTI ANSWER BACK SET	Hazard and horn reminder mode can be changed in this mode. The reminder mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
AUTO LOCK SET	Auto locking function mode can be changed in this mode. The function mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.

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< FUNCTION DIAGNOSIS >

TO CHOILD	<i>,,</i> (0.10	0.0											
Work Ite	m							Descrip	otion				
					peration n					operatio	n mode w	ill be chan	nged wher
TRUNK OPEN SET Th				item is d	iplayed, n	ot suppor	ted.				-	-	
			Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.										
REMO CONT ID R	EGIST	ŀ	Keyf	ob ID cod	de can be	registere	d.						
REMO CONT ID E	RASUR	ŀ	Keyf	ob ID cod	de can be	erased.							
REMO CONT ID C	ONFIR	ı	It ca	n be ched	cked whet	her keyfo	b ID code	is registe	ered or no	t in this m	node.	-	
Hazard and horn remi	nder mod	е											
		DE 1 node)			DE 2 node)	МО	DE 3	МО	DE 4	МО	DE 5	МО	DE 6
Keyfob operation	Lock	Unic	ock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	One	се	Twice	_	_	_	Twice	Once	Twice	_	_	Once
Horn sound	Once	_	_		_	_	_	_	_	Once	_	Once	_
Auto locking function	mode				'			I					<u>'</u>
				N	MODE 1			MODE	2		MC	ODE 3	
Auto locking fun	ction		5 minutes				Nothing			1 minute			
Panic alarm operation	mode									•			
			MODE 1			MODE 2				MODE 3			
Keyfob operation	Keyfob operation		0.5 seconds			Nothing				1.5 seconds			
Back door open opera	ation mode)											
			MODE 1			MODE 2				MODE 3			
Keyfob operation	Keyfob operation			0.5 seconds		Nothing			0.5 seconds				
Keyless power window	w down op	eration	n mo	ode									
					MODE 1			MODE 2			MODE 3		
Keyfob operatio	n				3 second	S		Nothing			5 seconds		
			_							_			

DATA MONITOR

Monitor Item [Unit}	Condition
IGN ON SW [ON/OFF]	Indicates condition of ignition switch in ON position
KEY SW [ON/OFF]	Indicates condition of key switch
ACC ON SW [ON/OFF]	Indicates condition of ignition switch in 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
KEYLESS PSD R	NOTE: This is displayed even when it is not equipped
KEYLESS PSD L	NOTE: This is displayed even when it is not equipped
KEYLESS PBD	NOTE: This is displayed even when it is not equipped
KEYLESS TRUNK	NOTE: This is displayed even when it is not equipped
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) LH
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) RH

DLK-19

< FUNCTION DIAGNOSIS >

Monitor Item [Unit}	Condition
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH (crew cab)
DOOR SW-RL [ON/OFF]	Indicates condition of rear door switch LH (crew cab)
TRNK OPN MNTR	NOTE: This is displayed even when it is not equipped
BACK DOOR SW	Indicates condition of back door switch
CDL LOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
RKE LCK - UNLCK	NOTE: This is displayed even when it is not equipped
RKE KEEP UNLK	NOTE: This is displayed even when it is not equipped
KEY CYL LK SW	NOTE: This is displayed even when it is not equipped

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation. The doors lock and unlock based on the item on CON-SULT-III screen touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The windows are lowered when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when "RH" on CONSULT-III screen is touched and the left hazard lamp turns on when "LH" on CONSULT-III screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after "ON" on CONSULT-III screen is touched.
TRUNK/BACK DOOR	NOTE: This is displayed even when it is not equipped
PSD PBD OPEN TEST	NOTE: This is displayed even when it is not equipped

U1000 CAN COMM CIRCUIT

< COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS

U1000 CAN COMM CIRCUIT

Description INFOID:000000004065238

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

DTC Logic

DTC DETECTION LOGIC

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

Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

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

Is "CAN COMM CIRCUIT" displayed?

YES >> Refer to LAN-5, "CAN Communication Control Circuit".

NO >> Refer to GI-37, "Intermittent Incident".

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U1010 CONTROL UNIT (CAN)

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U1010 CONTROL UNIT (CAN)

DTC Logic

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:0000000004065242

1.REPLACE BCM

When DTC [U1010] is detected, replace BCM. Refer to BCS-57, "Removal and Installation".

>> Replace BCM.

Special Repair Requirement

INFOID:0000000004065243

1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to BCS-57, "Removal and Installation" for BCM configuration.

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

>> Work End.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

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	Pattony nowar cupply	18 (10A)
70	Battery power supply	G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

Is the fuse blown?

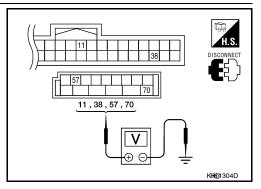
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

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		Condition	Voltage (V) (Ap-	
	(+)	(-)	source		prox.)	
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	
M20	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage	



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Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

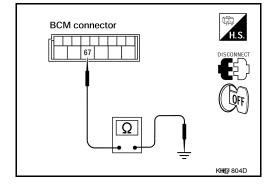
Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector Terminal		Ground	Continuity
M20	67		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



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DOOR SWITCH

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DOOR SWITCH

Description INFOID:000000004065245

Detects door open/close condition.

Component Function Check

INFOID:0000000004065246

1. CHECK FUNCTION

(III) With CONSULT-III

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

Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	
DOOR SW-RL	$CLOSE \to OPEN \colon OFF \to ON$
DOOR SW-RR	
BACK DOOR SW	

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-24, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:0000000004065247

1. CHECK DOOR SWITCHES INPUT SIGNAL

With CONSULT-III

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

· When doors are open:

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

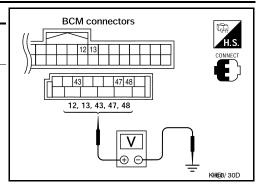
· When doors are closed:

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

Without CONSULT-III

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

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



Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2

2.CHECK DOOR SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect door switch and BCM.
- 3. 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 (C) D502 terminal 3 and ground.

2 - Ground :Continuity should not exist3 - 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

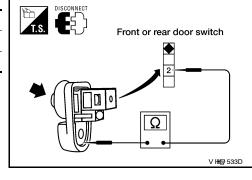
Check continuity between door switch terminal 2 and exposed metal of switch while pressing and releasing switch.

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

Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> Replace door switch.



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DOOR SWITCH

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4. CHECK BACK DOOR SWITCH

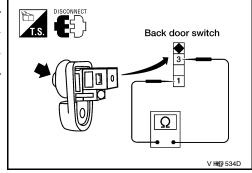
Check continuity between door switch terminals.

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

Is the inspection result normal?

>> Repair or replace back door switch ground circuit. >> Replace back door switch. YES

NO



< COMPONENT DIAGNOSIS >

DOOR LOCK AND UNLOCK SWITCH

Description INFOID:000000004065248

Transmits door lock/unlock operation to BCM.

Component Function Check

1. CHECK FUNCTION

(P)With CONSULT-III

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

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	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 <u>DLK-27</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

 $1.\mathsf{check}$ door lock/unlock switch input signal

With CONSULT-III

Check door lock/unlock switch ("CDL LOCK SW", "CDL UNLOCK SW") in DATA MONITOR mode in CONSULT-III. Refer to DLK-17, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

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

CDL LOCK SW : ON

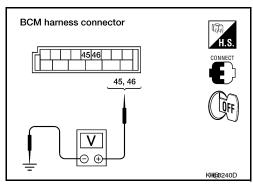
When door lock/unlock switch is turned to UNLOCK:

CDL UNLOCK SW : ON

Without CONSULT-III

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

Connec- Te	Term	ninals	Condition	Voltage (V)	
tor	(+)	(-)	(Approx.)		
	46	Ground	Door lock/unlock switch is neutral.	Battery voltage	
M19	Ground	Door lock/unlock switch is turned to UNLOCK.	0		
WITS	45 Ground		Door lock/unlock switch is neutral.	Battery voltage	
	45	Giouna	Door lock/unlock switch is turned to LOCK.	0	



Is the inspection result normal?

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

NO >> GO TO 2

2.CHECK DOOR LOCK/UNLOCK SWITCH

- Turn ignition switch OFF.
- 2. Disconnect door lock/unlock switch.

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Check continuity between main power window and door lock/ unlock switch terminals 10, 11 and 14.

Terr	ninal	Condition	Continuity
10	10 14	Lock	Yes
10		Unlock/Neutral	No
11		Unlock	Yes
Į Į		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
ı		Unlock/Neutral	No
2		Unlock	Yes
		Lock/Neutral	No

Is the inspection result normal?

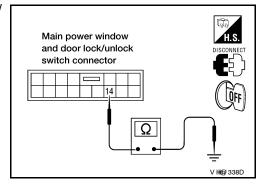
YES >> GO TO 3

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

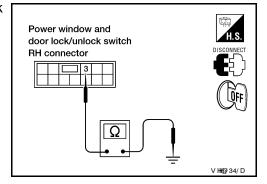
3 - Ground

: Continuity should exist.

Is the inspection result normal?

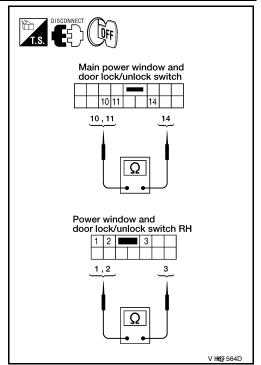
YES >> GO TO 4

NO >> Repair or replace harness.



4. CHECK DOOR LOCK SWITCH CIRCUIT

- Disconnect BCM.
- 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.

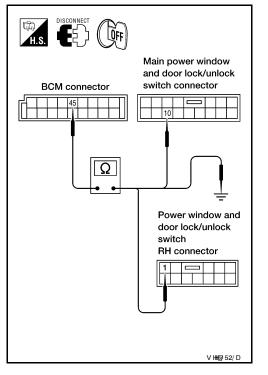


< COMPONENT DIAGNOSIS >

1 - 45 : Continuity should exist. 10 - 45 : Continuity should exist.

Check continuity between BCM connector M19 terminal 45 and ground.

45 - Ground : Continuity should not exist.



 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.

Check continuity between BCM connector M19 terminal 46 and ground.

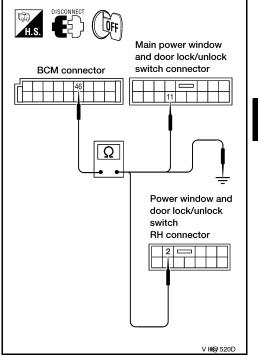
46 - Ground : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 5

NO

>> Repair or replace harness.



5. CHECK BCM OUTPUT VOLTAGE

1. Connect BCM.

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

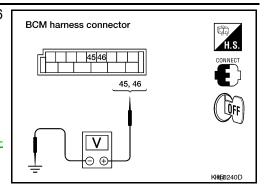
45 - Ground : Battery voltage 46 - Ground : Battery voltage

Is the inspection result normal?

YES >> Check condition of the harness and connector.

NO >> Replace BCM. Refer to <u>BCS-57</u>, "Removal and Installa-

tion".



< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

DRIVER SIDE

DRIVER SIDE: Description

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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:0000000004065252

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Monitor item	Condition		
KEY CYL LK-SW	Lock	: ON	
RET CTL LR-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
KET CTL UIN-SVV	Neutral / Lock	: OFF	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to <u>DLK-31</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000004065253

1. CHECK DOOR KEY CYLINDER SWITCH LH

(P)With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT-III. Refer to DLK-17, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

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

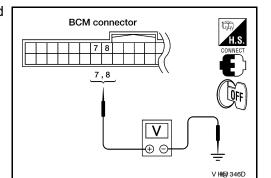
KEY CYL LK-SW : ON

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

KEY CYL UN-SW : ON

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

Connector	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
M18	7	Ground	Neutral/Lock	5
			Unlock	0
	8		Neutral/Unlock	5
			Lock	0



Is the inspection result normal?

YES >> Front door lock assembly LH (key cylinder switch) signal is OK.

NO >> GO TO 2

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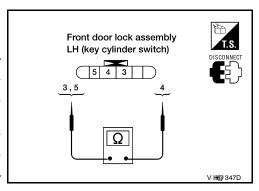
DLK-31

< COMPONENT DIAGNOSIS >

$\overline{2.}$ 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 <u>DLK-110, "Removal and Installation"</u>.

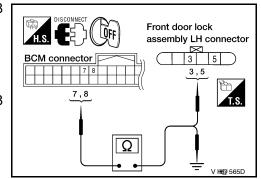
${f 3}.$ CHECK FRONT DOOR LOCK ASSEMBLY LH HARNESS

- 1. Disconnect BCM.
- 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.

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

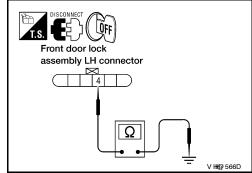
Check continuity between front door lock assembly LH connector D14 terminal 4 and ground.

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.

< COMPONENT DIAGNOSIS >

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

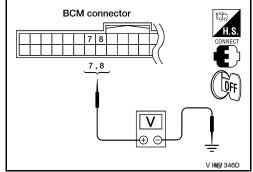
> 7 - Ground : Approx. 5V 8 - Ground : Approx. 5V

Is the inspection result normal?

YES >> Check condition of the harness and connector.

>> Replace BCM. Refer to BCS-57, "Removal and Installa-NO

tion".



BACK DOOR

BACK DOOR: Description

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

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Monitor item	Cone	dition
KEY CYL LK-SW	Lock	: ON
RET GTL LN-SW	Neutral / Unlock	: OFF
KEY CYL UN-SW	Unlock	: ON
RET CTL UN-SW	Neutral / Lock	: OFF

Is the inspection result normal?

YES >> Key cylinder switch is OK.

>> Refer to DLK-33, "BACK DOOR: Diagnosis Procedure". NO

BACK DOOR: Diagnosis Procedure

CHECK BACK DOOR KEY CYLINDER SWITCH

(P)With CONSULT-III

Check back door key cylinder switch ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode in CONSULT-III. Refer to DLK-17, "DOOR LOCK: CONSULT-III 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

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INFOID:0000000004065254

INFOID:0000000004065255

INFOID:0000000004065256

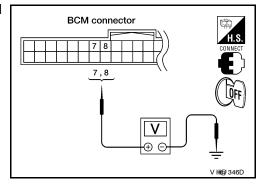
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< COMPONENT DIAGNOSIS >

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

Connector	Terminals		Condition	Voltage (V)
	(+)	(-)	Condition	(Approx.)
M18	7	Ground	Neutral/Lock	5
			Unlock	0
	8		Neutral/Unlock	5
			Lock	0



Is the inspection result normal?

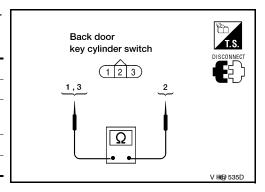
YES >> Back door key cylinder switch signal is OK.

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
	Key is turned to LOCK.	Yes
1 – 2	Key is in N position or turned to UN- LOCK	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.

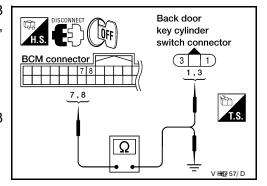
3.check back door key cylinder switch harness

- Disconnect BCM.
- 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.

f 4 .CHECK BACK DOOR KEY CYLINDER SWITCH GROUND

< COMPONENT DIAGNOSIS >

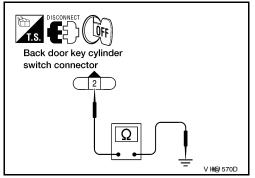
Check continuity between back door key cylinder switch connector D505 terminal 2 and ground.

2 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.



5. CHECK BCM OUTPUT VOLTAGE

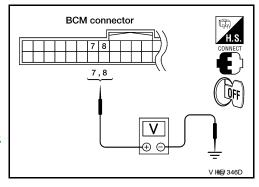
- 1. Connect BCM.
- 2. Check voltage between BCM connector M18 terminals 7, 8 and ground.

7 - Ground : Approx. 5V 8 - Ground : Approx. 5V

Is the inspection result normal?

YES >> Check condition of the harness and connector.

NO >> Replace BCM. Refer to <u>BCS-57</u>, "Removal and Installation".



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DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

DOOR LOCK ACTUATOR

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000004065257

Locks/unlocks the door with the signal from BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000004065258

INFOID:0000000004065259

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

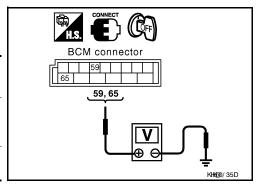
NO >> Refer to <u>DLK-36</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

DRIVER SIDE: Diagnosis Procedure

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)
	(+)	(-)	Condition	(Approx.)
M20	59 M20	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



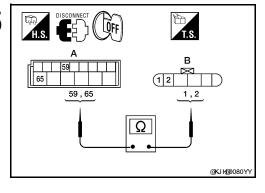
Is the inspection result normal?

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

2.check door lock actuator harness

- Disconnect BCM and front door lock assembly LH (actuator).
- 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	D14	1	163



Is the inspection result normal?

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

NO >> Repair or replace harness.

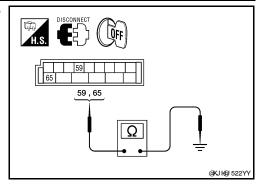
3.CHECK DOOR LOCK ACTUATOR HARNESS

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

< COMPONENT DIAGNOSIS >

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

Connector	Terminals		Continuity
M20	59	Ground	No
IVIZO	65	Ground	NO



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-57, "Removal and Installation".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE: Component Function Check

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-37, "PASSENGER SIDE : Diagnosis Procedure".

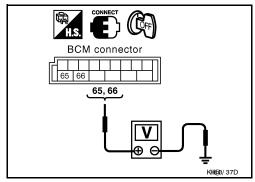
PASSENGER SIDE: Diagnosis Procedure

1. CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

1. Turn ignition switch OFF.

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

Connector	Term	inals	Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
M20	65	Ground	Door lock/unlock switch is turned to LOCK	0 → Battery voltage
19120	66	Sibulia	Door lock/unlock switch is turned to UNLOCK	for 300 ms



Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock actuator RH.

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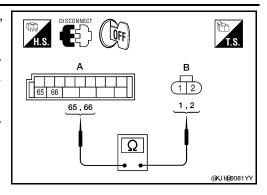
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< COMPONENT DIAGNOSIS >

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

Te	rminal	Continuity
65	2	Yes
66	1	163



Is the inspection result normal?

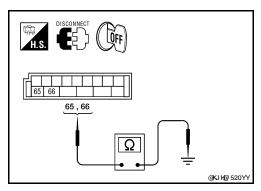
YES >> Replace front door lock actuator RH. Refer to <u>DLK-110</u>, "Removal and Installation".

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.

Ter	minals	Continuity
65	Ground	No
66	Glound	



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Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-57, "Removal and Installation".

NO >> Repair or replace harness.

REAR LH

REAR LH : Description

Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-38</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

REAR LH: Diagnosis Procedure

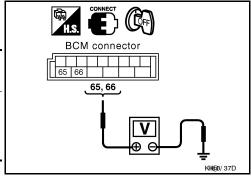
1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.

< COMPONENT DIAGNOSIS >

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

Connector	Tern	ninals	Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
M20	65	Ground	Door lock/unlock switch is turned to LOCK	0 → Battery voltage
IVI2U —	66	Ground	Door lock/unlock switch is turned to UNLOCK	for 300 ms



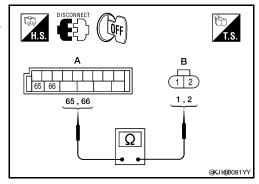
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

- 1. Disconnect BCM and rear door lock actuator LH.
- 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	163



Is the inspection result normal?

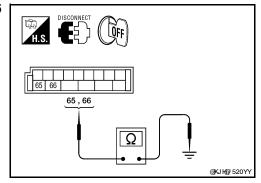
YES >> Replace rear door lock actuator LH.

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.

Ter	minals	Continuity
65	Ground	No
66	Gloulia	No



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-57, "Removal and Installation".

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

Locks/unlocks the door with the signal from BCM.

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< COMPONENT DIAGNOSIS >

REAR RH: Component Function Check

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1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-40</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

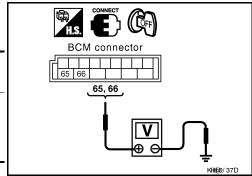
REAR RH: Diagnosis Procedure

INFOID:0000000004065268

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



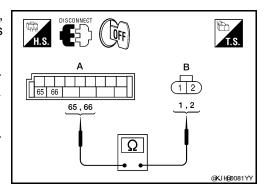
Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and rear door lock actuator RH.
- 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	163



Is the inspection result normal?

YES >> Replace rear door lock actuator RH.

NO >> Repair or replace harness.

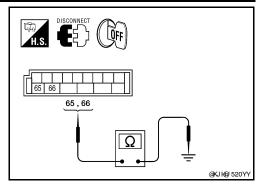
3. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

< COMPONENT DIAGNOSIS >

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

Ter	minals	Continuity
65	Ground	No
66	Ground	



Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-57</u>, "Removal and Installation".

NO >> Repair or replace harness.

BACK DOOR

BACK DOOR: Description

Locks/unlocks the door with the signal from BCM.

BACK DOOR: Component Function Check

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to DLK-41, "BACK DOOR: Diagnosis Procedure".

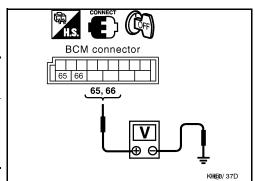
BACK DOOR : Diagnosis Procedure

1. CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.

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

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



Is the inspection result normal?

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

2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and back door lock actuator.

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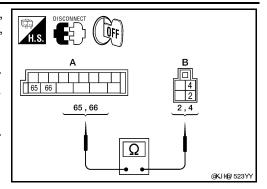
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< COMPONENT DIAGNOSIS >

 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	163



Is the inspection result normal?

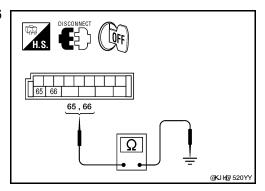
YES >> Replace door lock actuator.

NO >> Repair or replace harness.

3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity
65	Ground	No
66	Ground	140



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-57, "Removal and Installation".

NO >> Repair or replace harness.

REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

REMOTE KEYLESS ENTRY RECEIVER

Description INFOID:0000000004065272

Receives keyfob operation and transmits to BCM.

Component Function Check

1. CHECK FUNCTION

(P)With CONSULT-III

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

Monitor item	Condition	
RKE OPE COUN1	Checks whether value changes when operating key fob.	

Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

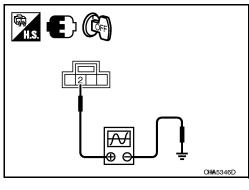
>> Refer to DLK-43, "Diagnosis Procedure". NO

Diagnosis Procedure

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 re- ceiver connector	Terminal	(-)	Keyfob condition	Signal (Reference value)
M120	2	Ground	No function	(V) 6 4 2 0 *** 0.2s NBB2768C
IVITZU	2	Glouid	Any button is pressed	(V) 6 4 2 0 • 0.2s NBB277/ C



Is the inspection result normal?

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

2.REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

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REMOTE KEYLESS ENTRY RECEIVER

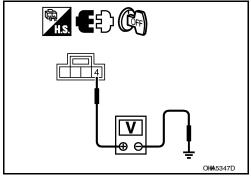
< COMPONENT DIAGNOSIS >

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

4 - Ground : Approx. 5 volt.

Is the inspection result normal?

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



3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

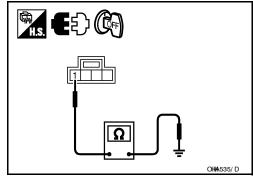
Check continuity between remote keyless entry receiver connector M120 terminal 1 and ground.

1 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Replace remote keyless entry receiver.

NO >> GO TO 4



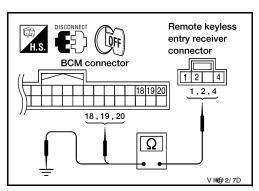
4. HARNESS INSPECTION BETWEEN BCM AND RKE RECEIVER

- 1. Disconnect remote keyless entry receiver and BCM connectors.
- Check continuity between BCM connector M18 terminals 18, 19, 20 and remote keyless entry receiver connector M120 terminals 1, 2, 4.

1 - 18 : Continuity should exist.
2 - 20 : Continuity should exist.
4 - 19 : Continuity should exist.

3. Check continuity between remote keyless entry receiver connector M120 terminals 1, 2, 4 and ground.

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



Is the inspection result normal?

YES >> Replace remote keyless entry receiver.

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

KEYFOB BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

KEYFOB BATTERY AND FUNCTION

Description

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

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1. CHECK FUNCTION

(P)With CONSULT-III

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

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

Is the inspection result normal?

YES >> Key fob is OK.

NO >> Refer to <u>DLK-45</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

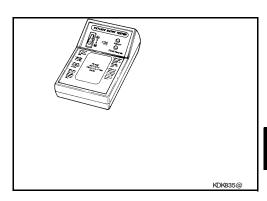
INFOID:0000000004455934

1. CHECK KEYFOB FUNCTION

Check keyfob function using Remote Keyless Entry Tester J-43241. Does the test pass?

YES >> Key fob is OK.

NO >> GO TO 2



2. CHECK KEY FOB COMPONENTS

1. Open the lid using a coin.

CAUTION:

- · Do not touch the circuit board or battery terminal.
- The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.
- 2. Remove the key fob battery.

CAUTION:

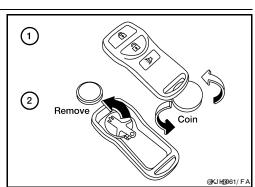
- Keep dirt, grease, and other foreign materials off the electrode contact area.
- 3. Visually inspect keyfob internal components.

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace malfunctioning parts.

3. CHECK KEY FOB BATTERY



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KEYFOB BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

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

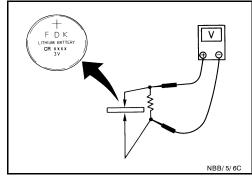
Standard : Approx. 2.5 - 3.0V

Is the measurement value within specification?

YES >> Key fob battery is OK. Check remote keyless entry receiver. Refer to <u>DLK-43.</u>

"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.

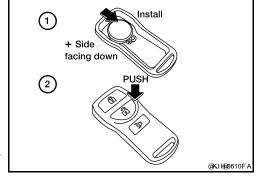
CAUTION:

- 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 <u>DLK-43</u>. "Component Function Check".



HORN FUNCTION

< COMPONENT DIAGNOSIS >

HORN FUNCTION

Description

Perform answer-back for each operation with horn.

Component Function Check

1. CHECK FUNCTION

- 1. Select "HORN" in "ACTIVE TEST" mode with CONSULT-III.
- 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 <u>DLK-47</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

1. CHECK HORN FUNCTION

Check horn function with horn switch.

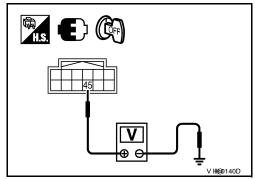
Does the horn sound?

YES >> GO TO 2

NO >> Refer to <u>HRN-3, "Wiring Diagram"</u>.

2.CHECK HORN RELAY POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Perform "ACTIVE TEST", "HORN" with CONSULT-III.
- 3. Using an oscilloscope or analog voltmeter, check voltage between IPDM E/R connector E122 terminal 45 and ground.



IPDM E/R Ground		Test item		Voltage (V)	
Connector	Terminal	Ground	rest item		(Approx.)
E122	45	Ground	HORN	$OFF \to ON \to OFF$	Battery voltage \rightarrow 0 \rightarrow Battery voltage
EIZZ	45 Giodila Ri	HOKN	Other than above	Battery voltage	

Is the inspection result normal?

YES >> Repair harness for open between IPDM E/R and horn relay.

NO >> GO TO 3

3. CHECK HORN RELAY CIRCUIT

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

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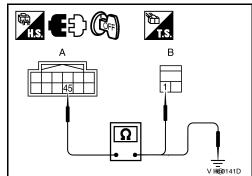
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HORN FUNCTION

< COMPONENT DIAGNOSIS >

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



IPD	IPDM E/R		relay	Continuity
Connector	Terminal	Connector Terminal		Continuity
A: E122	45	B: H-1	1	Yes

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

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

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS > WARNING CHIME FUNCTION Α Description INFOID:0000000004065283 Performs operation method guide and warning with buzzer. В Component Function Check INFOID:0000000004065284 1. CHECK FUNCTION C (P)With CONSULT-III Check the operation of "INSIDE BUZZER" in the Active Test. Refer to MWI-3, "Work Flow". D Is the inspection result normal? Yes >> Warning buzzer into combination meter is OK. >> Refer to <u>DLK-49</u>, "<u>Diagnosis Procedure</u>". No Е Diagnosis Procedure INFOID:0000000004065285 1. CHECK METER BUZZER CIRCUIT F The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to MWI-90, "Removal and Installation". >> Inspection End. Н J DLK M Ν

HAZARD FUNCTION

< COMPONENT DIAGNOSIS >

HAZARD FUNCTION

Description INFOID:000000004065286

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

Component Function Check

INFOID:0000000004065287

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 <u>DLK-50</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000004065288

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 <u>BCS-57, "Removal and Installation"</u>.

NO >> Repair or replace hazard warning switch circuit. Refer to EXL-78, "Wiring Diagram".

KEY SWITCH (BCM INPUT)

< COMPONENT DIAGNOSIS >

KEY SWITCH (BCM INPUT)

Diagnosis Procedure

INFOID:0000000004065289

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1. CHECK KEY SWITCH INPUT SIGNAL

With CONSULT-III

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT-III. Refer to <u>DLK-17</u>, "DOOR <u>LOCK</u>: CONSULT-III Function (BCM - DOOR LOCK)".

• When key is inserted to ignition key cylinder:

KEY ON SW : ON

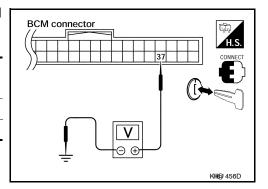
• When key is removed from ignition key cylinder:

KEY ON SW : OFF

Without CONSULT-III

Check voltage between BCM connector M18 terminal 37 and ground.

Connec- Terminal		Condition	Voltage (V)		
tor	(+)	(-)	Condition	voilage (v)	
M18 37 G	Ground	Key is inserted.	Battery voltage		
	31	Ground	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)

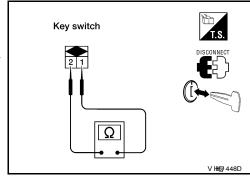
- Turn ignition switch OFF.
- 2. Disconnect key switch connector.
- 3. Check continuity between key switch terminals.

Terminals	Condition	Continuity
1 – 2	Key is inserted.	Yes
1 = 2	Key is removed.	No

Is the inspection result normal?

YES >> Repair or replace harness or fuse.

NO >> Replace key switch.



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HEADLAMP FUNCTION

< COMPONENT DIAGNOSIS >

HEADLAMP FUNCTION

Diagnosis Procedure

INFOID:0000000004065290

1. CHECK HEADLAMP OPERATION

Do headlamps operate with headlamp switch?

YES or NO

YES

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

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

Diagnosis Procedure

1. CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.

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

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KEYFOB ID SET UP WITH CONSULT-III

< COMPONENT DIAGNOSIS >

KEYFOB ID SET UP WITH CONSULT-III

ID Code Entry Procedure

INFOID:0000000004065292

KEYFOB ID SET UP WITH CONSULT-III

NOTE:

- If a keyfob is lost, the ID code of the lost keyfob must be erased to prevent unauthorized use. A specific ID code can be erased with CONSULT-III. However, when the ID code of a lost keyfob is not known, all controller ID codes should be erased. After all ID codes are erased, the ID codes of all remaining and/or new keyfobs must be re-registered.
- When registering an additional keyfob, the existing ID codes in memory may or may not be erased. If
 five ID codes are stored in memory when an additional code is registered, only the oldest code is
 erased. If less than five codes are stored in memory when an additional code is registered, the new
 ID code is added and no ID codes are erased.
- Entry of a maximum of five ID codes is allowed. When more than five codes are entered, the oldest ID code will be erased.
- Even if the same ID code that is already in memory is input, the same ID code can be entered. The code is counted as an additional code.
- 1. Turn ignition switch ON.
- 2. Select "BCM".
- Select "MULTI REMOTE ENT".
- 4. Select "WORK SUPPORT".
- You can register, erase or confirm a keyfob ID code. To register a new code, select the following option and follow CONSULT-III instructions:
 - · "REMO CONT ID REGIST"
 - Use this mode to register a keyfob ID code.

NOTE:

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

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

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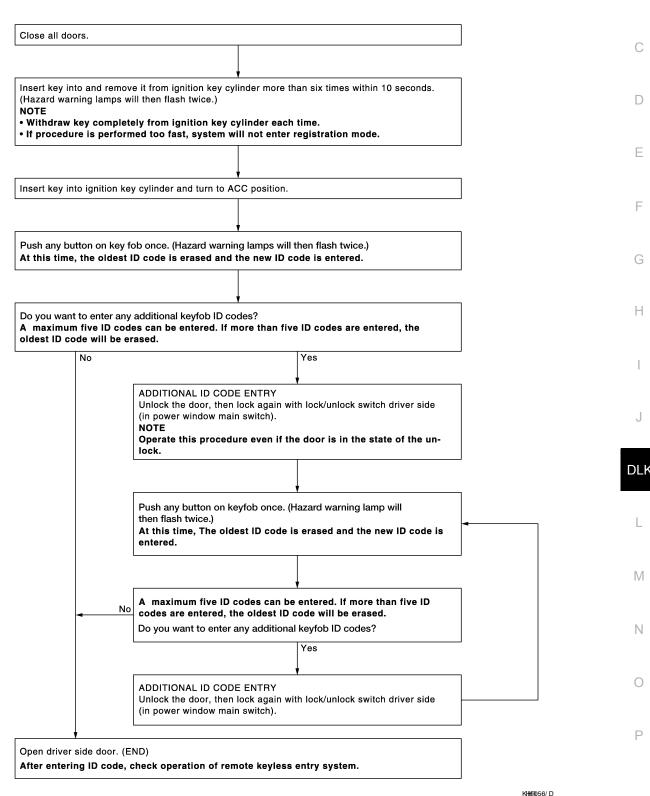
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INFOID:0000000004065293

KEYFOB ID SET UP WITHOUT CONSULT-III

ID Code Entry Procedure

KEYFOB ID SET UP WITHOUT CONSULT-III



NOTE:

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

KEYFOB ID SET UP WITHOUT CONSULT-III

< COMPONENT DIAGNOSIS >

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

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

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

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value INFOID:0000000004455935 В

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VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	C
IGN ON SW	Ignition switch OFF or ACC	OFF	
IGN ON SW	Ignition switch ON	ON	D
KEN ON SW	Mechanical key is removed from key cylinder	OFF	
KEY ON SW	Mechanical key is inserted to key cylinder	ON	
CDL LOCK SW	Door lock/unlock switch does not operate	OFF	
CDL LOCK SW	Press door lock/unlock switch to the lock side	ON	
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF	F
CDL UNLOCK SW	Press door lock/unlock switch to the unlock side	ON	
DOOR SW-DR	Driver's door closed	OFF	
DOOR SW-DR	Driver's door opened	ON	G
DOOD SW AS	Passenger door closed	OFF	
DOOR SW-AS	Passenger door opened	ON	Н
DOOD SW DD	Rear RH door closed	OFF	
DOOR SW-RR	Rear RH door opened	ON	
DOOD CW DI	Rear LH door closed	OFF	
DOOR SW-RL	Rear LH door opened	ON	
DAOK DOOD OW	Back door closed	OFF	
BACK DOOR SW	Back door opened	ON	
KEN ON TROM	Other than driver door key cylinder LOCK position	OFF	
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON	DLK
	Other than driver door key cylinder UNLOCK position	OFF	
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON	
1/5// 500 00//	"LOCK" button of key fob is not pressed	OFF	
KEYLESS LOCK	"LOCK" button of key fob is pressed	ON	
VEV(1 500 1 IN 11 00 IV	"UNLOCK" button of key fob is not pressed	OFF	M
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	ON	
ACC ON CVA	Ignition switch OFF	OFF	
ACC ON SW	Ignition switch ACC or ON	ON	— N
DEAD DEE OW	Rear window defogger switch OFF	OFF	
REAR DEF SW	Rear window defogger switch ON	ON	0
	Lighting switch OFF	OFF	
LIGHT SW 1ST	Lighting switch 1ST	ON	<u></u> -
DUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	OFF	<u> </u>
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	ON	
KEVI ESS DANIO	PANIC button of key fob is not pressed	OFF	
KEYLESS PANIC	PANIC button of key fob is pressed	ON	

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
KEYLESS TRUNK	NOTE: The item is indicated, but not monitored.	OFF
TRNK OPN MNTR	NOTE: The item is indicated, but not monitored.	OFF
	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	OFF
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is pressed and held simultaneously	ON
	UNLOCK button of key fob is not pressed	OFF
RKE KEEP UNLK	UNLOCK button of key fob is pressed and held	ON
LI DEAM CW	Lighting switch OFF	OFF
HI BEAM SW	Lighting switch HI	ON
LIEAD LAMB OWA	Lighting switch OFF	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
LIEAD LAMB OW	Lighting switch OFF	OFF
HEAD LAMP SW 2	Lighting switch 2ND	ON
AUTO LIGHT SW	NOTE: The item is indicated, but not monitored.	OFF
DA CCINO CIA	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
ED 500 0W	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
RR FOG SW	NOTE: The item is indicated, but not monitored.	OFF
	Turn signal switch OFF	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TUDNI GIONIAL I	Turn signal switch OFF	OFF
TURN SIGNAL L	Turn signal switch LH	ON
CARCOL AMP OW	Cargo lamp switch OFF	OFF
CARGO LAMP SW	Cargo lamp switch ON	ON
OPTICAL SENSOR	NOTE: The item is indicated, but not monitored.	OFF
ION OW CAN	Ignition switch OFF or ACC	OFF
IGN SW CAN	Ignition switch ON	ON
ED MIDED III	Front wiper switch OFF	OFF
FR WIPER HI	Front wiper switch HI	ON
ED MIDED LOW	Front wiper switch OFF	OFF
FR WIPER LOW	Front wiper switch LO	ON
ED WIDED INT	Front wiper switch OFF	OFF
FR WIPER INT	Front wiper switch INT	ON
ED WASHED OW	Front washer switch OFF	OFF
FR WASHER SW	Front washer switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
ED WIDED OTOD	Any position other than front wiper stop position	OFF
FR WIPER STOP	Front wiper stop position	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

< ECU DIAGNOSIS >

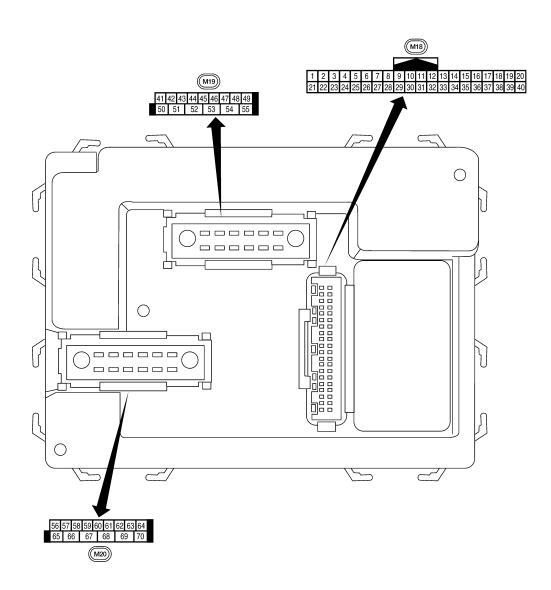
Monitor Item	Condition	Value/Status	
	Rear wiper switch OFF	OFF	
RR WIPER ON	Rear wiper switch ON	ON	
	Rear wiper switch OFF	OFF ON OFF	
RR WIPER INT	Rear wiper switch INT	ON	
	Rear washer switch OFF	OFF	
RR WASHER SW	Rear washer switch ON	ON	
DD WIDED OTOD	Any position other than rear wiper stop position	OFF	
RR WIPER STOP	Rear wiper stop position	ON	
H/L WASH SW	NOTE: The item is indicated, but not monitored.	OFF	
	Hazard switch OFF	OFF	
HAZARD SW	Hazard switch ON	ON	
	Brake pedal is not depressed	OFF	
BRAKE SW	Brake pedal is depressed	ON	
	Blower fan motor switch OFF	OFF	
FAN ON SIG	Blower fan motor switch ON (other than OFF)	ON	
	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	OFF	
AIR COND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	ON	
TRNK OPNR SW	NOTE: The item is indicated, but not monitored.	OFF	
TRUNK CYL SW	NOTE: The item is indicated, but not monitored.	OFF	
HOOD SW	NOTE: The item is indicated, but not monitored.	OFF	
OIL PRESS SW	Ignition switch OFF or ACCEngine running	OFF	
	Ignition switch ON	OFF ON	
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire	
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire	
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire	
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire	
ID REGST FL1	ID of front LH tire transmitter is registered	DONE	
ID REGGI FLI	ID of front LH tire transmitter is not registered	YET	
ID DECCT ED4	ID of front RH tire transmitter is registered	DONE	
ID REGST FR1	ID of front RH tire transmitter is not registered	YET	
ID DECOT DO	ID of rear RH tire transmitter is registered	DONE	
ID REGST RR1	ID of rear RH tire transmitter is not registered	YET	
ID DECOT DI 4	ID of rear LH tire transmitter is registered	DONE	
ID REGST RL1	ID of rear LH tire transmitter is not registered	YET	
	Tire pressure indicator OFF	OFF	
WARNING LAMP	Tire pressure indicator ON	ON	

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
BU77FR	Tire pressure warning alarm is not sounding	OFF
BOZZEN	Tire pressure warning alarm is sounding	ON

Terminal Layout

INFOID:0000000004455936



Physical Values

INFOID:0000000004455937

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	147		Signal		Measuring condition	Defended of
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
	DD.	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
1	BR	nation	Output	Door is unlocked (SW ON)		0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ++5ms
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms BJ@4180D
5	L,	Combination switch input 2				(V)
6	R	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	*** 5ms
		Front door lock as-			ON (open, 2nd turn)	Momentary 1.5V
7	GR	sembly LH (key cylin- der switch) and back door key cylinder switch (unlock)	Input	OFF	OFF (closed)	0V
		Front door lock as-			ON (open)	Momentary 1.5V
8	SB	sembly LH (key cylin- der switch) and back door key cylinder switch (lock)	Input	OFF	OFF (closed)	0V
9	Y	Rear window defogger	Input	ON	Rear window defogger switch ON	0V
	•	switch	input	.,	Rear window defogger switch OFF	5V
	G/B	Ignition switch (ACC	Input	ACC or	Ignition switch ACC or ON	Battery voltage

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation or condition	(Approx.)
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) OFF (closed)	0V Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	_	5V
18	BR	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	_	0V
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0
20	G	Remote keyless entry	Input	OFF	Stand-by (keyfob buttons released)	(V) 6 4 2 0 + 50 ms
20	J	receiver (signal)	mpat	OI I	When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	(V) 6 4 2 0 + *50 ms
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 \rightarrow 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 sig-	Input	ON	A/C switch OFF	5V
-1	4.4	nal	mpat	514	A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
			pat	5.4	Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
20		. Idzaid Switoil	прас	011	OFF	5V
31	R	Off-road lamps switch	Input	ON	ON	0V
		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			OFF	5V

< ECU DIAGNOSIS >

	Wire		Signal		Measuring cond	dition	Reference value or waveform			
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	(Approx.)			
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 6 4 2 0 +			
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 6 4 2 0 → 5ms			
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 6 4 2 0 +-5ms			
35	BR	Combination switch output 2	Output O		Lighting, turn, wiper OFF Wiper dial position 4		(V)			
36	LG	Combination switch output 1		ON			6 4 2 0 → +5ms RJH@4181D			
37	В	Key switch and key	Innut	OFF	Key inserted		Battery voltage			
31	ь	lock solenoid	Input	OFF	Key inserted		0V			
38	W/R	Ignition switch (ON)	Input	ON	_		Battery voltage			
39	L	CAN-H	_	_	_		-			
40	Р	CAN-L	_	_	_	ON				
42	L	Off-road lamps	Output	ON	Off-road lamps switch	ON OFF	0V Battery voltage			
					ON (open)	J1 1	0V			
43	Υ	Back door switch	Input	OFF	OFF (closed)		Battery voltage			
								Rise up position (rear wiper arm on stopper)		ov
					A Position (full position)	clockwise stop	Battery voltage			
44	0	Rear wiper auto stop switch	Input	ON	Forward sweep (counterclock-wise direction)		Fluctuating			
					B Position (full wise stop posit		0V			
					Reverse sweep (clockwise direction)		Fluctuating			

< ECU DIAGNOSIS >

	Wire		Signal		Measuring condition Operation or condition		Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch			(Approx.)
45	V	Lock switch	Input	OFF	ON (lock)		0V
40	•	LOCK SWITCH	mpat	011	OFF		Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)		0V
40		Officer Switch	трас	011	OFF		Battery voltage
47	GR	Front door switch LH	Input	OFF	ON (open)		0V
777	OI C	Tront door Switch Err	mpat	011	OFF (closed)		Battery voltage
48	Р	Rear door switch LH	Input	OFF	ON (open)		0V
-10		rteal door owner Err	трас	011	OFF (closed)		Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open	(ON)	0V
40	_	ourgo lamp	Output	011	All doors close	ed (OFF)	Battery voltage
50	W	Off-road lamps relay	Output	ON	Off-road	ON	0V
	**	On road lamps relay	Output	ON	lamps switch	OFF	Battery voltage
51	G	Trailer turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms RJ ₩@//8I
52	V	Trailer turn signal (left)	Output	ON	Turn left ON		(V) 15 10 500 ms BJ H@2//8I
55	W	Rear wiper output cir-	Output	ON	OFF		0
		cuit 1	- Carpar	0	ON		Battery voltage
56	V	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF		0V
				ON	_		Battery voltage
57	R/Y	Battery power supply	Input	OFF	_		Battery voltage
59	GR	Front door lock as- sembly LH actuator	Output	OFF	OFF (neutral)		0V
33	Oit	(unlock)	Output	011	ON (unlock)		Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 5 0 500 ms

< ECU DIAGNOSIS >

	Wire		Signal		Measuring condition		Reference value or waveform						
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	(Approx.)						
61	G	Turn signal (right)	Output	ON	Turn right ON		Turn right ON		Turn right ON		Turn right ON		(V) 15 10 500 ms RJH@2//81
63	BR	Interior room/map	Output OFF		Any door ON (open)		0V						
00	DIX	lamp	Output	011	switch	OFF (closed)	Battery voltage						
65	V	All door lock actuators	Output	Output	Output	Output	Output OFF	OFF (neutral)		· · · · · ·		0V	
00	V	(lock)	Output			Battery voltage							
				Front door lock actua-			OFF (neutral)		0V				
66	L	tor RH, rear door lock actuators LH/RH and back door lock actua- tor (unlock)	Output	ut OFF	ON (unlock)		Battery voltage						
67	В	Ground	Input	ON	_		0V						
					Ignition switch ON		Battery voltage						
						Within 45 seconds after ignition switch OFF				Battery voltage			
68	0	Power window power supply (RAP)	Output	_	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						

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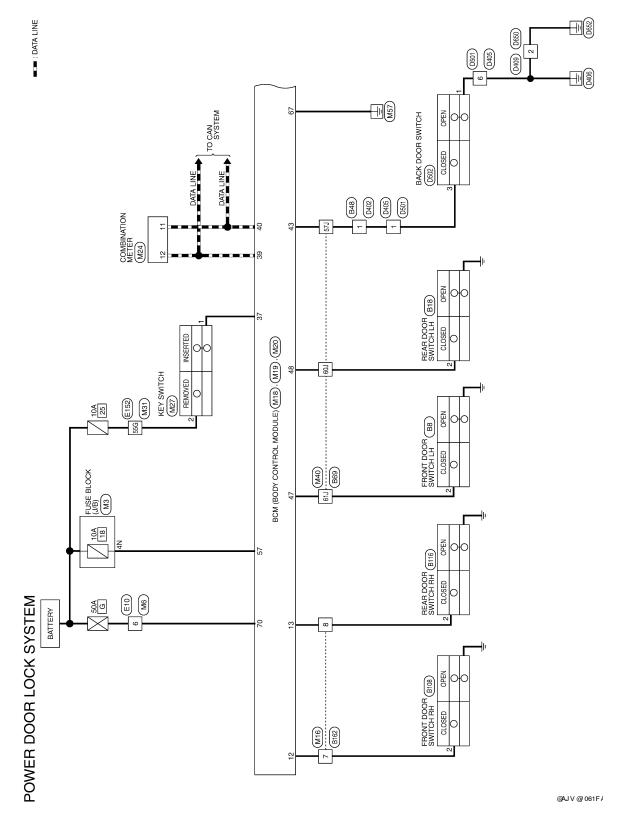
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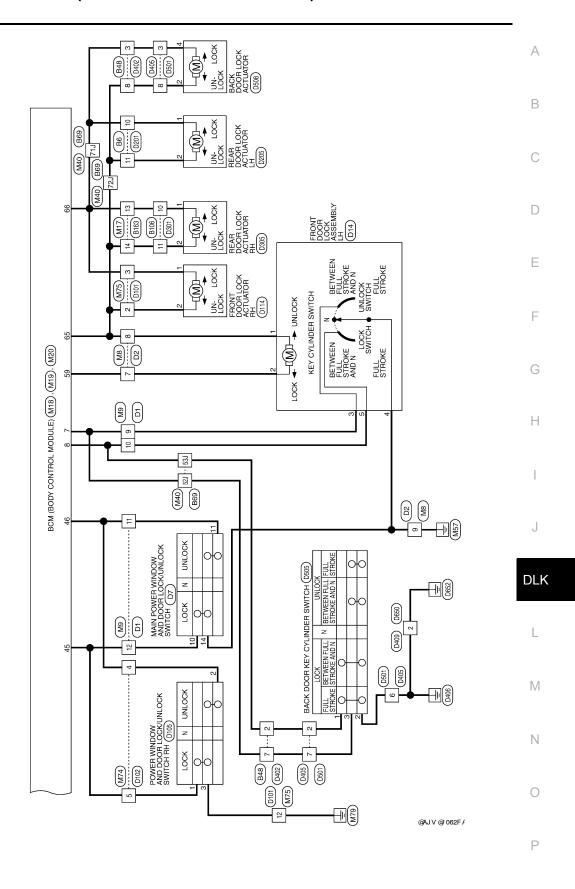
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Wiring Diagram — POWER DOOR LOCK SYSTEM —

INFOID:0000000004065297



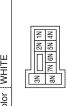


POWER DOOR LOCK SYSTEM CONNECTORS

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

Connector No. M6 Connector Name WIRE TO WIRE

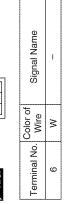
Connector Color WHITE





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

	WIRE TO WIRE	BROWN	3 2	10 8 7 8 8 10	Signal Name		and a	1
. M8			4	11 21	Color of Wire	GR	>	В
Connector No.	Connector Name	Connector Color		H.S.	Terminal No.	7	8	6



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



Connector No. M16 Connector Name WIRE TO WIRE	. M16 me WIRE	E TO WIRE
Connector Color WHITE	lor WHI	1E
诵 H.S.	6 5 4 3	0 0 8 7
Terminal No.	Color of Wire	Signal Name
7	മ	1
α	-	1

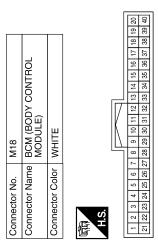
Signal Name ļ Connector Name WIRE TO WIRE Connector Color WHITE Ø Color of Wire GB SB ല > Connector No. Terminal No. 9 # 5

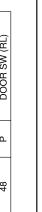
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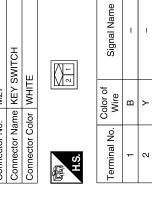
Connector No.	o. M19	6
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color		WHITE
H.S.	50 51	41 42 (3) 44 (45) 49 47 (48) 49 50 50 51 52 53 54 55
Terminal No.	Color of Wire	Signal Name
43	>	BACK DOOR SW
45	>	CDL LOCK SW
46	re	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	۵	DOOR SW (RL)

Signal Name	KEY CYLINDER UNLOCK SW	KEY CYLINDER LOCK SW	DOOR SW (AS)	DOOR SW (RR)	KEY SW	CAN-H	CAN-L
Color of Wire	GR	SB	P	7	В	٦	Д
Terminal No.	7	8	12	13	37	39	40





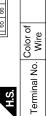
M27	KEY SWITCH	WHITE	<u>-</u>
Connector No.	Connector Name KEY SWITCH	Connector Color WHITE	



				22 21			
	Connector Name COMBINATION METER	ш		8 7 6 5 4 3 28 27 26 25 24 23	Signal Name	CAN-L	CAN-H
. M24	me COME	lor WHIT		18 17 16 15 14 13 12 11 10 9 38 37 36 35 34 33 32 31 30 29	Color of Wire	Ь	_
Connector No.	Connector Na	Connector Color WHITE	H.S.	20 19 18 17 16 15 40 39 38 37 36 35	Terminal No.	11	12

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





	Signal Name	BAT (FUSE)	DOOR UNLOCK OUTPUT (DR)	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	BAT (F/L)
Color of	Wire	₽/Y	GR	^	7	В	W
	l erminal No.	22	69	99	99	29	02

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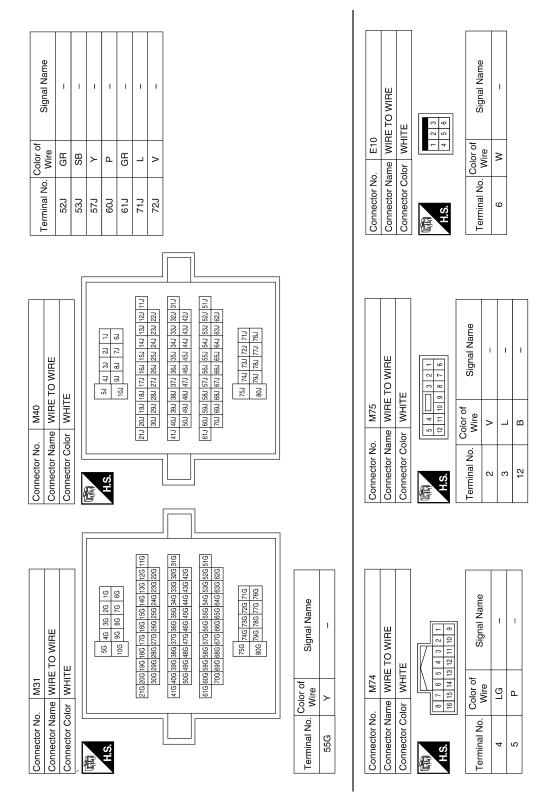
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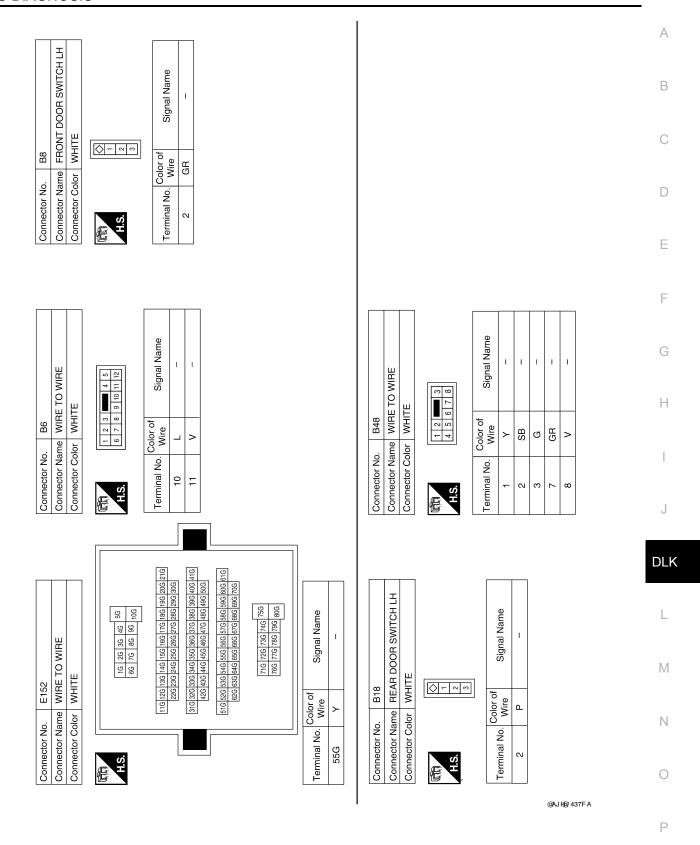
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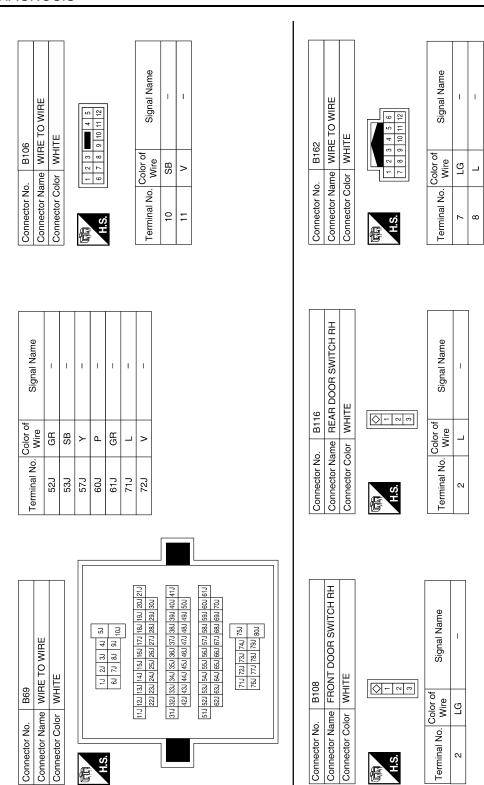
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Connector No.	B163	Connector No. D1	. 0		Connector No.	D5	
Connector Name WIRE TO WIRE	WIRE TO WIRE	Connector Name WIRE TO WIRE	me WIRE	TO WIRE	Connector Name WIRE TO WIRE	me WIRE	TO WIRE
Connector Color WHITE	WHITE	Connector Color WHITE	olor WHIT	ш	Connector Color BROWN	lor BROW	Z
H.S.	3	明.S.	1 2 3 4 9 10 11 12	12 4 5 6 7 8 15 16 16 16 16 16 16 16	原 用.S.	1 2 8 9 9 9	10 11 12
						Color of	
Color of		Color of Terminal No.	Color of	Signal Name	Terminal No. Wire	Wire	Signal Name
lelling NO. Wi	re Signal Name		aliv			9	1
13 SB	ı	6	B/W	1	- a	5 >	1
V V		10	SB	ı	0 0	> (
		11	M	ı	on .	n	1
		12	LG	ı			

	_		_						
_	E TO WIRE	丑		3 4 5	9 10 11	Signal Name	ı	1	ı
D101	me WIF	or WH		1 2	6 7 8	Color of Wire	>	G/≺	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE			H.S.	Terminal No. Wire	2	က	12
	•		_						

Connector No.	. D14	_
Connector Name		FRONT DOOR LOCK ASSEMBLY LH
Connector Color	lor GRAY	47
	9	8 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Terminal No.	Color of Wire	Signal Name
	>	ı
2	G	ı
က	B/W	ı
4	В	ı
5	SB	I

	×						
	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH	ПЕ	2 3 4	Signal Name	ı	ı	ı
. D7		lor WH	8 9 10	Color of Wire	re	≥	В
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	10	1	14

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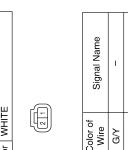
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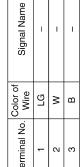


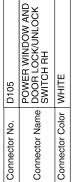


Signa			
Color of Wire	G/Y	۸	
Terminal No.	-	2	











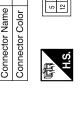
Color of Wire	ГG	Μ	В
Terminal No.	1	2	3

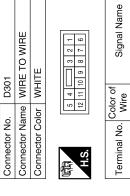
D102	WIRE TO WIRE	WHITE	10 11 12 13 14 15 16
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.



	Connec
OOR LOCK	Connec
OR LH	Connec

D301





ne REAR DOOR I ACTUATOR LI	or WHITE	
Connector Name	Connector Color	

Connector No. | D205



Sig			
Color of Wire	В	۸	
Terminal No.	1	2	

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nal Name

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-	E TO WIRE	TE	8 2 2 1	Signal Name	I	ı
. D201	me WIF	lor WH	5 4 11 10 9	Color of Wire	ഗ	>
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	10	-

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	Connector No.	a	D405 WIRE TO WIRE
	Corniector Nar	ile wile	ם אוא סו
-	Connector Color WHITE	or WHIT	
	语 H.S.	3 7	6 5 4
	Terminal No.	Color of Wire	Signal Name
	-	>	ı
	2	SB	ı
	က	ŋ	ı
	9	В	ı
	7	GR	ı
	8	>	1

		H	
	Connector No.	D205	
WIRE	Connector Name	ne BACK I	BACK DOOR SWITCH
	Connector Color	or WHITE	
[F	₩		
<u> </u>	H.S.	<u>></u> ∾ ∾	
		=]	
Signal Name			
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Color of	
I	Terminal No.	Wire	Signal Name
1	-	В	I
ı	8	>	1

Color of Wire

Terminal No.

7 8 3 7

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	TO WIRE	E	1 2 1 1 2 1 1	Signal Name	I	l	-	-	ı
. D402	me WIRE	lor WHIT	3 7 6	Color of Wire	\	SB	9	GR	>
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	所 H.S.	Terminal No.	1	2	3	7	8

				ıme		
D305	Connector Name REAR DOOR LOCK ACTUATOR RH	HTE		of Signal Name	ı	ı
	me RE	lor	ربری	Color of Wire	G	>
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	-	٥

	F	
Connector No.	. D409	
Connector Name		WIRE TO WIRE
Connector Color	lor WHITE	且
H.S.		
Terminal No.	Color of Wire	Signal Name
2	В	_

Connector Name WIRE TO WIRE Connector Color WHITE

Connector No. D501

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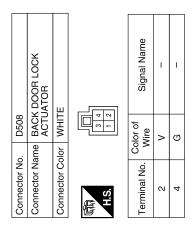
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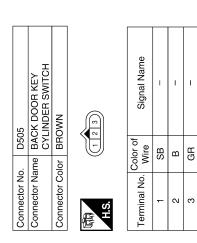
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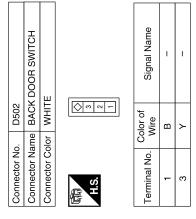
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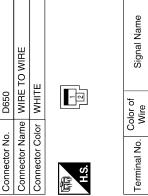
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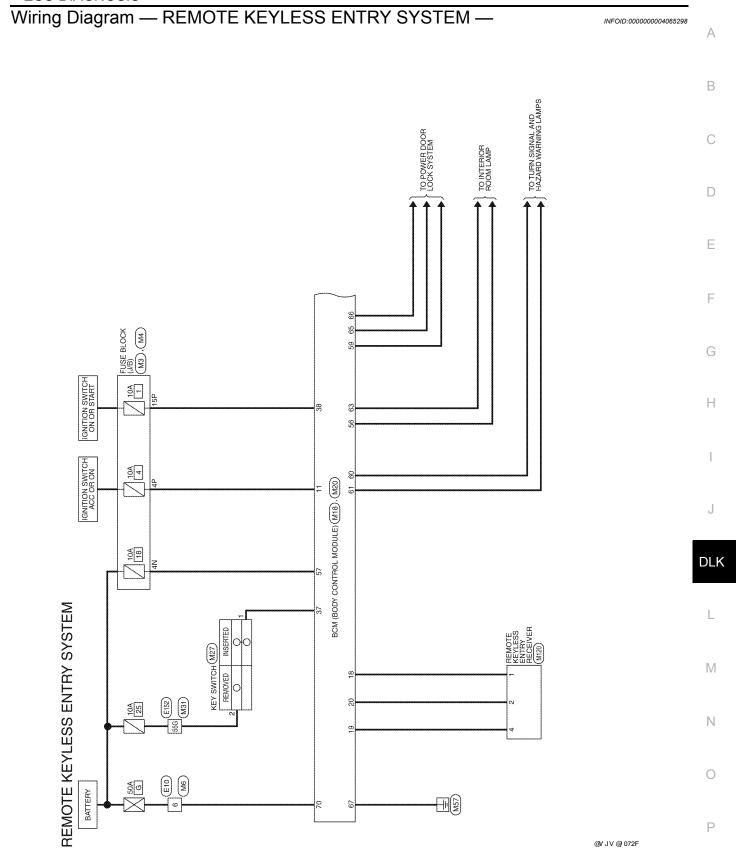




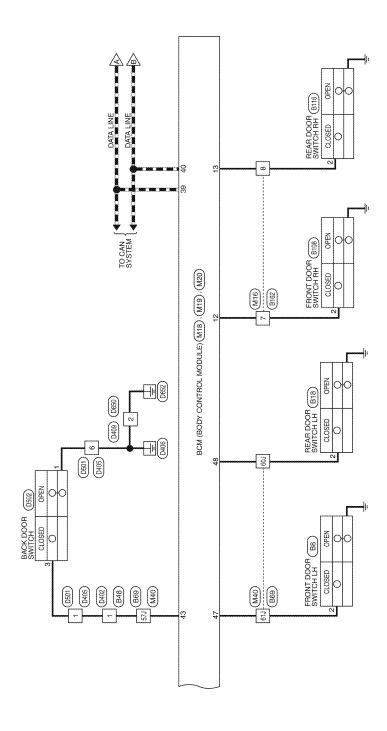


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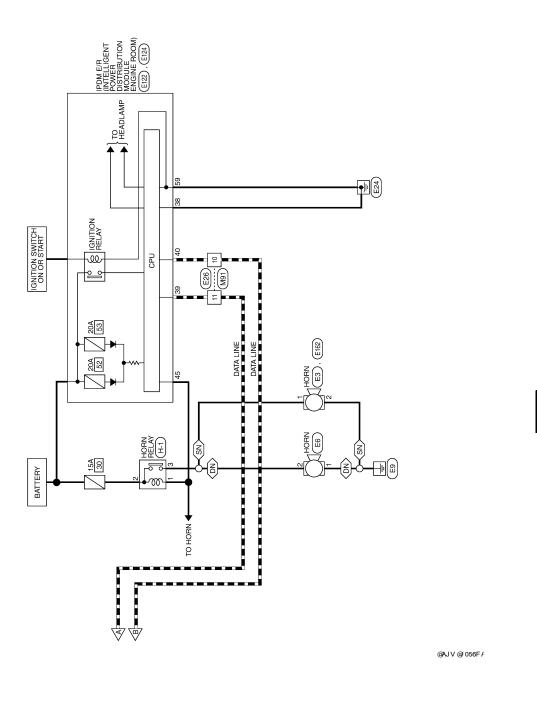
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METER : DATA LINE



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Connector Name WIRE TO WIRE Connector Color WHITE

Connector No. M6

REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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

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

Connector Color WHITE

Sector Color WHITE SN Color SN Colo
--

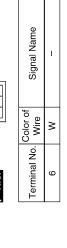


8N 7N 6N 5N 4N	Signal Nan	_
8N 7	Color of Wire	R/Υ
H.S.	Terminal No.	4N

8N 7N 6N 5N 4N	Signal Nam	_
N8 N	Color of Wire	R/Υ
	nal No.	7

8N 7N 6N 5N 4N	Signal Name	ı
N8 N8	Color of Wire	R/Υ
	ıal No.	_

7P 6P 5P 4P 7 3P 2P 1 16P 15P 14P 13P 12P 11P 10P 9P 8	Signal Na	1	I
7P 6P 5P 4P 1 16P 15P 14P 13P 1	Color of Wire	G/B	W/R
南 H.S.	Terminal No.	4P	15P



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

Connector Name WIRE TO WIRE Connector Color WHITE

M16

Connector No.





Signal Name

Color of Wire ГG

Terminal No.

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	Г	0	40	1
		19 20	39 4	١
		18	38	١
		17	37	l
		16	36	l
		15	35	l
		14	34	l
г	_	13	33	l
	17	12	32	l
	V	11	30 31	l
	Λ	10	30	l
	\square	6	29	١
L	ī	8	28	١
		7	27	١
		9	26	١
		2	24 25	١
		4		١
	- 1	1	\sim	1

KEYLESS & AUTO LIGHT SENSOR GND

BB

DOOR SW (AS) DOOR SW (RR)

Signal Name

Color of Wire

Terminal No. Ξ 12 13 8

G/B 2 KEYLESS TUNER POWER SUPPLY OUTPUT

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KEYLESS TUNER SIGNAL

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KEY SW IGN SW CAN-H CAN-L

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< ECU DIAGNOSIS >

of Signal Name	FLASHER OUTPUT (LEFT)	FLASHER OUTPUT (RIGHT)	ROOM LAMP OUTPUT	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	L H
Color of Wire	ГС	ŋ	BR	^	_	В	///
Terminal No.	09	61	63	65	99	29	02

Connector No.
Connector Name
Connector Color
56 57 58 59 60 61 62 63 64 65 66 67 68 69 70
Color of Wire

DOOR UNLOCK OUTPUT (DR)

BAT (FUSE)

Rγ GR

57 59

6	BCM (BODY CONTROL MODULE)	WHITE	41 42 43 44 45 46 47 48 49	Signal Name	BACK DOOR SW	(Aa) WS AOOa	DOOR SW (RL)
. M19		_	41 42 43 50 51	Color of Wire	>	GR	Ь
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	43	47	48

Signal Name	1										
Terminal No. Wire	55G Y										
Termi		Г									
Connector No. M31	Connector Color WHITE		56 40 30 10 10 10 10 10 10 10 10 10 10 10 10 10	92 98 96 94 97 98 96	21G 20G 19G 18G 17G 18G 15G 14G 13G 12G 11G	306/296/286/276/286/256/246/236/226	416 406 396 386 376 366 356 346 336 326 316	506 496 486 476 486 436 436 426	61G 60G 59G 85G 57G 56G 55G 54G 53G 52G 51G	756 746 736 776	806 796 786 776 766
M27 KEY SWITCH	ļ			1	Signal Name	ı	ı				
No. M27 Name KEY			M~]	Color of Wire	В	>				

	KEY SWITCH	щ		Signal Name	-	-
M27		v WHITE	~	Color of Wire	В	٨
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2

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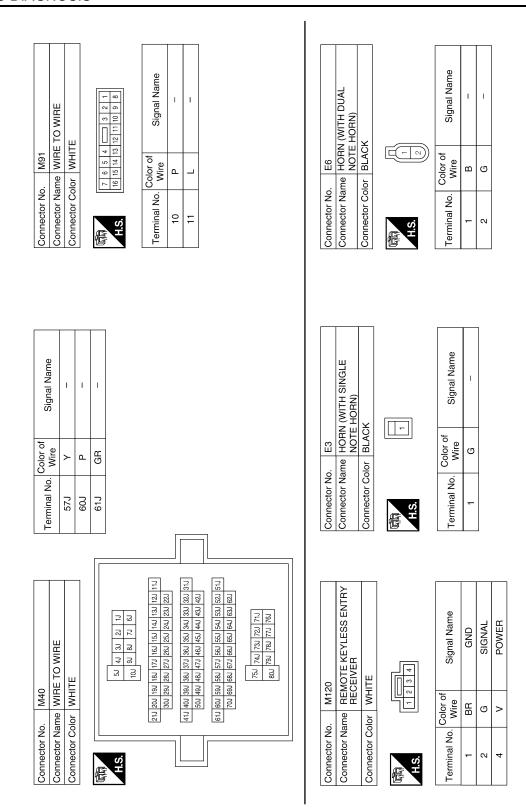
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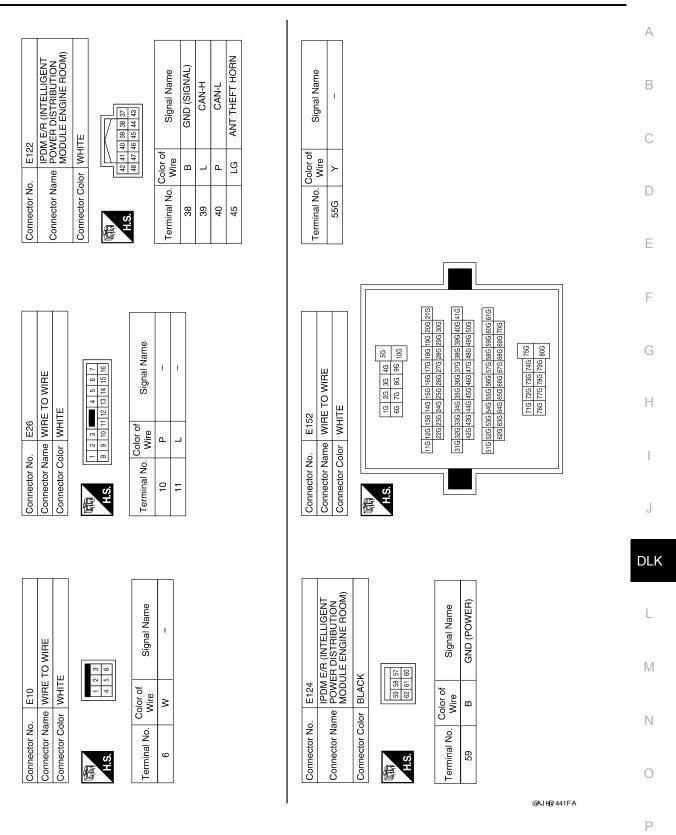
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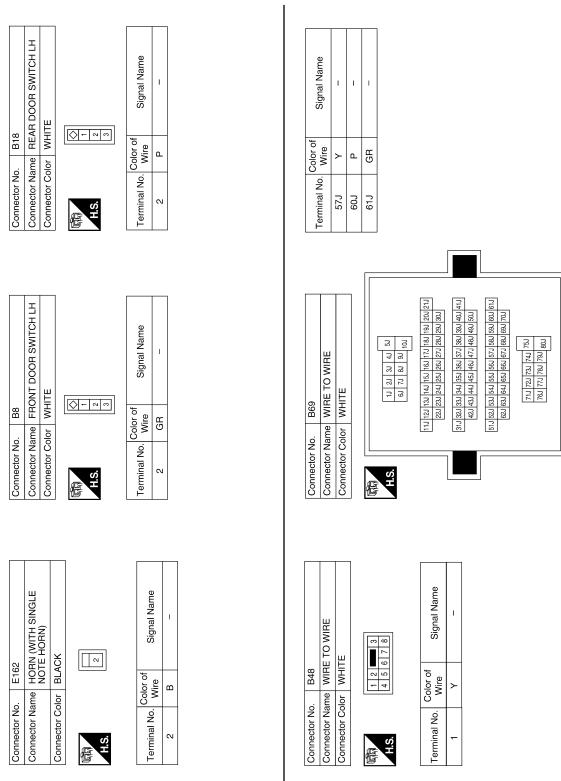


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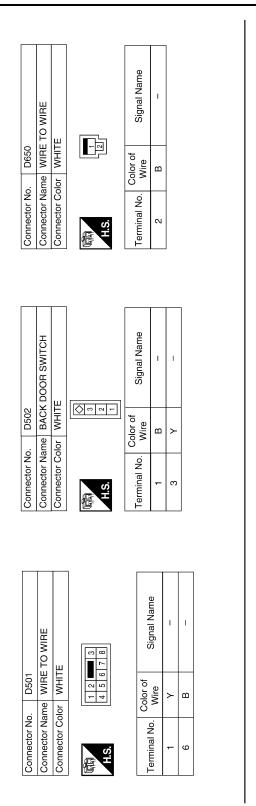


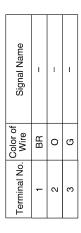
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< ECU DIAGNOSIS >

		А
WIRE Signal Name	Signal Name	В
17E TTE TTE TO 11 11 11 11 11 11 11 11 11 11 11 11 11		С
	NO N	D
Connector No. Connector Color H.S. Terminal No. W 7 8	Connector No. Connector Color H.S. Terminal No. 2	Е
		F
OR SWITCH RH Signal Name	Signal Name	G
TTE DO	6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Н
1 1 1 1 10 = 111	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I
Connector No. Connector Color Connector Color H.S. Terminal No. W 2	Connector No. Connector Name Connector Color Terminal No. 6 6	J
		DLK
FRONT DOOR SWITCH RH WHITE Col Signal Name	WIRE Signal Name	L
MHITE Sign of	22 3E TO 7 6 5	M
Solo Solo LC William		Ν
Connector No. Connector Col. Terminal No. 2	Connector No. Connector Cold Connector Cold H.S. 1	0
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DTC Inspection Priority Chart

INFOID:0000000004455938

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

< ECU DIAGNOSIS >

Priority	DTC	Α
1	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)	
2	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM	Е
3	C1729: VHCL SPEED SIG ERR C1735: IGNITION SIGNAL	
	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 	Е
	 C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR 	F
4	 C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR 	G
	 C1719: [PRESSDATA ERR] RL C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR 	H
	 C1723: [CODE ERR] RL C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR 	I
	C1727: [BATT VOLT LOW] RL	

DTC Index

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	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	_	_	BCS-31
U1010: CONTROL UNIT (CAN)	_	_	BCS-32
B2190: NATS ANTENNA AMP	_	_	SEC-18
B2191: DIFFERENCE OF KEY	_	_	<u>SEC-21</u>
B2192: ID DISCORD BCM-ECM	_	_	SEC-22
B2193: CHAIN OF BCM-ECM	_	_	SEC-24
C1708: [NO DATA] FL	_	_	<u>WT-14</u>

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CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
C1709: [NO DATA] FR	_	_	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	<u>WT-16</u>
C1716: [PRESSDATA ERR] FL	_	_	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	_	_	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	_	_	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	_	_	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	_	_	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	_	_	<u>WT-19</u>
C1735: IGNITION SIGNAL	_	_	_

DOOR LOCK

SYMPTOM DIAGNOSIS

DOOR LOCK

Symptom Table

INFOID:0000000004065302 В

DOOR LOCK SYSTEM

NOTE:

Before performing the diagnosis in the following table, check "Work flow". Refer to <u>DLK-4, "Work Flow"</u>.
If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Symptom	Repair order	Refer to page
	1. Door switch check	DLK-24
Key reminder door function does not operate properly.	2. Key switch (Insert) check	DLK-51
on,.	3. Replace BCM.	BCS-57
Power door lock does not operate with door lock and	Door lock/unlock switch check (driver side)	DLK-27
unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH.	2. Door lock/unlock switch check (passenger side)	<u>DLK-27</u>
	Door lock actuator check (Front LH)	DLK-36
	2. Door lock actuator check (Front RH)	<u>DLK-37</u>
Specific door lock actuator does not operate.	3. Door lock actuator check (Rear LH)	<u>DLK-38</u>
	4. Door lock actuator check (Rear RH)	<u>DLK-40</u>
	5. Back door	<u>DLK-41</u>
Power door lock does not operate with front door key cylinder LH or back door key cylinder operation.	Front door lock assembly LH (key cylinder switch) check	DLK-31
	2. Back door key cylinder switch check	<u>DLK-33</u>
	3. Replace BCM.	BCS-57
	BCM power supply and ground circuit check	BCS-33
Power door lock does not operate.	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.	Ensure automatic door lock/unlock function (lock operation) is enabled.	<u>DLK-17</u>
	Check combination meter vehicle speed signal.	<u>MWI-28</u>
	3. Check intermittent incident.	<u>GI-37</u>
Ignition OFF interlock door UNLOCK function does	Ensure automatic door lock/unlock function (unlock operation) is enabled.	<u>DLK-17</u>
not operate.	2. Check BCM for DTCs.	<u>DLK-87</u>
	3. Check intermittent incident.	<u>GI-37</u>

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REMOTE KEYLESS ENTRY SYSTEM

REMOTE KEYLESS ENTRY SYSTEM

Symptom Table

REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	
	2. Check BCM and remote keyless entry receiver.	DLK-43
The court D of the felt count has entered	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-45
The new ID of keyfob cannot be entered.	2. Key switch (insert) check	
	3. Door switch check	DLK-24
	4. ACC power check	BCS-33
	5. Replace BCM.	BCS-57
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system)	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	<u>DLK-14</u>
	2. Replace BCM.	BCS-57
Hazard and horn reminder does not activate properly	Check hazard and horn reminder mode with CONSULT-III NOTE: Hazard and horn reminder mode can be changed. First check the hazard and horn reminder mode setting.	DLK-14
when pressing lock or unlock button of keyfob.	2. Door switch check	
	3. Replace BCM.	BCS-57
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob.	Check hazard reminder mode with CONSULT-III NOTE: Hazard reminder mode can be changed. First check the hazard reminder mode setting.	DLK-14
(Horn reminder OK)	Check hazard function with hazard switch	
	3. Replace BCM.	BCS-57
Horn reminder does not activate properly when	Check horn reminder mode with CONSULT-III NOTE: Horn reminder mode can be changed. First check the horn reminder mode setting.	DLK-14
pressing lock or unlock button of keyfob. (Hazard reminder OK)	2. Check horn function with horn switch	
	3. IPDM E/R operation check	
	4. Replace BCM.	BCS-57
	Room lamp operation check	
Room lamp and ignition keyhole illumination do not	Ignition keyhole illumination operation check	
operate properly.	3. Door switch check	
	4. Replace BCM.	BCS-57

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.	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241) NOTE: If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-45
	2. Key switch (insert) check	DLK-51
	3. Replace BCM.	BCS-57
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	Check auto door lock operation mode with CONSULT-III NOTE: Auto door lock operation mode can be changed. First check the auto door lock operation mode setting.	DLK-12
	2. Replace BCM.	BCS-57

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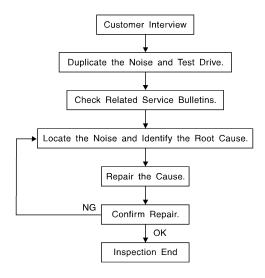
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CUSTOMER INTERVIEW

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.

< SYMPTOM DIAGNOSIS >

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

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

CHECK RELATED SERVICE BULLETINS

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

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

LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

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

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< SYMPTOM DIAGNOSIS >

SILICONE GREASE

Used instead of UHMW tape that will be visible or not fit.

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

DUCT TAPE

Use to eliminate movement.

CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

Generic Squeak and Rattle Troubleshooting

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

CAUTION:

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

CENTER CONSOLE

Components to pay attention to include:

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

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

DOORS

Pay attention to the:

- 1. Finisher and inner panel making a slapping noise
- 2. Inside handle escutcheon to door finisher
- 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

< 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:

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

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

OVERHEAD CONSOLE (FRONT AND REAR)

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

- 1. Any component mounted to the engine wall
- Components that pass through the engine wall
- Engine wall mounts and connectors
- Loose radiator mounting pins
- 5. Hood bumpers out of adjustment
- Hood striker out of adjustment

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

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Diagnostic Worksheet

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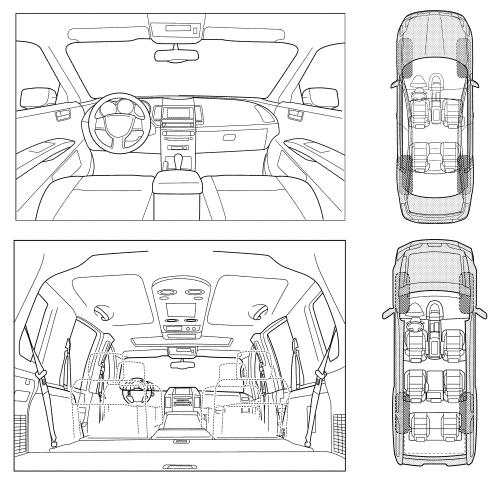
Dear Customer:

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

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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



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

-1-

< SYMPTOM DIAGNOSIS >

Through driveways		se occurs	:		
After sitting out in the rain Section After sitting out in the rain					
1 st time in the morning	I. WHEN DOES IT OCCUR? (please che	eck the bo	xes that app	oly)	
Only when it is cold outside	☐ Anytime	☐ Af	ter sitting ou	ut in the ra	in
Only when it is hot outside	☐ 1st time in the morning	\square w	hen it is rair	ning or wet	i .
WHEN DRIVING:	Only when it is cold outside	☐ Dr	y or dusty c	onditions	
Through driveways Squeak (like tennis shoes on a clean floor)	Only when it is hot outside	☐ Ot	her:		
Over rough roads	II. WHEN DRIVING:	IV. W	HAT TYPE	OF NOISE	
Over rough roads	☐ Through driveways	☐ Sc	ueak (like t	ennis shoe	es on a clean floor)
Only about mph			-		
On acceleration				_	
Coming to a stop	Only about mph	☐ Kn	ock (like a l	knock at th	e door)
On turns: left, right or either (circle)	On acceleration	☐ Tio	k (like a clo	ck second	l hand)
With passengers or cargo Other: After driving miles or minutes D BE COMPLETED BY DEALERSHIP PERSONNEL Dest Drive Notes: YES NO Initials of person performing Phicle test driven with customer Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirm repair Customer Name			-		
Other: After driving miles or minutes Description By Dealership Personnel Pest Drive Notes: YES NO Initials of person performing Pehicle test driven with customer	<u> </u>	□ Ві	ızz (like a bı	ımble bee)	
After driving miles or minutes D BE COMPLETED BY DEALERSHIP PERSONNEL Dest Drive Notes: YES NO Initials of person performing Dehicle test driven with customer Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirm repair N: Customer Name JO.# Date: This form must be attached to Work Order.					
PES NO Initials of person performing Phicle test driven with customer Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirm repair Customer Name					
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Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirm repair Customer Name //O.# This form must be attached to Work Order					
Noise source located and repaired			YES	NO	Initials of person performing
N: Customer Name /O.# Date:	'ehicle test driven with customer		YES	NO 🗆	Initials of person performing
N: Customer Name /.O.# Date: This form must be attached to Work Order			YES	NO	Initials of person performing
/.O.# Date: This form must be attached to Work Order	- Noise verified on test drive - Noise source located and repaired		YES	NO	Initials of person performing
This form must be attached to Work Order	Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confire	m repair	YES	NO	Initials of person performing
This form must be attached to Work Order	 Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirent 				performing
	- Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirn /IN:	Cust	□ □ □		performing
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	Noise verified on test drive Noise source located and repaired Follow up test drive performed to confire IN: V.O.#	Cust	comer Name		performing
	- Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confire IN:	Cust	comer Name		performing
	Noise verified on test drive Noise source located and repaired Follow up test drive performed to confirm IN:	Cust	comer Name		performing

PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

Precaution for work

- After removing and installing the opening/closing parts, be sure to carry out fitting adjustments to check their operation.
- Check the lubrication level, damage, and wear of each part. If necessary, grease or replace it.

PREPARATION

PREPARATION

PREPARATION

Special Service Tool

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	FIHE 882D	Locating the noise
— (J-43980) NISSAN Squeak and Rat- tle Kit	RHEØ 883D	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	KDK835@	Used to test keyfobs

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PREPARATION

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Commercial Service Tool

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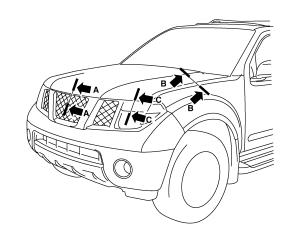
(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	PIHED 884D	Locating the noise

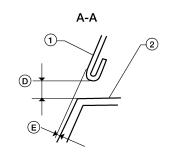
ON-VEHICLE REPAIR

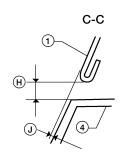
HOOD

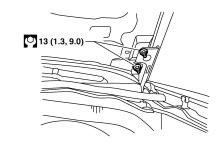
Fitting Adjustment

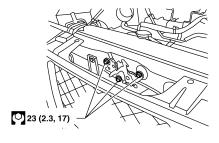
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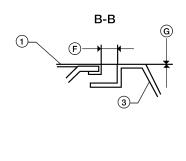












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- 1. Hood
- 4. Headlamp assembly
- F. 4.5 mm (0.18 in)
- J. 0.7 mm (0.03 in)

- 2. Front grille
- D. 6.0 mm (0.24 in)
- G. 0.0 mm (0.0 in)

- 3. Front fender
- E. 0.7 mm (0.03 in)
- H. 6.0 mm (0.24 in)

CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

- 1. Remove the front grille. Refer to EXT-16, "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.

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< ON-VEHICLE REPAIR >

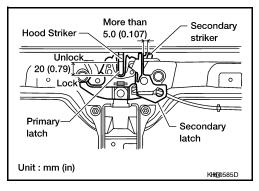
- 5. Tighten the bolts to specification.
- 6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
- 7. Install the front grille. Refer to EXT-16, "Removal and Installation".

HOOD LOCK ADJUSTMENT

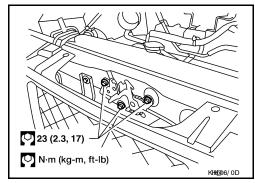
- 1. Remove the front grille. Refer to <a>EXT-16, "Removal and Installation".
- 2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
- Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

CAUTION:

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



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

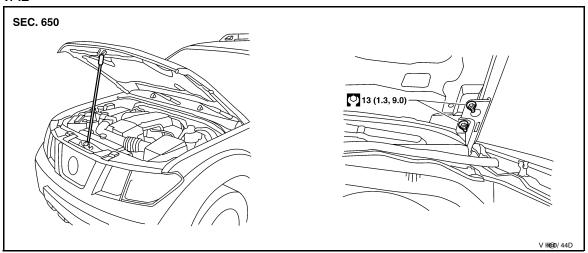


5. Install the front grille. Refer to EXT-16, "Removal and Installation".

Removal and Installation of Hood Assembly

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REMOVAL



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

CAUTION:

Operate with two workers, because of its heavy weight.

INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation of Hood Lock Control

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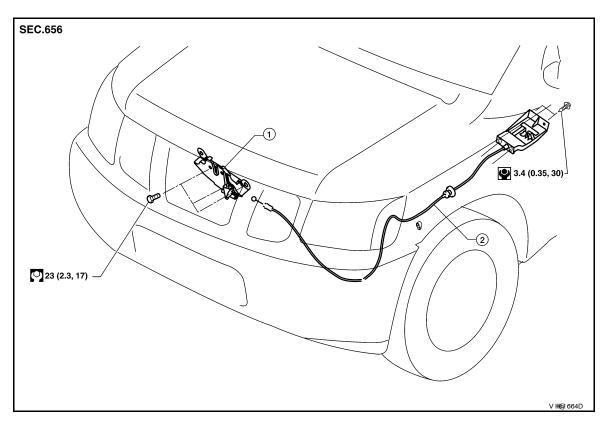
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1. Hood lock assembly

2. Hood lock cable

REMOVAL

- 1. Remove the front grille. Refer to <u>EXT-16</u>, "Removal and Installation".
- 2. Remove the front fender protector (LH). Refer to EXT-19, "Front Fender Protector".
- 3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
- 4. Remove the bolts, and the hood release handle.
- 5. Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.

CAUTION:

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

INSTALLATION

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

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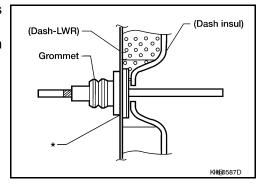
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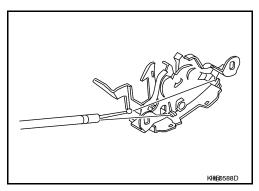
< ON-VEHICLE REPAIR >

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

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



- 4. Install the cable securely to the lock.
- 5. Adjust the hood lock. Refer to <u>DLK-104, "Hood Lock Control Inspection"</u>.



6. Install the front grille. Refer to EXT-16, "Removal and Installation".

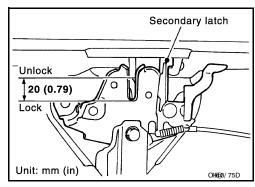
Hood Lock Control Inspection

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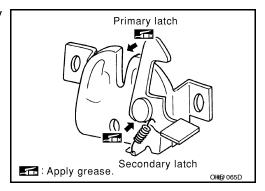
CAUTION:

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

- Remove the front grille. Refer to <u>EXT-16</u>, "Removal and Installation".
- 2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
- 3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



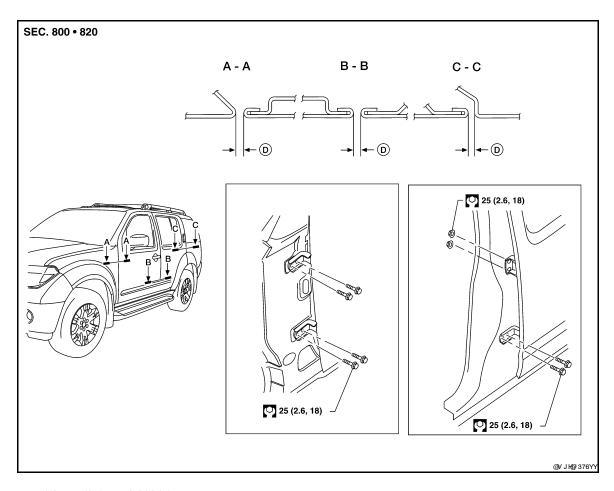
Check the hood lock lubrication condition. If necessary, apply "body grease" to the points shown.



5. Install the front grille. Refer to EXT-16, "Removal and Installation".

DOOR

Fitting Adjustment



D. $4.5 \pm 1.0 \text{ mm} (0.177 \pm 0.039 \text{ in})$

FRONT DOOR

Longitudinal clearance and surface height adjustment at front end

- 1. Remove the fender. Refer to EXT-18, "Removal and Installation".
- 2. Loosen the hinge bolts. Raise or lower the front door at rear end to adjust.
- Install the fender. Refer to <u>EXT-18</u>, "Removal and Installation".

REAR DOOR

Longitudinal clearance and surface height adjustment at front end

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

BACK DOOR

Longitudinal clearance and surface height adjustment

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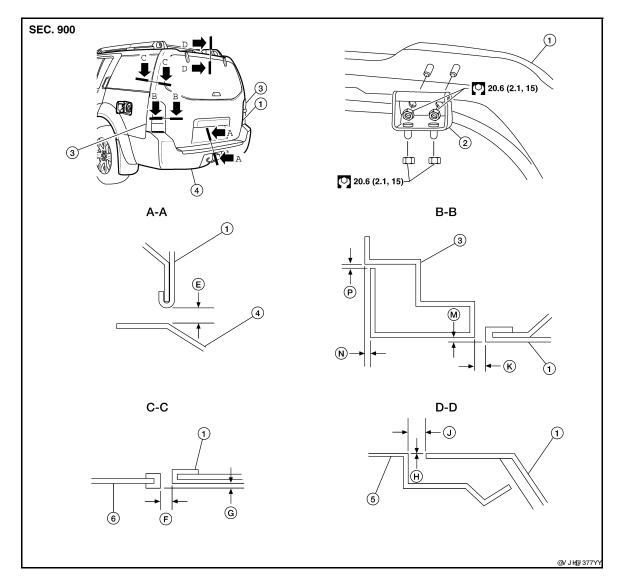
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DLK-105



- 1. Back door assembly
- 4. Rear bumper fascia
- E. $7.2 \pm 2.0 \text{ mm} (0.28 \pm 0.06 \text{ in})$
- H. 1.0 ± 1.5 mm $(0.04 \pm 0.06$ in)
- M. $0.8 \pm 2.0 \text{ mm} (0.03 \pm 0.08 \text{ in})$
- 2. Back door hinge
- 5. Roof
- F. $6.0 \pm 1.5 \text{ mm} (0.24 \pm 0.06 \text{ in})$
- J. 8.0 ± 1.5 mm $(0.31 \pm 0.06 in)$
- N. $0.8 \pm 1.0 \text{ mm} (0.03 \pm 0.04 \text{ in})$
- 3. Tail lamp assembly
- 6. Side window glass
- G. $2.0 \pm 2.0 \text{ mm} (0.08 \pm 0.08 \text{ in})$
- K. $5.3 \pm 2.0 \text{ mm} (0.21 \pm 0.08 \text{ in})$
- P. $2.0 \pm 1.0 \text{ mm} (0.08 \pm 0.04 \text{ in})$

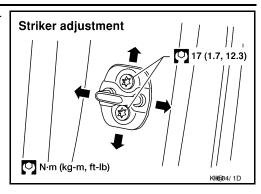
- 1. Open and support the back door.
- 2. Slightly loosen the hinge nuts.
- 3. Reposition the door as necessary and tighten the nuts.
- 4. Confirm the adjustment. Repeat as necessary to obtain the desired fit.

STRIKER ADJUSTMENT

Body Side Doors

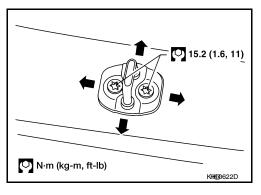
< ON-VEHICLE REPAIR >

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



Back Door

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



Removal and Installation

FRONT DOOR

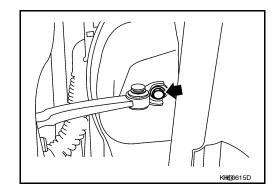
CAUTION:

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

Removal

- Remove the front door glass and regulator. Refer to <u>GW-14</u>, "Front Door Glass Regulator".
- 2. Remove the door harness.
- Remove the check link bolt from the hinge pillar.

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



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

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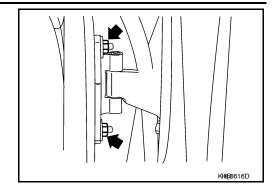
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Door hinge nuts

24.5 N·m (2.5 kg-m, 18 ft-lb)



Installation

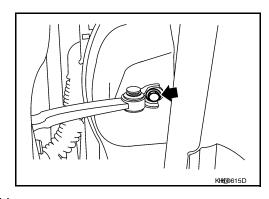
Installation is in the reverse order of removal.

REAR DOOR

Removal

- 1. Remove the door finisher. Refer to INT-13, "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.

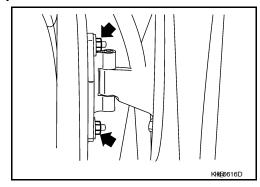
Check link to hinge pillar 14.7 N·m (1.5 kg-m, 11 ft-lb) bolt



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

Door hinge nuts

24.5 N·m (2.5 kg-m, 18 ft-lb)



Installation

Installation is in the reverse order of removal.

BACK DOOR

Removal

- 1. Remove the glass hatch.
- 2. Remove the back door lock assembly. Refer to DLK-114, "Component Structure".
- 3. Remove the back door wire harness.
- 4. Remove the rear washer nozzle and hose from the back door. Refer to <u>WW-84, "Removal and Installation"</u>

CAUTION:

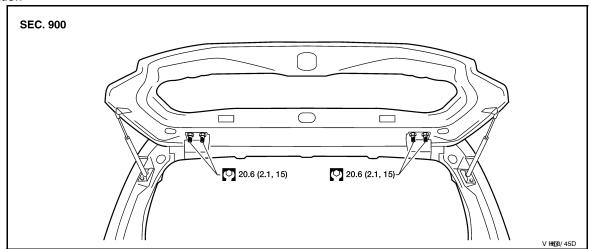
Two technicians should be used to avoid damaging the back door during removal.

DOOR

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

Installation



Installation is in the reverse order of removal.

• Align the back door. Refer to DLK-105, "Fitting Adjustment".

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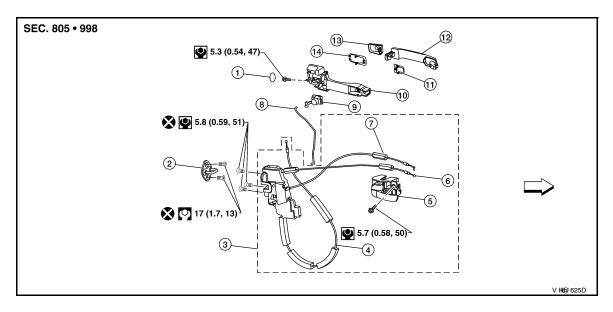
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FRONT DOOR LOCK

Component Structure

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

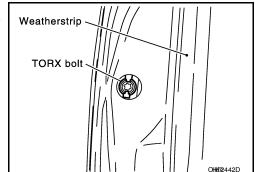
- 3. Door lock assembly
- 6. Inside handle cable
- 9. Door key cylinder
- 12. Outside handle

Removal and Installation

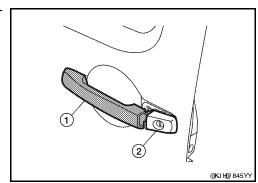
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REMOVAL

- Remove the front door window regulator. Refer to <u>GW-14, "Front Door Glass Regulator"</u>.
- 2. Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



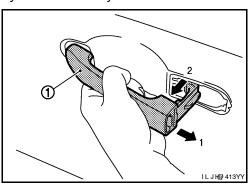
3. While pulling the outside handle (1), remove door key cylinder assembly or escutcheon (2).



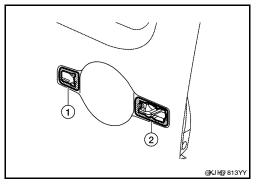
FRONT DOOR LOCK

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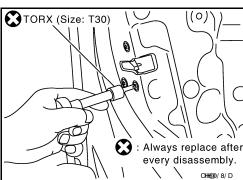
- 4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.
- 5. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle.



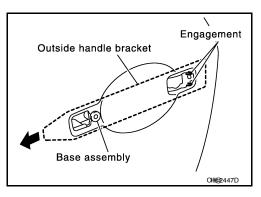
6. Remove the front gasket (1) and rear gasket (2).



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



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



9. Disconnect the door lock actuator electrical connector.

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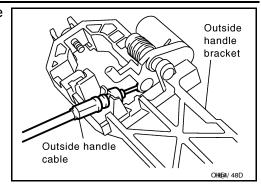
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FRONT DOOR LOCK

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



INSTALLATION

Installation is in the reverse order of removal.

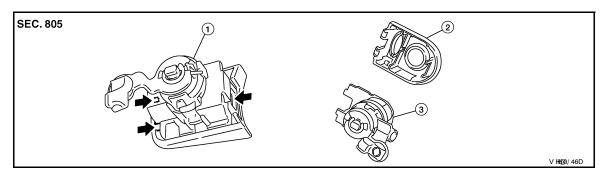
CAUTION:

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

Disassembly and Assembly

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DOOR KEY CYLINDER ASSEMBLY



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

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

REAR DOOR LOCK

Component Structure

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17 (1.7, 13)
2
2
5.8 (0.59, 51)
3

- 1. Outside door handle
- 4. Outside door handle cable
- 7. Door lock cable

- 2. Rear door striker
- 5. Inside door handle cable

- 3. Rear door lock assembly
- 6. Inside door handle assembly

Removal and Installation

REMOVAL

- 1. Remove the rear door window regulator. Refer to GW-18, "Rear Door Glass Regulator".
- 2. Remove door grommets, and remove outside handle nuts from the hole.
- 3. Remove outside handle.
- 4. Disconnect the outside handle cable connection.
- 5. Remove the inside door handle.
- 6. Disconnect the door lock and inside door handle cables from the inside door handle.
- 7. Disconnect the door lock actuator connector and remove the assembly.

INSTALLATION

Installation is in the reverse order of removal.

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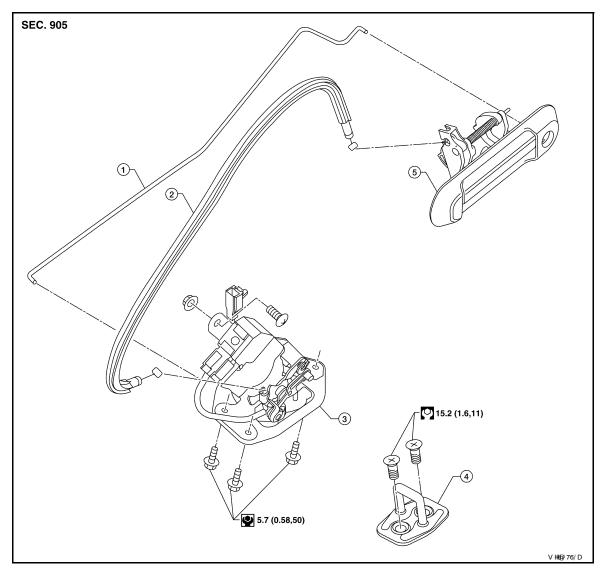
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BACK DOOR LOCK

Component Structure

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- 1. Back door lock rod
- 4. Back door striker
- 2. Back door latch cable
- 5. Back door release handle
- 3. Back door latch