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DOOR LOCK	

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< BASIC INSPECTION >

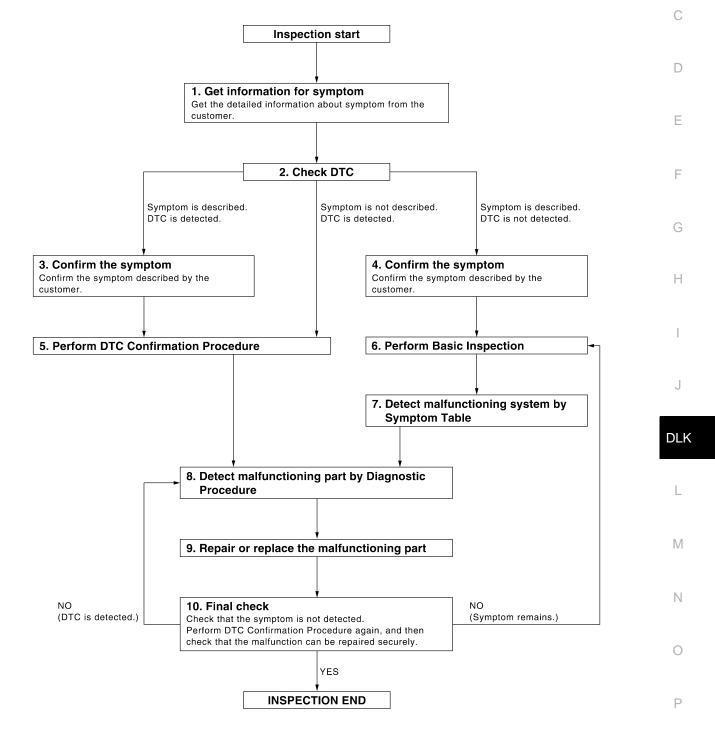
BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

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OVERALL SEQUENCE



< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

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

>> GO TO 2.

2.CHECK DTC

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

Is any symptom described and any DTC detected?

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

3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to <u>DLK-181</u>, "<u>DTC Inspection Priority Chart</u>" 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 8.

No >> Refer to <u>GI-42, "Intermittent Incident"</u>.

6.PERFORM BASIC INSPECTION

Perform DLK-5, "Work Flow".

Inspection End>>GO TO 7.

7. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

Detect malfunctioning system according to <u>DLK-186</u>, "<u>Symptom Table</u>" based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE	Δ
Inspect according to Diagnostic Procedure of the system. NOTE:	
The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.	В
Is malfunctioning part detected?	
Yes >> GO TO 9. No >> Check voltage of related BCM terminals using CONSULT-III.	С
9. REPAIR OR REPLACE THE MALFUNCTIONING PART	
 Repair or replace the malfunctioning part. Reconnect parts or connectors disconnected during Diagnostic Procedure again after repair and replacement. 	D
3. Check DTC. If DTC is displayed, erase it.	E
>> GO TO 10.	
10.FINAL CHECK	F
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.	G
OK or NG	
NG (DTC is detected)>>GO TO 8. NG (Symptom remains)>>GO TO 6. OK >> INSPECTION END	H
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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

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

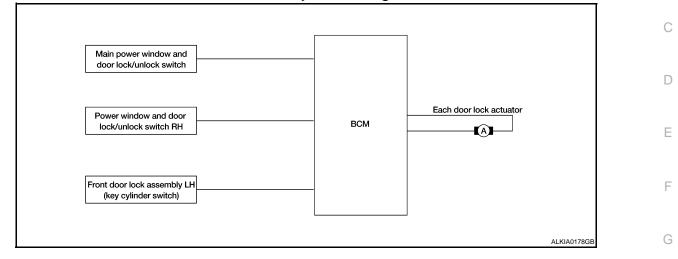
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

Refer to the CONSULT-III operation manual for the initialization procedure.

< FUNCTION DIAGNOSIS >

FUNCTION DIAGNOSIS DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

DOOR LOCK AND UNLOCK SWITCH : System Diagram



DOOR LOCK AND UNLOCK SWITCH : System Description

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	
Door key cylinder switch				

DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

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

Selective Unlock Operation

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

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUP- ⁽ PORT". Refer to <u>DLK-35, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Key Reminder System Refer to <u>DLK-32, "System Description"</u>. M

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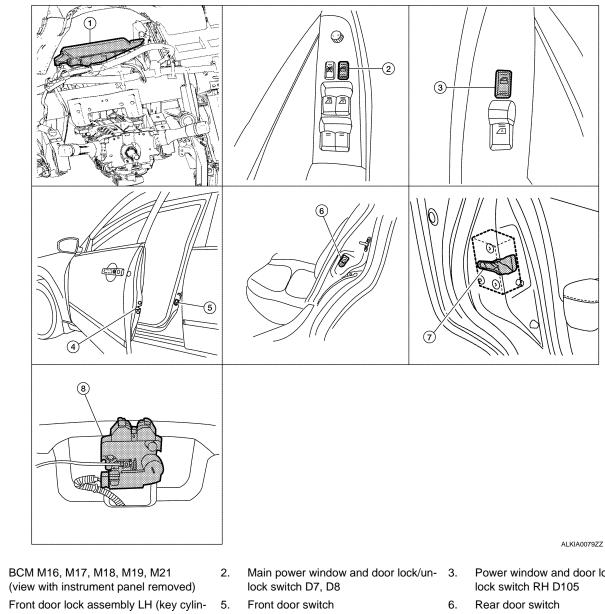
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< FUNCTION DIAGNOSIS >

DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000003070939



- 1. (view with instrument panel removed)
- 4. der switch) D10 Front door lock actuator RH D108
- 7. Rear door lock actuator LH D205 RH D305
- LH B8 RH B108
- Trunk lamp switch and trunk release 8. solenoid B28
- Power window and door lock/un-
- LH B18 RH B116

DOOR LOCK AND UNLOCK SWITCH : Component Description

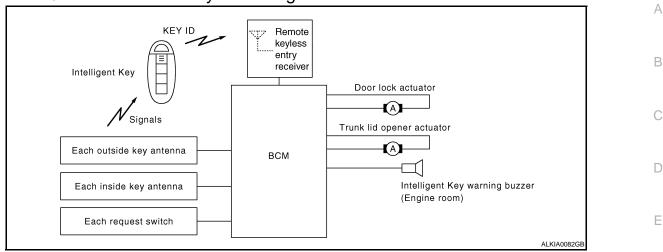
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Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Transmits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

DOOR REQUEST SWITCH

< FUNCTION DIAGNOSIS >

DOOR REQUEST SWITCH : System Diagram



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DOOR REQUEST SWITCH : System Description

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

 The Intelligent Key system is a system that makes it possible to lock and unlock the door locks (door lock/ unlock function) by carrying the Intelligent Key, which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (BCM).
 CAUTION:

The driver should always carry the Intelligent Key

- If an action that does not meet the operating conditions of the Intelligent Key system is taken, the buzzer goes off to inform the driver (Warning chime function).
- When a door lock is locked, unlocked or trunk open with request switch or remote controller button operation, the hazard lamps flash and the Intelligent Key warning buzzer or horn sounds (Hazard and buzzer/horn reminder function).
- The settings for each function can be changed with the CONSULT-III.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with the CONSULT-III.

OPERATION DESCRIPTION/DOOR LOCK/UNLOCK

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

OPERATION CONDITION

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

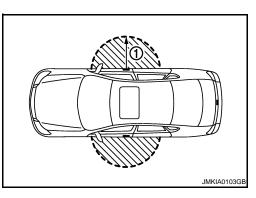
Each request switch operation	Operation condition	
Lock operation	 All doors are closed Ignition switch is in OFF position Intelligent Key is out of key slot Intelligent Key is outside the vehicle Intelligent Key is within outside key antenna detection area 	
Unlock Operation	 Intelligent Key is outside the vehicle Intelligent Key is within outside key antenna detection area * 	

< FUNCTION DIAGNOSIS >

*: Even with a registered Intelligent Key remaining inside the vehicle, door locks can be unlocked from outside of the vehicle with a spare Intelligent Key as long as key IDs are different.

OUTSIDE KEY ANTENNA DETECTION AREA

The outside key antenna detection area of door lock/unlock function is in the range of approximately 80 cm (31.50 in) surrounding the driver and passenger door handles (1).



SELECTIVE UNLOCK FUNCTION

When an LOCK signal is sent from door request switch (driver side or passenger side), all doors will be locked. When an UNLOCK signal is sent from door request switch (driver side or passenger side) once, driver's door will be unlocked.

Then, if an UNLOCK signal is sent from door request switch (driver side and passenger side) again within 5 seconds, all other door will be unlocked.

HAZARD AND BUZZER REMINDER FUNCTION

During lock, unlock, or trunk opening operation by each request switch, the hazard warning lamps and Intelligent Key warning buzzer will blink or honk as a reminder.

When doors are locked, unlocked by each request switch, IPDM E/R honks Intelligent Key warning buzzer as a reminder and transmits hazard request signal to BCM via CAN communication line. BCM flashes hazard warning lamps as a reminder.

Operating function of hazard warning lamps and buzzer reminder

Operation	Hazard warning lamps flash	Intelligent Key warning buzzer honk
Unlock	Once	Once
Lock	Twice	Twice
Trunk open	—	Four times

How to change hazard and buzzer reminder mode

Refer to DLK-35, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

AUTO DOOR LOCK FUNCTION

When all doors are locked, ignition switch is in OFF position and key switch is OFF (Intelligent Key is not inserted in key slot), doors are unlocked with door request switch

When BCM does not receive the following signals within 60 seconds, all doors are locked.

- Door switch is ON (door is opened)
- Door is locked
- Ignition switch is ON (ignition switch is pressed)
- Key switch is ON (Intelligent Key is inserted in key slot)

Auto door lock mode can be changed by "AUTO LOCK SET" mode in "WORK SUPPORT". Refer to <u>DLK-35.</u> "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

ROOM LAMP OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for up to 30 seconds maximum) by receiving UNLOCK signal from door request switch. For detailed description, refer to <u>DLK-9</u>, "<u>DOOR LOCK AND UNLOCK SWITCH</u> : <u>System Description</u>".

LIST OF OPERATION RELATED PARTS

Parts marked with \times are the parts related to operation.

< FUNCTION DIAGNOSIS >

Door lock function	Intelligent Key	Key slot	Remote keyless entry receiver	Door switch	Door request switch (Driver, Passenger)	Door lock actuator	Inside key antenna	Outside key antenna (Driver, Passenger)	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamp	Push-button ignition switch	A B C D
Door lock/unlock function by request switch	×	×	×	×	×	×	×	×		×	×			Е
Hazard and buzzer reminder function for door lock/unlock operation									×	×	×	×		
Key reminder function	×	×	×	×	×	×	×	×	×	×	×	×		F
Selective unlock function by request switch (Driver side)	×				×	×	×	×		×	×			
Selective unlock function by request switch (Passenger side)	×				×	×	×	×		×	×			G
Auto door lock function	×	×		×	×	×				×	×		×	

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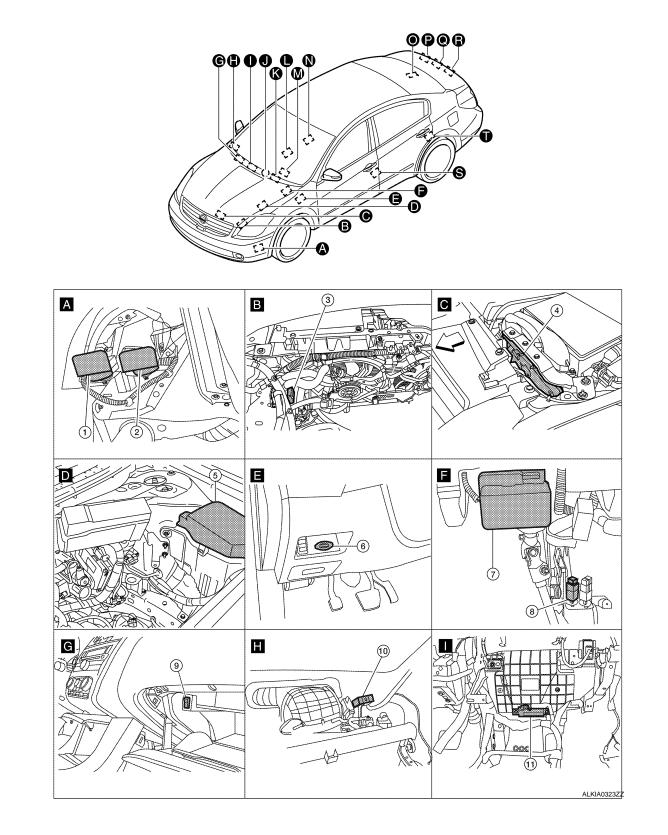
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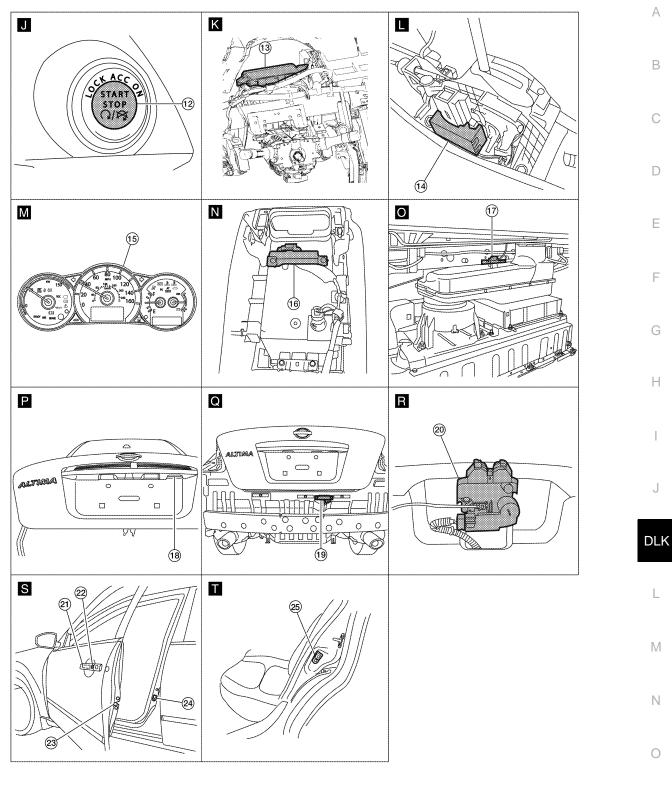
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< FUNCTION DIAGNOSIS >

DOOR REQUEST SWITCH : Component Parts Location

INFOID:000000003070943





1. Horn (low) E215

- 2. Horn (high) E216
- (view with front fender protector LH removed) 5. IPDM E/R E17, E18
 - 8. Stop lamp switch E38

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- Intelligent key warning buzzer 3. E73
- 6. Key slot M40
- Trunk lid opener cancel switch 9. M74

- 4. ECM
- 7. Electronic steering column lock M32 (view with instrument panel LH removed)

< FUNCTION DIAGNOSIS >

10.	Remote keyless entry receiver M27 (view with instrument panel removed)	11.	Instrument panel antenna M49 (view with center console assembly re- moved)	12.	Push button ignition switch M38.
13.	BCM M16, M17, M18, M19, M20, M21 (view with instrument panel removed)	14.	ECVT device (detent switch)	15.	Combination meter M24
16.	Front console antenna M203 (view with center console assembly re- moved)	17.	Rear parcel shelf antenna B29	18.	Trunk opener request switch B33
19.	Rear bumper antenna B46	20.	Trunk lamp switch and trunk release solenoid B28 (view with trunk lid inner trim panel re- moved)	21.	Front outside handle LH (outside key antenna) D6 Front outside handle RH (outside key antenna) D106
22.	Front outside handle LH (request switch) D6 Front outside handle RH (request switch) D106	23.	Front door lock assembly LH D10 Front door lock actuator RH D108	24.	Front door switch LH B8 RH B108
25.	Rear door switch LH B18 RH B116				

Rear bumper antenna B46 DOOR REQUEST SWITCH : Component Description

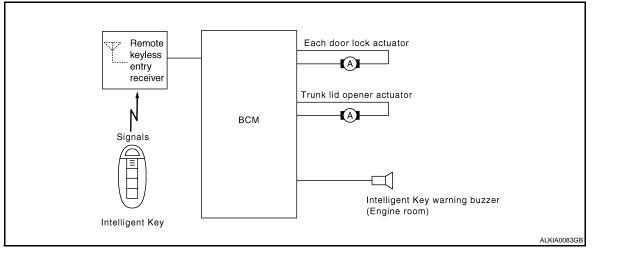
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Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to BCM.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Door switch	Transmits door open/close condition to BCM.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to BCM.
Request switch	Transmits lock/unlock operation to BCM.
Intelligent Key	Transmits button operation to remote keyless entry receiver

Intelligent Key	I ransmits button operation to remote keyless entry receiver.
Outside key antenna	Detects if Intelligent Key is outside the vehicle.
Inside key antenna	Detects if Intelligent Key is inside the vehicle.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.

INTELLIGENT KEY

INTELLIGENT KEY : System Diagram



INTELLIGENT KEY : System Description

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INFOID:000000003070945

The Intelligent Key has the same functions as the remote control entry system. Therefore, it can be used in the same manner as the remote controller by operating the door lock/unlock button.

< FUNCTION DIAGNOSIS >

OPERATION DESCRIPTION/DOOR LOCK/UNLOCK FUNCTION

- When door lock/unlock button of the Intelligent Key is pressed, lock signal or unlock signal is transmitted A from Intelligent Key to BCM via remote keyless entry receiver.
- When BCM receives the door lock/unlock signal, it operates door lock actuator, flashes the hazard lamp (lock: 2 time, unlock: 1 times) and horn chirp signal to IPDM E/R at the same time as a reminder.
- IPDM E/R honks horn (lock: 2 time) as a reminder

OPERATION CONDITION

Remote controller operation	Operation condition	Operation	
Lock	All doors closed	All doors lock	
Unlock	Intelligent Key is out of key slot	All doors unlock	D

OPERATION AREA

- Operating Range
- To ensure the Intelligent Key works effectively, use within 80 cm range of each doors, however the operable range may differ according to surroundings.

SELECTIVE UNLOCK FUNCTION

When a LOCK signal is transmitted from Intelligent Key, all doors will be locked.

When an UNLOCK signal is transmitted from Intelligent Key once, driver's door will be unlocked.

Then, if an UNLOCK signal is transmitted from Intelligent Key again within 5 seconds, all other doors will be unlocked.

HAZARD AND HORN REMINDER FUNCTION

When doors are locked or unlocked by Intelligent Key, BCM flashes hazard warning lamps as a reminder and sends horn chirp signal to IPDM E/R. IPDM E/R sounds horn as a reminder.

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

Operating function of hazard and horn reminder

		C mode			S mode	
Intelligent Key operation	Lock	Unlock	Trunk open	Lock	Unlock	Trunk open
Hazard warning lamp flash	Twice	Once	—	Twice	—	
Horns sound	Once	—	—	—	—	—

Hazard and horn reminder does not operate if any door switch is ON (any door is OPEN). **How to change hazard and horn reminder mode**

Refer to DLK-35, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Without CONSULT-III

Refer to Owner's Manual for instructions.

AUTO DOOR LOCK FUNCTION

Auto Door Lock Function

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

- Door switch is ON (door is opened)
- Door is locked

Ignition switch is ON

• Key switch is ON (Intelligent Key is inserted in key slot)

Auto door lock mode can be changed by DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to <u>DLK-35, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

PANIC ALARM FUNCTION

When ignition switch is OFF (ignition switch is not pressed) and key switch is OFF (Intelligent Key is not inserted in key slot), BCM receives PANIC ALARM signal from Intelligent Key.

BCM turns on and off headlamp intermittently and transmits theft warning horn signal to IPDM E/R. Then, IPDM E/R turns on and off horn intermittently.

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off:

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< FUNCTION DIAGNOSIS >

After 25 seconds

• When BCM receives any signal from Intelligent Key

Panic alarm function mode can be changed by PANIC ALARM SET mode in "WORK SUPPORT". Refer to DLK-35, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

KEYLESS POWER WINDOW DOWN (OPEN) FUNCTION

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

The power window opening stops when the following operations are performed:

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

While retained power operation activate, Keyless power window down (open) function cannot be operated. Keyless power window down operation mode can be changed by PW DOWN SET mode in "WORK SUP-PORT". Refer to <u>DLK-35</u>, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

ROOM LAMP ILLUMINATION OPERATION

When the following conditions are met:

• Condition of interior lamp switch is in DOOR position

• Door switch OFF (all the doors are closed)

Intelligent Key system turns on interior lamp (for 15 seconds) by receiving UNLOCK signal from Intelligent Key. For detailed description, refer to <u>DLK-16, "INTELLIGENT KEY : System Description"</u>.

LIST OF OPERATION RELATED PARTS

Parts marked with \times are the parts related to operation.

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

INTELLIGENT KEY : Component Parts Location

INFOID:000000003070947

Refer to DLK-14, "DOOR REQUEST SWITCH : Component Parts Location".

INTELLIGENT KEY : Component Description

INFOID:000000003070948

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to BCM.

< FUNCTION DIAGNOSIS >

Item	Function	^
Intelligent Key	Transmits button operation to remote keyless entry receiver.	A
Fuel lid opener actuator	Performs lock/unlock of the fuel lid.	
Intelligent key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.	В

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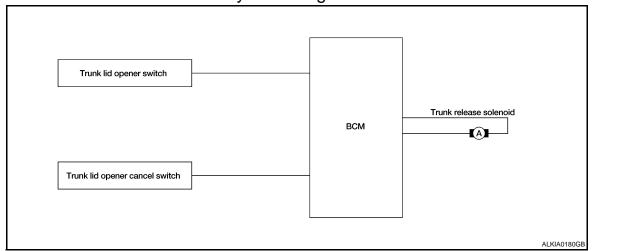
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< FUNCTION DIAGNOSIS >

TRUNK OPEN FUNCTION TRUNK LID OPENER SWITCH

TRUNK LID OPENER SWITCH : System Diagram



TRUNK LID OPENER SWITCH : System Description

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INFOID:000000003070949

Switch	Switch Input/output signal to BCM		Actuator		
Trunk lid opener switch	Trunk open signal	Trunk open control	Trunk lid opener actuator		
Trunk lid opener cancel switch	Tunk open signal	Trank open control			

TRUNK LID OPENER OPERATION

When trunk lid opener switch is ON, BCM opens trunk opener actuator.

BCM can open trunk lid opener actuator when

vehicle speed is less than 5 km/h (3MPH)

· vehicle security system is disarmed or pre-armed phase

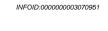
BCM does not open trunk lid opener actuator when

• trunk lid opener cancel switch is OFF (CANCEL)

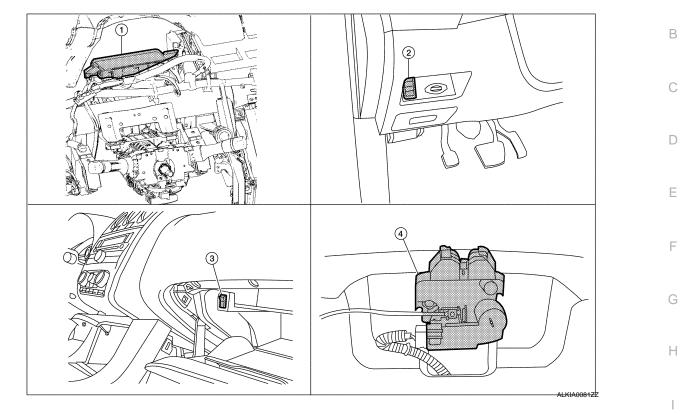
- vehicle speed is more than 5 km/h (3MPH)
- · vehicle security system is armed or alarm phase
- Intelligent Key is inserted in key slot

< FUNCTION DIAGNOSIS >

TRUNK LID OPENER SWITCH : Component Parts Location



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- 1. BCM M16, M17, M18, M20, M21
- 2. Trunk lid opener switch M75
- 3. Trunk lid opener cancel switch M74

INFOID:000000003070952

 Trunk lamp switch and trunk release solenoid B28 (view with trunk lid inner trim panel removed)

TRUNK LID OPENER SWITCH : Component Description

Item	Function	
BCM	Transmits trunk open operation to BCM.	
Trunk lid opener switch	Transmits trunk open operation to BCM.	
Trunk release solenoid	Opens the trunk with the open signal from BCM	
Trunk lid opener cancel switch	Cancels the trunk open operation.	

TRUNK REQUEST SWITCH

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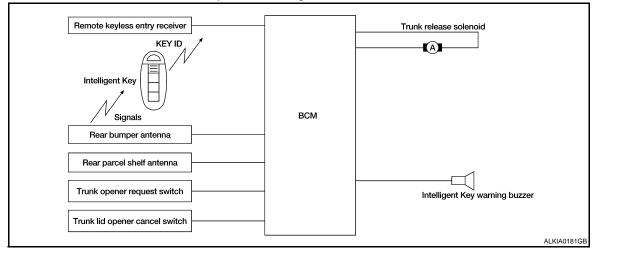
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< FUNCTION DIAGNOSIS >

TRUNK REQUEST SWITCH : System Diagram



TRUNK REQUEST SWITCH : System Description

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Only when pressing the request switch, it is possible to open the trunk by carrying the Intelligent Key.

The Intelligent Key system is a system that makes it possible to open the trunk (trunk open function) by carrying the Intelligent Key which operates based on the results of electronic ID verification using two-way communications between the Intelligent Key and the vehicle (BCM).
 CAUTION:

The driver should always carry the Intelligent Key

- If an action that does not meet the operating conditions of the Intelligent Key system is taken, the buzzer goes off to inform the driver (warning chime functions).
- When a trunk open with request switch or remote controller button operation, the hazard lamps flash and the Intelligent Key warning buzzer or horns sound (hazard and buzzer/horn reminder function).
- The settings for each function can be changed with the CONSULT-III.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with the CONSULT-III.

OPERATION DESCRIPTION/TRUNK OPEN

- When the BCM detects that trunk open request switch is pressed, it starts the outside key antenna (trunk room) and inside key antenna corresponding to the pressed trunk open request switch and transmits the request signal to the Intelligent Key. And then, check that the Intelligent Key is near the trunk.
- If the Intelligent Key is within the outside key antenna (trunk room) detection area, it receives the request signal and transmits the key ID signal to the BCM via remote keyless entry receiver.
- BCM receives the key ID signal and compares it with the registered key ID.
- BCM transmits the trunk open request signal and sounds Intelligent Key warning buzzer 4 consecutive times.
- When BCM receives the trunk open request signal, it operates the trunk release solenoid and opens the trunk.

OPERATION CONDITION

If the following conditions are not satisfied, trunk open operation is not performed even if the request switch is operated.

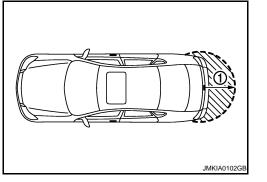
Each request switch operation	Operation condition					
Trunk open operation	 Intelligent Key is within outside key antenna (trunk room) detection area* Trunk cancel switch is ON Key reminder functions operate (trunk) 					

*: Even with a registered Intelligent Key remaining inside the vehicle, door locks can be unlocked from outside of the vehicle with a spare Intelligent Key as long as key IDs are different.

OUTSIDE KEY ANTENNA DETECTION AREA

< FUNCTION DIAGNOSIS >

The outside key antenna detection area of trunk open function is in the range of approximately 80 cm (31.50 in) surrounding Trunk opener request switch (1). However, this operating range depends on the ambient conditions.



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KEY REMINDER FUNCTION

Key reminder function	Operation condition	Operation
Trunk is closed	Right after trunk is closed under the following conditionsIntelligent Key is inside trunk roomAll doors are closedAll doors are locked	 Trunk open Honk Intelligent Key warning buzzer

*: If the door closing impact shocks the door lock knob, or contacts against baggage with the door lock knob might activate the door locks accidentally but unlock operation will be perform at these cases.

CAUTION:

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

HAZARD AND BUZZER REMINDER FUNCTION

During trunk opening operation by request switch, the hazard warning lamps and Intelligent Key warning buzzer will flash or honk as a reminder.

When trunk open by each request switch, IPDM E/R honks Intelligent Key warning buzzer as a reminder and transmits hazard request signal to BCM via CAN communication line.

BCM flashes hazard warning lamps as a reminder.

Operating function of hazard and buzzer reminder

Operation	Hazard warning lamp flash	Intelligent Key warning buzzer honks	М
Trunk open	—	Four times	IVI

How to change hazard and buzzer reminder mode

With CONSULT-III

Refer to DLK-35, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

LIST OF OPERATION RELATED PARTS

Parts marked with \times are the parts related to operation.

< FUNCTION DIAGNOSIS >

Trunk open function		Key slot	Remote keyless entry receiver	Door switch	Trunk room lamp switch	Trunk opener request switch	Trunk release solenoid	Inside key antenna	Outside key antenna (Trunk)	Intelligent Key warning buzzer	CAN communication system	BCM	Hazard warning lamps	Trunk lid opener cancel switch
Trunk open function by the trunk opener request switch	×	×	×		×	×	×	×	×		×	×		×
Hazard and buzzer reminder function for door lock/unlock operation										×	×	×	×	
Buzzer reminder for trunk open operation										×	×	×		
Key reminder function	×	×	×	×				×	×	×	×	×	×	

TRUNK REQUEST SWITCH : Component Parts Location

Refer to <u>DLK-18, "INTELLIGENT KEY : Component Parts Location"</u>.

TRUNK REQUEST SWITCH : Component Description

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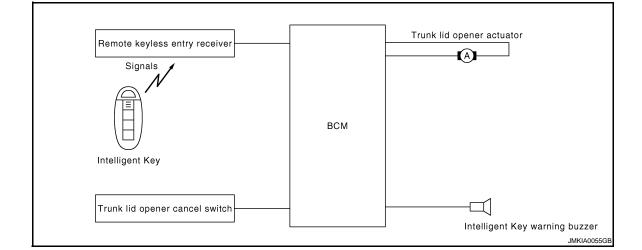
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Item	Function
BCM	Controls trunk open function.
Trunk release solenoid	Transmits trunk open operation to BCM.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to BCM.
Trunk opener request switch	Transmits trunk open operation to BCM.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Outside key antenna	Detects if Intelligent Key is outside the vehicle.
Inside key antenna	Detects if Intelligent Key is inside the vehicle.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.

INTELLIGENT KEY

INTELLIGENT KEY : System Diagram





< FUNCTION DIAGNOSIS >

INTELLIGENT KEY : System Description

The Intelligent Key has the same functions as the remote control entry system. Therefore, it can be used in the same manner as the remote controller by operating the trunk open button.

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OPERATION DESCRIPTION/TRUNK OPEN FUNCTION

- When trunk button of the Intelligent Key is pressed, the trunk open signal is transmitted from the Intelligent Key to the BCM via remote keyless entry receiver.
- When BCM receives the trunk open request signal, it operates the trunk lid opener actuator and opens the trunk.

OPERATION CONDITION

Remote controller operation	Operation condition	Operation
Trunk open	 Press and hold the trunk open button for 0.5 second or more 	Trunk open

OPERATION AREA

Operating Range

• To ensure the Intelligent Key works effectively, use within 80 cm range of each door, however the operable range may differ according to surroundings.

HAZARD AND HORN REMINDER FUNCTION

When doors are locked or unlocked by Intelligent Key. BCM flashes hazard warning lamps as a reminder and transmits horn chirp signal to IPDM E/R. IPDM E/R sound horns as a reminder.

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

Operating function of hazard and horn reminder

		C mode			S mode	
Intelligent Key operation	Lock	Unlock	Trunk open	Lock	Unlock	Trunk open
Hazard warning lamp flash	Twice	Once		Twice	-	—
Horn sound	Once	—	—	_	_	_

Hazard and horn reminder does not operate if any door switch is ON (any door is OPEN). How to change hazard and horn reminder mode

(P) With CONŠULT-III

Refer to DLK-35, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)".

Without CONSULT-III

Refer to Owner's Manual for instructions.

LIST OF OPERATION RELATED PARTS

Parts marked with \times are the parts related to operation.

Remote keyless entry functions	Intelligent Key	Key slot	Trunk room lamp switch	Trunk release solenoid	Intelligent Key warning buzzer	CAN communication system	BCM	Combination meter	Hazard warning lamps	Horns	IPDM E/R	Head lamp	M N O
Trunk open function by remote control button	×	×	×	×		×	×						D
Hazard and horn reminder function	×				×	×	×	×	×	×	×		P

INTELLIGENT KEY : Component Parts Location

Refer to DLK-18, "INTELLIGENT KEY : Component Parts Location".

< FUNCTION DIAGNOSIS >

INTELLIGENT KEY : Component Description

INFOID:000000003070960

Item	Function
BCM	Controls trunk open function.
Trunk release solenoid	Opens the trunk with the open signal from BCM.
Remote keyless entry receiver	Receives trunk open signal from the Intelligent Key, and then transmits to BCM.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with a buzzer sound.

< FUNCTION DIAGNOSIS >

WARNING FUNCTION

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System Description	INFOID:000000003070961	1
OPERATION DESCRIPTION The warning functions are as follows and are given to the user as warning information and v combinations of Intelligent Key warning buzzer, KEY warning lamp, key slot illumination an		В
meter display in combination meter.Intelligent Key system malfunctionOFF position warning		С
 P position warning ACC warning Take away warning 		D
 Door lock operation warning Key warning Intelligent Key insert information Engine start information 		E
 Steering lock information Intelligent key low battery warning Key ID warning 		F

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Key ID warning

OPERATION CONDITION

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

Warning/Info	rmation functions	Operation procedure	
Intelligent Key system m	alfunction	When a malfunction is detected on BCM, "KEY" warning lamp will illuminate.	
	For internal	Ignition switch: ACC position.Door switch (driver side): ON (Door is open).	
OFF position warning	For external	OFF position warning (For internal) is in active mode, driver side door has been closed. NOTE: OFF position (For external) active only when each of the sequence has occurred as below: P position warning \rightarrow ACC warning \rightarrow OFF position warning (For internal) \rightarrow OFF position warning (For internal)	J
P position warning		Shift position: Except P positionEngine is running to stopped (Ignition switch is ON to OFF)	DL
ACC warning		 During P position warning is in active mode, shift position has changed P position. Ignition switch: Except OFF position. 	L
	Door is open to close	 Ignition switch: Except LOCK position. Door switch: ON to OFF (Door is open to close). Intelligent Key can not be detected inside the vehicle. 	N
	Door is open	 Door switch: ON (Door is open) Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle. 	N
Take away warning	Push-ignition switch oper- ation	 Ignition switch: Except LOCK position. Press ignition switch. Intelligent Key can not be detected inside the vehicle. 	0
	Take away through win- dow	 Engine is running. Key ID verification every 30 seconds when registered Intelligent Key can not be detected inside the vehicle. After vehicle speed verification, the registered Intelligent Key can not be de- tect inside the vehicle. 	P
	Intelligent Key is removed from key slot	• When Intelligent Key is removed from key slot, Intelligent Key can not be detected inside the vehicle.	

< FUNCTION DIAGNOSIS >

Warning/Inform	nation functions	Operation procedure
Door lock operation warn-	Request switch operation	When request switch is pushed (lock operation) under the following conditions.Door switch: ON (Any door is open).Intelligent Key is inside vehicle.
ing	Intelligent Key button op- eration	 When Intelligent Key button is pushed (lock operation) under the following conditions. Door switch: ON (Any door is open). For 3 seconds after Intelligent Key is removed from key slot.
Key warning		 Ignition switch is OFF position. Driver side door switch: ON (Driver side door is open). Intelligent Key is inserted in key slot.
Intelligent Key insert inforr	nation	 Door switch: ON to OFF (Door is open to close). Ignition switch: OFF to ON position. Intelligent Key is out of key slot. Intelligent Key can not be detected inside the vehicle.
	Ignition switch is ON posi- tion	 Ignition switch: ON position. Shift position: P position Engine is stopped
Engine start information	Ignition switch is except ON position	 Ignition switch: Except ON position. Shift position: P position Intelligent Key is inserted in key slot. Intelligent Key can be detected inside the vehicle.
Steering lock information		When steering lock can not be released after ignition switch is turned ON.
Intelligent Key low battery warning		When Intelligent Key has low battery, it is detected by BCM after ignition switch is turned ON.
Key ID warning		When registered intelligent Key cannot be detected inside the vehicle after ig- nition switch is turned ON.

WARNING METHOD

The following table shows the alarm or warning methods with chime. Meter display, "KEY" indicator or key slot illumination when the warning conditions are met.

					Warning	g chime
Warning/Informa	ation functions	"KEY" warn- ing lamp	Combination meter display	Key slot il- lumination	Combination meter buzzer	Intelligent Key warning buzzer
Intelligent Key syste	m malfunction	Illuminate	—	_	—	_
OFF position warn-	For internal	_	_	_	Activate	_
ing	For external	—	—	_	—	Activate
P position warning			P SHIFT	_	Activate	_
ACC warning			PUSH JMKIA0047GB		Activate	_

< FUNCTION DIAGNOSIS >

		// //			Warning	
Warning/Informa	ation functions	"KEY" warn- ing lamp	Combination meter display	Key slot il- lumination	Combination meter buzzer	Intelligent Key warning buzzer
	Door is open to close			Flash	Activate	Activate
	Door is open	—		Flash	_	_
Take away warning	Push-ignition switch operation			Flash	Activate	_
, ,	Take away through window	—		Flash	Activate	_
	Intelligent Key is removed from key slot	_	JMKIA0036GB	Flash	_	_
Door lock operation	Request switch operation		_			Activate
warning	Intelligent Key operation	_	_	_	—	Activate
Key ID warning		_	I NO KEY	_	_	
Key warning		_	JMKIA0035GB	Flash	Activate	_
Intelligent Key inser	t information		JMKIA0034GB	Flash	_	
Engine start informa	tion		BRAKE			

< FUNCTION DIAGNOSIS >

				Warning chime			
Warning/Information functions	"KEY" warn- ing lamp	Combination meter display	Key slot il- lumination	Combination meter buzzer	Intelligent Key warning buzzer		
Steering lock information		JMKIA0033GB			_		
Intelligent Key low battery warning		JMKIA0048GB			_		

LIST OF OPERATION RELATED PARTS Parts marked with \times are the parts related to operation.

Warnin	g function	Intelligent Key	Key slot	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Key slot illumination	Park position switch	"KEY" warning lamp
Intelligent Key system mal	function										×	×				×
OFF position warning	For internal				×					×	×	×				
	For external				Х				×		×	×				
P position warning				×						×	×	×	×		×	
ACC warning				×						×	×	×	×		×	
	Door is open or close	×			×		×		×	×	×	×	×	×		
	Door is open	×			×		×				×	×	×	×		
Take away warning	Push-ignition switch oper- ation	×		×			×			×	×	×	×	×		
	Take away through win- dow	×					×			×	×	×	×	×		
	Intelligent Key is removed from key slot	×	×				×				×	×	×	×		
Door lock operation warning		×	×		×	×	×	×	×		×	×				
Key ID warning		×	×	×			×				×	×	×			
Key warning		×	×		×					×	×	×	×	×		
Intelligent Key insert inform	nation	×	×	×	×		×				×	×	×	×		

< FUNCTION DIAGNOSIS >

Warning	g function	Intelligent Key	Key slot	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Key slot illumination	Park position switch	"KEY" warning lamp	A B C
	Ignition switch is ON posi- tion	×	×	×			×				×	×	×		×		D
Engine start information	Ignition switch is except ON position	×	×	×			×				×	×	×				E
Steering lock information				×							×	×	×				
Intelligent Key low battery warning		×					×				×	×	×				F
Component Parts	Component Parts Location												II	NFOID:00	0000000	3070962	

Refer to DLK-18, "INTELLIGENT KEY : Component Parts Location".

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KEY REMINDER FUNCTION

System Description

INFOID:000000003070963

Key reminder is the function that prevents the key from being left in the vehicle. Key reminder has the following 3 functions.

Key reminder function	Operation condition	Operation
Driver door closed*	 Right after driver side door is closed under the following conditions Door lock operation is performed Driver side door is opened Driver side door is in unlock state 	All doors unlock
Door is open or closed	 Right after all doors are closed under the following conditions Intelligent Key is inside the vehicle Any door is opened All doors are locked by door lock and unlock switch or door lock knob 	 All doors unlock Sounds Intelligent Key warning buzzer
Trunk is closed	Right after trunk is closed under the following conditions Intelligent Key is inside trunk room All doors are closed All doors are locked 	 Trunk open Sounds Intelligent Key warning buzzer

*: If the door closing impact shocks the door lock knob, or contacts against baggage with the door lock knob might activate the door locks accidentally but unlock operation will be perform in these cases.

CAUTION:

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

Component Parts Location

INFOID:000000003070964

Refer to <u>DLK-18, "INTELLIGENT KEY : Component Parts Location"</u>.

HOMELINK UNIVERSAL TRANSCEIVER

< FUNCTION DIAGNOSIS >

HOMELINK UNIVERSAL TRANSCEIVER

Component Description

INFOID:000000003070965

Item	Function	Reference page
Homelink universal transceiver	A maximum of 3 radio signals can be stored and transmitted to operate the garage door, etc.	Refer to Owner's Manual

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< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : Diagnosis Description

BCM CONSULT-III FUNCTION

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.
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	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

System	Sub system coloction item	Diagnosis mode					
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST			
Door lock	DOOR LOCK	×	×	×			
Rear window defogger	REAR DEFOGGER		×	×			
Warning chime	BUZZER		×	×			
Interior room lamp timer	INT LAMP	×	×	×			
Exterior lamp	HEAD LAMP	×	×	×			
Wiper and washer	WIPER	×	×	×			
Turn signal and hazard warning lamps	FLASHER	×	×	×			
Air conditioner	AIR CONDITONER		×				
Intelligent Key system	INTELLIGENT KEY	×	×	×			
Combination switch	COMB SW		×				
BCM	BCM	×					
Immobilizer	IMMU		×	×			
Interior room lamp battery saver	BATTERY SAVER	×	×	×			
Trunk open	TRUNK		×				
Vehicle security system	THEFT ALM	×	×	×			
RAP system	RETAINED PWR		×				
Signal buffer system	SIGNAL BUFFER		×	×			
TPMS	AIR PRESSURE MONITOR	×	×	×			

COMMON ITEM : CONSULT-III Function

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT Refer to <u>BCS-81, "DTC Index"</u>. DOOR LOCK INFOID:000000003303363

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

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

BCM CONSULT-III FUNCTION

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

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Diagnosis mode	Function Description	
WORK SUPPORT	Changes the setting for each system function.	
DATA MONITOR	The BCM input/output signals are displayed.	С
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.	

WORK SUPPORT

Monitor item	Description	
DOOR LOCK-UNLOCK SET	Selective unlock function mode can be changed to operate (WITH) or not operate (WITHOUT) with this mode.	E

DATA MONITOR

	Contents	Monitor Item
G	Indicated [ON/OFF] condition of door request switch (driver side).	REQ SW-DR
	Indicated [ON/OFF] condition of door request switch (passenger side).	REQ SW-AS
	Indicated [ON/OFF] condition of trunk lid opener request switch.	REQ SW-BD/TR
Н	Indicated [ON/OFF] condition of driver side door switch.	DOOR SW-DR
	Indicated [ON/OFF] condition of passenger side door switch.	DOOR SW-AS
	NOTE: This item is displayed, but cannot be monitored.	DOOR SW-RR
	NOTE: This item is displayed, but cannot be monitored.	DOOR SW-RL
J	NOTE: This item is displayed, but cannot be monitored.	DOOR SW-BK
	Indicated [ON/OFF] condition of lock signal from door lock unlock switch.	CDL LOCK SW
DL	Indicated [ON/OFF] condition of unlock signal from door lock unlock switch.	CDL UNLOCK SW
	Indicated [ON/OFF] condition of lock signal from key cylinder.	KEY CYL LK-SW
L	Indicated [ON/OFF] condition of unlock signal from key cylinder.	KEY CYL UN-SW

ACTIVE TEST

Test item	Description
DOOR LOCK	 This test is able to check door lock/unlock operation. The all door lock actuators are locked when "LOCK" on CONSULT-III screen is touched. The all door lock actuators are unlocked when "ALL UNLK" on CONSULT-III screen is touched. The driver side door lock actuator and fuel lid lock actuator are unlocked when "DR UNLK" on CONSULT-III screen is touched. The passenger side door lock actuator is unlocked when "AS UNLK" on CONSULT- III screen is touched.

INTELLIGENT KEY

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

BCM CONSULT-III FUNCTION

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

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.

WORK SUPPORT

Monitor item	Description
REMO CONT ID CONFIR	It can be checked whether Intelligent Key ID code is registered or not in this mode.
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch (driver side, passenger side and trunk) mode can be changed to operate (ON) or not operate (OFF) in this mode.
ENGINE START BY I-KEY	Engine start function mode can be changed to operate (ON) or not operate (OFF) with this mode.
TRUNK/GLASS HATCH OPEN	Buzzer reminder function mode by trunk opener request switch can be changed to operate (ON) or not operate (OFF) with this mode.
PANIC ALARM SET	 Panic alarm button pressing time on Intelligent Key remote control button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
TAKE OUT FROM WIN WARN	Take away warning chime (from window) mode can be changed to operate (ON) or not operate (OFF) with this mode.
PW DOWN SET	 Unlock button pressing time on Intelligent Key button can be selected from the following with this mode. 3 sec. 5 sec. OFF: Non-operation
TRUNK OPEN DELAY	 Trunk button pressing time on Intelligent Key button can be selected from the following with this mode. 0.5 sec. 1.5 sec. OFF: Non-operation
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operate (ON) or not operate (OFF) with this mode.
KEYLESS FUNCTION	Door lock function with Intelligent Key can be changed to operate (ON) or not operate (OFF) with this mode.
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operate (ON) or not operate (OFF) with this mode.
HAZARD ANSWER BACK	 Hazard reminder function mode can be selected from the following with this mode. LOCK ONLY: Door lock operation only UNLOCK ONLY: Door unlock operation only LOCK AND UNLOCK: Lock/unlock operation OFF: Non-operation
ANS BACK I-KEY LOCK	 Buzzer reminder function (lock operation) mode by door request switch (driver side and passenger side) can be selected from the following with this mode. HORN CHIRP: Sound horn BUZZER: Sound Intelligent Key warning buzzer OFF: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operate (ON) or not operate (OFF) with this mode.
SHORT CRANKING OUTPUT	Starter motor can operate during the times below. • 70 msec. • 100 msec. • 200 msec.
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor item	Description	^
HORN WITH KEYLESS LOCK	Horn reminder function mode by Intelligent Key button can be changed to operate (ON) or not operate (OFF) with this mode.	A
AUTO LOCK SET	Auto door lock function mode can be changed to operate (ON) or not operate (OFF) with this mode.	В

С

SELF-DIAG RESULT Refer to BCS-81, "DTC Index".

DATA MONITOR

Monitor Item	Condition
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h].
VEH SPEED 2	Display the vehicle speed signal received from ABS or eCVT by numerical value [Km/h].
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value starts changing.
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.
REQ SW -DR	Indicates [ON/OFF] condition of door request switch (driver side).
REQ SW -AS	Indicates [ON/OFF] condition of door request switch (passenger side).
REQ SW -BD/TR	Indicates [ON/OFF] condition of trunk opener request switch.
PUSH SW	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY2 -F/B	Indicates [ON/OFF] condition of ignition relay 2.
ACC RLY -F/B	Indicates [ON/OFF] condition of ACC relay.
CLUCH SW	Indicates [ON/OFF] condition of clutch switch.
BRAKE SW 1	Indicates [ON/OFF] condition of brake switch.
DETE/CANCL SW	Indicates [ON/OFF] condition of P position.
SFT PN/N SW	Indicates [ON/OFF] condition of P or N position.
S/L -LOCK	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L -UNLOCK	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY -F/B	Indicates [ON/OFF] condition of ignition switch.
UNLK SEN -DR	Indicates [ON/OFF] condition of driver door UNLOCK status.
PUSH SW -IPDM	Indicates [ON/OFF] condition of push-button ignition switch.
IGN RLY1 -F/B	Indicates [ON/OFF] condition of ignition relay 1.
DETE SW -IPDM	Indicates [ON/OFF] condition of P position.
SFT PN -IPDM	Indicates [ON/OFF] condition of P or N position.
SFT P -MET	Indicates [ON/OFF] condition of P position.
SFT N -MET	Indicates [ON/OFF] condition of N position.
ENGINE STATE	Indicates [STOP/START/CRANK/RUN] condition of engine states.
S/L LOCK-IPDM	Indicates [ON/OFF] condition of steering lock (LOCK).
S/L UNLK-IPDM	Indicates [ON/OFF] condition of steering lock (UNLOCK).
S/L RELAY-REQ	Indicates [ON/OFF] condition of steering lock relay.
DR DOOR STATE	Indicates [LOCK/READY/UNLK] condition of driver side door status.
AS DOOR STATE	Indicates [LOCK/READY/UNLK] condition of passenger side door status.
ID OK FLAG	Indicates [SET/RESET] condition of key ID.
PRMT ENG STRT	Indicates [SET/RESET] condition of engine start possibility.
PRMT RKE STRT	NOTE: This item is displayed, but cannot be monitored.
KEY SW -SLOT	Indicates [ON/OFF] condition of key slot.

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Monitor Item	Condition
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk lid.
RKE-LOCK	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
RKE-UNLOCK	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
RKE-TR/BD	Indicates [ON/OFF] condition of TRUNK OPEN signal from Intelligent Key.
RKE-PANIC	Indicates [ON/OFF] condition of PANIC button of Intelligent Key.
RKE-P/W OPEN	Indicates [ON/OFF] condition of P/W DOWN signal from Intelligent Key.
RKE-MODE CHG	Indicates [ON/OFF] condition of MODE CHANGE signal from Intelligent Key.

ACTIVE TEST

Test item	Description
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
PW REMOTO DOWN SET	This test is able to check power window down operation. The power window down will be activated after "ON" on CONSULT-III screen is touched.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation. Intelligent Key warning buzzer sounds when "ON" on CONSULT-III screen is touched.
INSIDE BUZZER	 This test is able to check warning chime in combination meter operation. Take away warning chime sounds when "TAKE OUT" on CONSULT-III screen is touched. Key warning chime sounds when "KEY WARN" on CONSULT-III screen is touched. P position warning chime sounds when "P RNG WARN" on CONSULT-III screen is touched. ACC warning chime sounds when "ACC WARN" on CONSULT-III screen is touched.
INDICATOR	 This test is able to check warning lamp operation. "KEY" Warning lamp illuminates when "KEY IND ON" on CONSULT-III screen is touched. "KEY" Warning lamp flashes when "KEY IND FSH" on CONSULT-III screen is touched.
INT LAMP	This test is able to check interior room lamp operation. The interior room lamp will be activated after "ON" on CONSULT-III screen is touched.
LCD	 This test is able to check meter display information Engine start information displays when "BRAKE/P" on CONSULT-III screen is touched. Engine start information displays when "BRAKE/P/ON" on CONSULT-III screen is touched. Key ID warning displays when "KEY ID NG" on CONSULT-III screen is touched. Steering lock information displays when "STLCK RELES" on CONSULT-III screen is touched. P position warning displays when "P RNG IND" on CONSULT-III screen is touched. Intelligent Key insert information displays when "INSERT KEY" on CONSULT-III screen is touched. Intelligent Key low battery warning displays when "KEY BAT LOW" on CONSULT-III screen is touched. Take away through window warning displays when "TK AWAY WDW" on CONSULT-III screen is touched. Take away warning display when "TAKE AWAY" on CONSULT-III screen is touched. OFF position warning display when "IGN OFF WARN" on CONSULT-III screen is touched.
TRUNK/GLASS HATCH	This test is able to check trunk lid opener actuator open operation. This actuator opens when "ON" on CONSULT-III screen is touched.
FLASHER	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
HORN	This test is able to check horn operation. The horn will be activated after "ON" on CONSULT-III screen is touched.
IGN CONT2	This test is able to check security hazard lamp operation. The hazard lamps will be activated after "ON" on CONSULT-III screen is touched.
P RANGE	This test is able to check A/T device power supply A/T device power is supplied when "ON" on CONSULT-III screen is touched.
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation. Push-ignition switch illumination illuminates when "ON" on CONSULT-III screen is touched.
LOCK INDCATOR	This test is able to check LOCK indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Test item	Description	٨
ACC INDICATOR	This test is able to check ACC indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.	A
IGNITION ON IND	This test is able to check INGITION ON indicator in push-ignition switch operation. LOCK indicator in push-ignition switch illuminates when "ON" on CONSULT-III screen is touched.	В
KEY SLOT ILLUMI	This test is able to check key slot illumination operation. Key slot illumination flash when "ON" on CONSULT-III screen is touched.	

TRUNK

TRUNK : CONSULT-III Function (BCM - TRUNK)

BCM CONSULT-III FUNCTION

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

	· ·	
DATA MONITOR	The BCM input/output signals are displayed.	

DATA MONITOR

Monitor Item	Contents	
PUSH SW	Indicates [ON/OFF] condition of push switch.	
UNLK SEN -DR	Indicates [ON/OFF] condition of unlock sensor.	
VEH SPEED 1	Indicates [Km/h] condition of vehicle speed signal from combination meter.	
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	
TR CANCEL SW	Indicates [ON/OFF] condition of trunk lid opener cancel switch.	
TR/BD OPEN SW	Indicates [ON/OFF] condition of trunk lid opener switch.	
TRNK/HAT MNTR	Indicates [ON/OFF] condition of trunk room lamp switch.	
RKE-TR/BD	Indicates [ON/OFF] condition of trunk open signal from Intelligent Key remote controller button.	

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COMPONENT DIAGNOSIS U1000 CAN COMM CIRCUIT

Description

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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-27, "CAN Communication Signal Chart".

DTC Logic

INFOID:000000003070971

DTC DETECTION LOGIC

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

Diagnosis Procedure

INFOID:000000003070972

1.PERFORM SELF DIAGNOSTIC

1. Turn ignition switch ON and wait for 2 second or more.

2. Check "Self Diagnostic Result".

Is "CAN COMM CIRCUIT" displayed?

- YES >> Refer to <u>DLK-40, "Diagnosis Procedure"</u>.
- NO >> Refer to GI-42, "Intermittent Incident".

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

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
Diagno	sis Procedure		INFOID:000000003070974
1. REPL	ACE BCM		
When D	TC [U1010] is detected	d, replace BCM.	
	>> Replace BCM.		
Specia	l Repair Requirer	nent	INF0ID:000000003070975
1.REQI	JIRED WORK WHEN	REPLACING BCM	
Initialize IVIS/NVI		I. For the details of initialization refer to CONSULT-III	operation manual NATS-
	>> Work end.		

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< COMPONENT DIAGNOSIS >

B2621 INSIDE KEY ANTENNA 1

Description

Detects whether Intelligent Key is inside the vehicle. Installed in the instrument center.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2621	INSIDE ANTENNA 1 CIRCUIT	An excessive high or low voltage from inside anten- na is sent to BCM.	 Inside key antenna (instrument panel) Between BCM and Inside key antenna (instrument panel)

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT-III

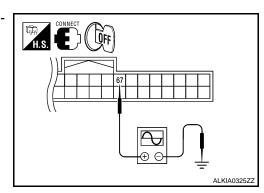
- 1. Perform INSIDE ANT DIAGNOSIS on "WORK SUPPORT" of "INTELLIGENT KEY".
- 2. Perform "INTELLIGENT KEY" Self Diagnostic Result.
- Is inside key antenna DTC detected?
- YES >> Refer to <u>DLK-42, "Diagnosis Procedure"</u>.
- NO >> Inside key antenna (instrument panel) is OK.

Diagnosis Procedure

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1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL 1

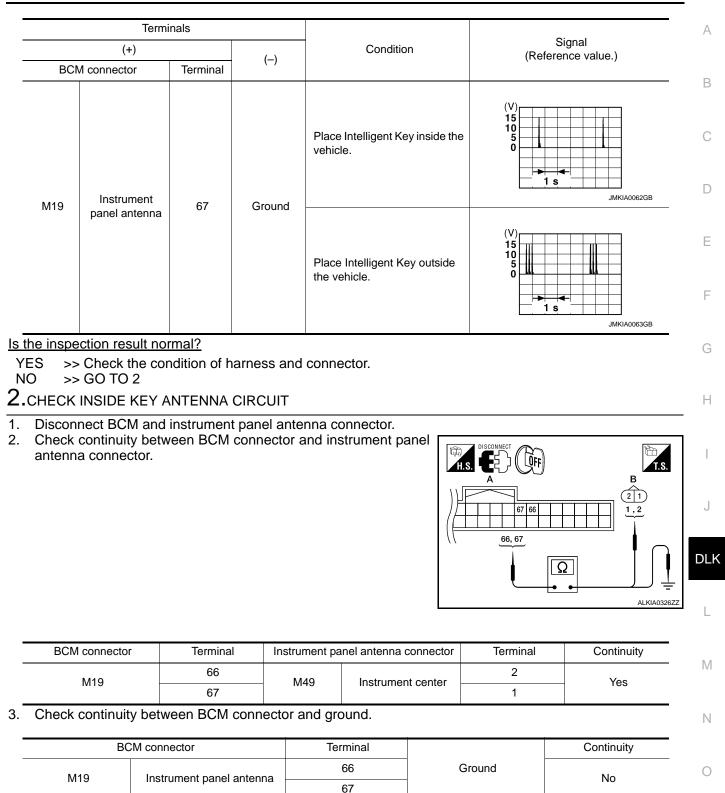
- 1. Turn ignition switch OFF.
- Check signal between BCM connector and ground with oscilloscope.



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B2621 INSIDE KEY ANTENNA 1

< COMPONENT DIAGNOSIS >



Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness between BCM and instrument panel antenna.

3.CHECK INSIDE KEY ANTENNA INPUT SIGNAL 2

1. Replace instrument panel antenna (New antenna or other antenna).

2. Connect BCM and instrument panel antenna connector.

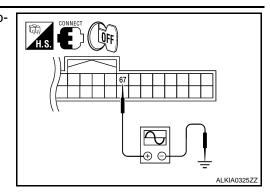
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B2621 INSIDE KEY ANTENNA 1

< COMPONENT DIAGNOSIS >

3. Check signal between BCM connector and ground with oscilloscope.



	Termi	nals			Cianal	
	(+)		()	Condition	Condition (Reference value.)	Signal (Reference value.)
BCI	V connector	Terminal				
M19	Instrument	67	Ground	Place Intelligent Key inside the vehicle.	(V) 15 10 5 0 1 s JMKIA0062GB	
10119	panel antenna	07	Ground	Place Intelligent Key outside the vehicle.	(V) 15 10 5 0 1 s JMKIA0063GB	

Is the inspection result normal?

YES >> Replace instrument panel antenna.

NO >> Replace BCM. Refer to <u>BCS-85, "Removal and Installation"</u>.

< COMPONENT DIAGNOSIS >

B2622 INSIDE KEY ANTENNA 2

Description

Detects whether Intelligent Key is inside the vehicle. Installed in the console.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause	D
B2622	INSIDE ANTENNA 2 CIRCUIT	An excessive high or low voltage from inside anten- na is sent to BCM.	 Front console antenna Between BCM and front console antenna. 	Е

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT-III

- 1. Perform front console antenna INSIDE ANT DIAGNOSIS on "WORK SUPPORT" of "INTELLIGENT KEY".
- 2. Perform "INTELLIGENT KEY" Self Diagnostic Result.

Is front console antenna DTC detected?

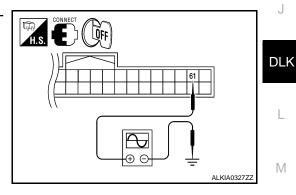
YES >> Refer to <u>DLK-45, "Diagnosis Procedure"</u>.

NO >> Front console antenna is OK.

Diagnosis Procedure

1. CHECK FRONT CONSOLE ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- Check signal between BCM connector and ground with oscilloscope.



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B2622 INSIDE KEY ANTENNA 2

< COMPONENT DIAGNOSIS >

	Termi	nals	-		Signal
(+)		()	Condition	Signal (Reference value.)	
BCI	M connector	Terminal	()		
M19	Front console	61	Ground	Place Intelligent Key inside the vehicle.	(V) 15 10 5 0 1 s JMKIA0062GB
MIB	antenna	01		Place Intelligent Key outside the vehicle.	(V) 15 10 5 0 1 s JMKIA0063GB

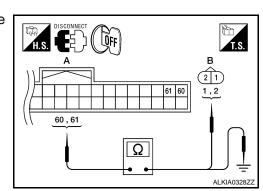
Is the inspection result normal?

YES >> Check the condition of harness and connector.

NO >> GO TO 2

 $2. {\sf CHECK FRONT CONSOLE ANTENNA CIRCUIT}$

- 1. Disconnect BCM and front console antenna connector.
- 2. Check continuity between BCM connector and front console antenna connector.



BCM connector	Terminal	Front console antenna connector		Terminal	Continuity
M19	60	M203	Console	2	Yes
10119	61	M205	CONSOLE	1	

3. Check continuity between BCM connector and ground.

BC	CM connector	Terminal		Continuity
M19	Console	60	Ground	No
10113	Console	61		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and front console antenna.

3.CHECK FRONT CONSOLE ANTENNA INPUT SIGNAL 2

1. Replace front console antenna (New antenna or other antenna).

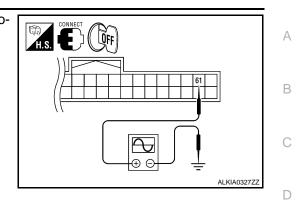
2. Connect BCM and front console antenna connector.

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B2622 INSIDE KEY ANTENNA 2

< COMPONENT DIAGNOSIS >

3. Check signal between BCM connector and ground with oscilloscope.



	Termi	nals			Signal	E
	(+)		()	Condition	(Reference value.)	
BCI	M connector	Terminal	()			
M40	Front console	64	Ground	Place Intelligent Key inside the ve- hicle.	(V) 15 10 5 0 1 s JMKIA0062GB	F G
M19	antenna	61	Ground	Place Intelligent Key outside the vehicle.	(V) 15 10 0 15 0 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 15 10 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15	l J

Is the inspection result normal?

YES >> Replace front console antenna.

NO >> Replace BCM. Refer to <u>BCS-85, "Removal and Installation"</u>.

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< COMPONENT DIAGNOSIS >

B2623 INSIDE KEY ANTENNA 3

Description

Detects whether Intelligent Key is inside the vehicle. Installed in the trunk room.

DTC Logic

DTC DETECTION LOGIC

DTC No.	Trouble diagnosis name	DTC detecting condition	Possible cause
B2623	INSIDE ANTENNA 3 CIRCUIT	An excessive high or low voltage from rear parcel shelf antenna is sent to BCM.	 rear parcel shelf antenna Between BCM and rear parcel shelf antenna

DTC CONFIRMATION PROCEDURE

1.PERFORM DTC CONFIRMATION PROCEDURE

With CONSULT-III

- 1. Perform rear parcel shelf antenna INSIDE ANT DIAGNOSIS on "WORK SUPPORT" of "INTELLIGENT KEY".
- 2. Perform "INTELLIGENT KEY" Self Diagnostic Result.

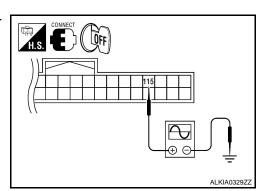
Is rear parcel shelf antenna DTC detected?

- YES >> Refer to <u>DLK-48, "Diagnosis Procedure"</u>.
- NO >> rear parcel shelf antenna is OK.

Diagnosis Procedure

1.CHECK REAR PARCEL SHELF ANTENNA INPUT SIGNAL 1

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.

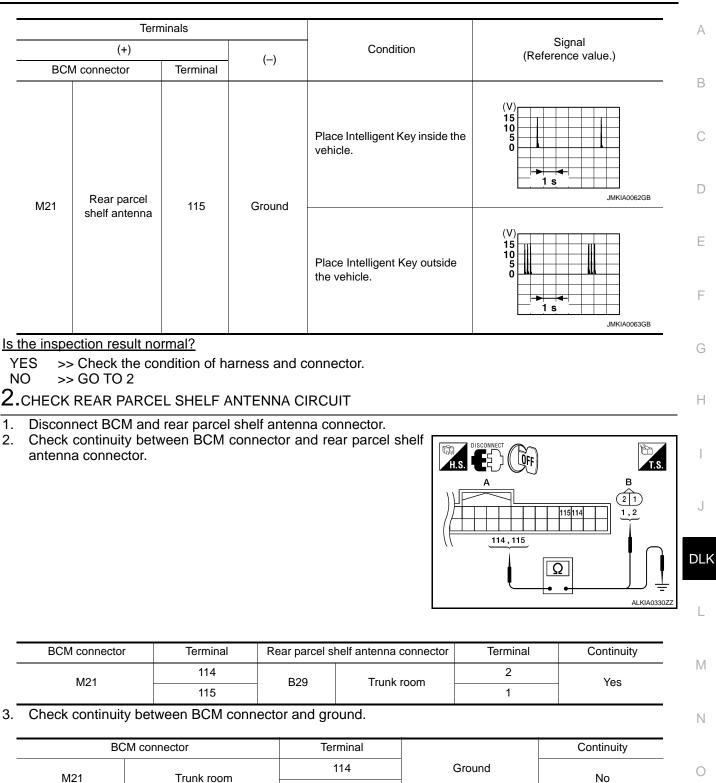


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B2623 INSIDE KEY ANTENNA 3

< COMPONENT DIAGNOSIS >



Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and rear parcel shelf antenna.

 $\mathbf{3.}$ CHECK REAR PARCEL SHELF ANTENNA INPUT SIGNAL 2

1. Replace rear parcel shelf antenna (New antenna or other antenna).

2. Connect BCM and rear parcel shelf antenna connector.

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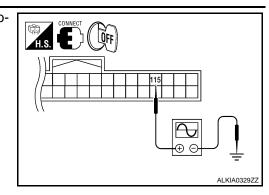
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B2623 INSIDE KEY ANTENNA 3

< COMPONENT DIAGNOSIS >

Check signal between BCM connector and ground with oscillo-3. scope.



	Teri	minals			
(+)		(–)	Condition	Signal (Reference value.)	
BCI	V connector	Terminal	()		
M21	Trunk room	115	Ground	Place Intelligent Key inside the vehicle.	(V) 15 10 5 0 1 s JMKIA0062GB
1112 1	TUIKIOOTT	115	Ground	Place Intelligent Key outside the vehicle.	(V) 15 10 5 0 1 s JMKIA0063GB

Is the inspection result normal?

YES

>> Replace rear parcel shelf antenna. >> Replace BCM. Refer to <u>BCS-85, "Removal and Installation"</u>. NO

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

POWER SUPPLY AND GROUND CIRCUIT

Diagnosis Procedure

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuse or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	J
11	Ballery power supply	10

Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

	Terminals					
(+)	(-)	Voltage (Approx.)			
B	СМ		(Approx.)			
Connector	Terminal	Ground				
M16	1	Ground	Detterrissiskens			
M17	11		Battery voltage			

Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$\mathbf{3.}$ CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

B	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M17	13	-	Yes	

Does continuity exist?

YES >> Inspection End.

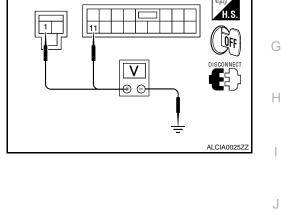
NO >> Repair or replace harness.

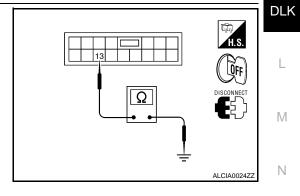
Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to CONSULT-III operation manual.

>> Work end.





INFOID-000000003303382



DLK-51

INFOID:00000003303381



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< COMPONENT DIAGNOSIS >

DOOR SWITCH

Description

Detects door open/close condition.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

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

Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	CLOSE \rightarrow OPEN: OFF \rightarrow ON
DOOR SW-RL	
DOOR SW-RR	

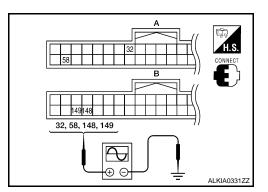
Is the inspection result normal?

- YES >> Door switch is OK.
- NO >> Refer to <u>DLK-52, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.



INFOID:000000003070986

INFOID:000000003070987

INFOID:000000003070988

DOOR SWITCH

< COMPONENT DIAGNOSIS >

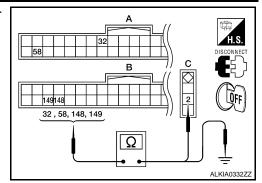
	Terminals					
(· BCM connector	+) Terminal	()	Door co	ndition	Voltage (V) (Approx.)	
				OPEN	0	
	58		Driver side	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	
A: M18				OPEN	0	
	32	32	Passenger side	CLOSE	(V) 15 0 5 0 10 ms JPMIA0011GB	
		- Ground	Ground	OPEN	0	
5.1404	148		Rear RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	
B: M21		-		OPEN	0	
	149		Rear Li	Rear LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
inspectio	n result norm	al?				
s >> GC) TO 4					
>> GC	OR SWITCH					

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DOOR SWITCH

< COMPONENT DIAGNOSIS >

 Check continuity between BCM connector and door switch connector.



INFOID:000000003070989

BCM connector	Terminal	Door switch connector	Terminal	Continuity	
A: M18	58	C: B8 (Driver side)			
A. INTO	32	C: B108 (Passenger side)	2	Yes	
B: M21	148	C: B116 (Rear RH)	Ζ	res	
B: WZ I	149	C: B18 (Rear LH)			

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity	
A: M18	58	-		
	32	Ground	No	
B: M21	148	-	INO	
	149			

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and door switch.

3.CHECK DOOR SWITCH

Refer to DLK-54, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace malfunctioning door switch.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

Component Inspection

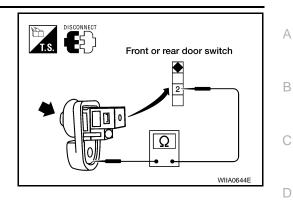
1. CHECK DOOR SWITCH

1. Turn ignition switch OFF.

2. Disconnect door switch connector.

< COMPONENT DIAGNOSIS >

3. Check door switch.



Terminal		Door switch condition	Continuity	
 Door switch		Door Switch condition	Continuity	
 0	Ground part of door switch	Pressed	No	
2	Ground part of door switch	Released	Yes	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace malfunction door switch.

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< COMPONENT DIAGNOSIS >

DOOR LOCK AND UNLOCK SWITCH DRIVER SIDE

DRIVER SIDE : Description

Transmits door lock/unlock operation to BCM.

DRIVER SIDE : Component Function Check

1.CHECK FUNCTION

(With CONSULT-III

Check CDL LOCK SW, CDL UNLOCK SW in "DATA MONITOR" mode with CONSULT-III.

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

Is the inspection result normal?

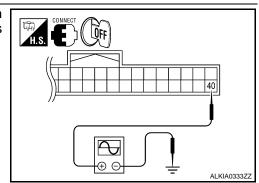
- YES >> Door lock and unlock switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>DLK-56</u>, "<u>DRIVER SIDE</u> : <u>Diagnosis Procedure (With LH and RH Anti-Pinch)</u>"</u>.
- NO >> With LH anti-pinch only, refer to <u>DLK-57, "DRIVER SIDE : Diagnosis Procedure (With LH Anti-Pinch Only)"</u>.

DRIVER SIDE : Diagnosis Procedure (With LH and RH Anti-Pinch)

INFOID:000000003070992

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Read voltage signal between BCM connector and ground with oscilloscope when door lock and unlock switch (driver side) is turned "LOCK" or "UNLOCK".



2. Check that signal shown in the figure below can be detected during 10 second just after door lock and unlock switch (driver side) is turned "LOCK" or "UNLOCK".

	Terminal				
(+)	()	Condition	Signal (Reference value)	
BCM connector	Terminal	()	(,		
M18	40	Ground	Door is closed	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10	

Is the inspection result normal?

DLK-56

INFOID:000000003070990

INFOID:000000003070991

< COMPONENT DIAGNOSIS >

>> GO TO 4

YES

Main power window and door lock/unlock switch connector	Termi	inal	Continuity
D8	17	Ground	Yes

Is the inspection result normal?

YES >> GO TO 3

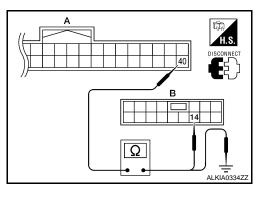
NO >> Repair or replace harness.

3. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM connector M18 (A) terminal 40 and main power window and door lock/unlock switch connector D8 (B) terminal 14.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
A: M18	40	B: D8	14	Yes



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3. Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal		Continuity
A: M18	40	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

DRIVER SIDE : Diagnosis Procedure (With LH Anti-Pinch Only)

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

DLK-57

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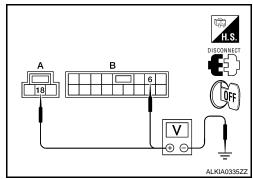
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< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch ON.
- 2. Check voltage at the main power window and door lock/unlock switch connector when the switch (driver side) is turned to "LOCK" or "UNLOCK".



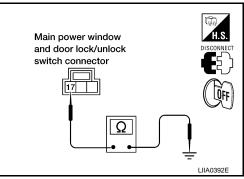
Connector	Main power window and door lock/un- lock switch state	Terminal		Voltage
A: D7	Neutral \rightarrow Unlock	6	Ground	Battery voltage $\rightarrow 0$
B: D8	Neutral \rightarrow Lock	18	Ground	Battery voltage $\rightarrow 0$

Is the inspection result normal?

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

$2. {\sf CHECK POWER WINDOW SWITCH GROUND}$

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector.
- 3. Check continuity between main power window and door lock/ unlock switch connector and ground.



Main power window and door lock/unlock switch connector	Termi	inal	Continuity
D8	17	Ground	Yes

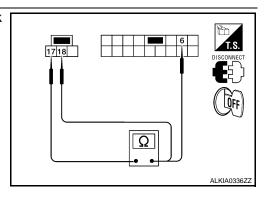
Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK POWER WINDOW SWITCH

Check continuity between main power window and door lock/unlock switch terminals.



< COMPONENT DIAGNOSIS >

Main power window and door lock/unlock switch state	Terminals	Continuity
Lock	17 - 18	Yes
Unlock	6 - 17	Yes
Neutral	6 - 17	No
Neutrai	17 - 18	No

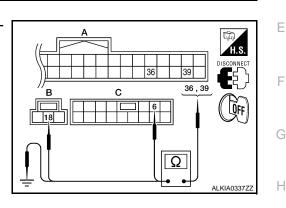
Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace main power window and door lock/unlock switch.

4.CHECK POWER WINDOW SWITCH CIRCUITS

- 1. Disconnect BCM connector.
- Check continuity between BCM connector and main power window and door lock/unlock switch connector.



BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
A: M18	36	B: D8	18	Yes
	39	C: D7	6	Yes

Check continuity between BCM connector and ground. 3.

	_			
BCM connector	Terminal		Continuity	
A: M18	36	Ground	No	
A. 1010	39	Cround	NO	L

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

DRIVER SIDE : Special Repair Requirement

INITIALIZATION PROCEDURE

- 1. Disconnect battery minus terminal or main power window and door lock/unlock switch connector. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.

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INFOID:000000003070994

< COMPONENT DIAGNOSIS >

5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the driver window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the main power window and door lock/unlock switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to <u>PWC-47, "Fail Safe"</u>
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.
- PASSENGER SIDE

PASSENGER SIDE : Description

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:000000003070996

INFOID 000000003070997

INFOID:000000003070995

1.CHECK FUNCTION

With CONSULT-III

Check CDL LOCK SW, CDL UNLOCK SW in "DATA MONITOR" mode with CONSULT-III.

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

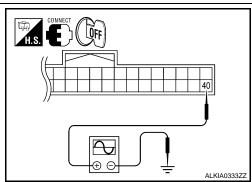
NO >> With LH and RH anti-pinch, refer to <u>DLK-60, "PASSENGER SIDE : Diagnosis Procedure (With LH and RH Anti-Pinch)"</u>.

NO >> With LH anti-pinch only, refer to <u>DLK-62</u>. "PASSENGER SIDE : Diagnosis Procedure (With LH <u>Anti-Pinch Only)"</u>.

PASSENGER SIDE : Diagnosis Procedure (With LH and RH Anti-Pinch)

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Read voltage signal between BCM connector and ground with oscilloscope when door lock and unlock switch (passenger side) is turned to "LOCK" or "UNLOCK".



DLK-60

< COMPONENT DIAGNOSIS >

2. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (passenger side) is turned "LOCK" or "UNLOCK".

	Terminal				
(+	·)	()	Condition	Signal (Reference value)	В
BCM connector	Terminal	()		(
M18	40	Ground	Door is closed	(V) 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10	C
				PIIA1297E	F

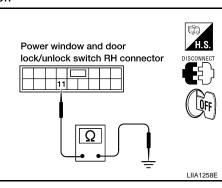
Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 2

2.CHECK POWER WINDOW SWITCH GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between front power window switch (passenger side) connector and ground.



Power window and door lock/unlock switch RH connector	Terminal		Continuity	
D105	11	Ground	Yes	-

DLK-61

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect BCM connector.

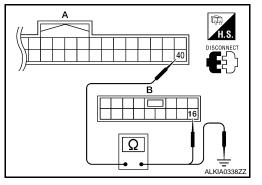
Is the inspection result normal?

 Check continuity between BCM connector M18 (A) terminal 40 and front power window switch (passenger side) connector D105 (B) terminal 16.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
A: M18	40	B: D105	16	Yes

 Check continuity between BCM connector M18 (A) terminal 40 and ground.

BCM connector	Terminal		Continuity
A: M18	40	Ground	No



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< COMPONENT DIAGNOSIS >

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

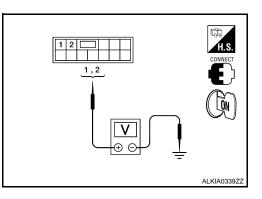
YES >> INSPECTION END.

PASSENGER SIDE : Diagnosis Procedure (With LH Anti-Pinch Only)

INFOID:000000003070998

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage at the power window and door lock/unlock switch RH connector when the switch (passenger side) is turned to "LOCK" or "UNLOCK".



Connector	Power window and door lock/unlock switch RH state	Terminal		Voltage
D105	Neutral \rightarrow Lock	2	Ground	Battery voltage $\rightarrow 0$
	Neutral \rightarrow Unlock	1	Ground	Battery voltage $\rightarrow 0$

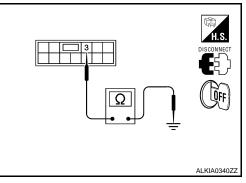
Is the inspection result normal?

YES >> GO TO 5

NO >> GO TO 2

2. CHECK POWER WINDOW SWITCH GROUND

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH connector.
- 3. Check continuity between power window and door lock/unlock switch RH connector and ground.



Power window and door lock/unlock switch RH connector	Term	inal	Continuity
D105	3	Ground	Yes

Is the inspection result normal?

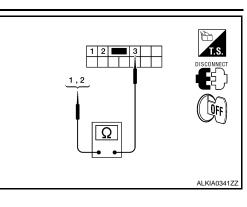
YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK POWER WINDOW SWITCH

< COMPONENT DIAGNOSIS >

Check continuity between power window and door lock/unlock switch RH terminals.



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Power window and door lock/unlock switch RH state	Terminals	Continuity
Lock	2 - 3	Yes
Unlock	1 - 3	Yes
Neutral	2 - 3	No
Neutral	1 - 3	No

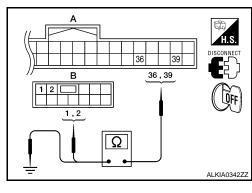
Is the inspection result normal?

YES >> GO TO 4

NO >> Replace power window and door lock/unlock switch RH.

4.CHECK POWER WINDOW SWITCH CIRCUITS

- 1. Disconnect BCM connector.
- Check continuity between BCM connector M18 (A) terminals 36, 39 and power window and door lock/unlock switch RH connector D105 (B) terminals 1 and 2.



BCM connector	Terminal	Power window and door lock/ unlock switch RH connector	Terminal	Continuity
A: M18	36	B: D105	1	Yes
A. MITO	39	B: D105	2	Yes

3. Check continuity between BCM connector M18 (A) terminals 36, 39 and ground.

BCM connector	Terminal		Continuity	-
A: M18	36	Ground	No	0
A. MITO	39	Ground	INO	_

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace harness.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

DLK-63

< COMPONENT DIAGNOSIS >

>> INSPECTION END.

PASSENGER SIDE : Special Repair Requirement

INFOID:000000003070999

NOTE:

This procedure is applicable to vehicles equipped with front LH and RH anti-pinch windows only.

INITIALIZATION PROCEDURE

- 1. Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.
- 5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to <u>DLK-179, "Fail Safe"</u>
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

KEY SLOT

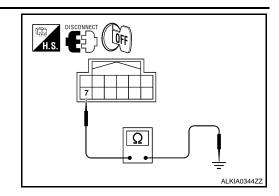
< COMPONENT DIAGNOSIS >

Description			INFOID:00000000307
Detect whether Intelligent Key Immobilizer antenna amp cheo		ponder.	
Component Function C	Check		INFOID:00000000307
1.CHECK FUNCTION			
With CONSULT-III Check KEY SW -SLOT in "DA	TA MONITOR" mode wi	ith CONSULT-III.	
Monitor ite	em	Co	ondition
KEY SW-SLOT		ey is inserted in key slot: ON	
		ey is removed from key slot: (OFF
Is the inspection result normal YES >> Key slot is OK. NO >> Refer to <u>DLK-65, '</u>	<u>?</u> 'Diagnosis Procedure".		
Diagnosis Procedure			INFOID:00000000307
	R SUPPLY CIRCUIT		
 CHECK KEY SLOT POWE Turn ignition switch OFF. Disconnect key slot connect Check voltage between key 	ector.	round.	
 Turn ignition switch OFF. Disconnect key slot conne Check voltage between ke 	ector.	round.	LKIA034
 Turn ignition switch OFF. Disconnect key slot connect 	ector. By slot connector and gr	round.	
 Turn ignition switch OFF. Disconnect key slot connect key slot co	ector. By slot connector and gr	H.S.	1,5 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
 Turn ignition switch OFF. Disconnect key slot connection in the second sec	Terminals	(-)	LKIA034

KEY SLOT

< COMPONENT DIAGNOSIS >

Check continuity between key slot connector and ground.



Key slot connector	Terminal	Ground	Continuity
M40	7	Cround	Yes

Is the inspection result normal?

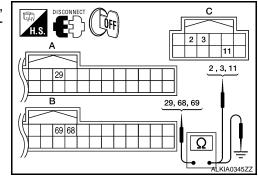
YES >> GO TO 3

NO >> Repair or replace key slot ground circuit.

3.CHECK KEY SLOT CIRCUIT

1. Disconnect BCM connector.

 Check continuity between BCM connector M18 (A) terminal 29, M19 (B) terminals 68, 69 and key slot connector M40 (C) terminals 2, 3, 11.



BCM connector	Terminal	Key slot connector	Terminal	Continuity
A: M18	29		11	Yes
D: M40	68	C: M40	2	Yes
B: M19	69	-	3	Yes

3. Check continuity between BCM connector M18 (A) terminal 29, M19 (B) terminals 68, 69 and ground.

BCM connector	Terminal		Continuity
A: M18	29		
B: M19	68 Ground	Ground	No
D. 1019	69		

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness between BCM and key slot.

4.CHECK KEY SLOT

Refer to DLK-67, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace key slot.

5.CHECK INTERMITTENT INCIDENT

KEY SLOT

< COMPONENT DIAGNOSIS >

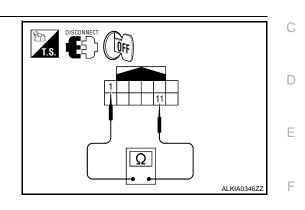
Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1.CHECK KEY SLOT

Check key slot.



Terminal		Condition	Continuity	
Key	slot	Condition	Continuity	
1	1 11	Intelligent Key inserted	Yes	
I	11	Intelligent Key removed	No	
s the inspection result	t normal?			

Is the inspection result normal?

OK >> INSPECTION END.

NG >> Replace key slot.

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< COMPONENT DIAGNOSIS >

KEY CYLINDER SWITCH

Description

INFOID:000000003071004

For vehicles equipped with LH and RH anti-pinch system, 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.

For vehicles equipped with LH anti-pinch system only, the front door lock assembly LH (key cylinder switch) transmits the LOCK or UNLOCK signal directly to the BCM.

Component Function Check

INFOID:000000003071005

INFOID-000000003071006

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 SYS-TEM" with CONSULT-III. Refer to <u>DLK-5</u>, "Work Flow".

Monitor item	Cor	ndition
KEY CYL LK-SW	Lock	: ON
KET GTE EK-SW	Neutral / Unlock	: OFF
	Unlock	: ON
KEY CYL UN-SW	Neutral / Lock	: OFF

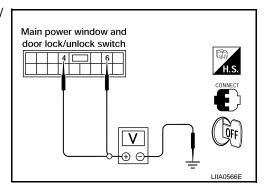
Is the inspection result normal?

- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to DLK-68. "Diagnosis Procedure (With LH and RH Anti-Pinch)".
- NO >> With LH anti-pinch only, refer to DLK-70, "Diagnosis Procedure (With LH Anti-Pinch Only)".

Diagnosis Procedure (With LH and RH Anti-Pinch)

1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connector and ground.



Terminals				
(+)		(+)		Voltage (V)
Main power window and door lock/unlock switch connector	Terminal	()	Key position	(Approx.)
	4		Lock	0
D7		Ground	Neutral / Unlock	Battery voltage
D7	6	Ground	Unlock	0
	6		Neutral / Lock	Battery voltage

Is the inspection result normal?

DLK-68

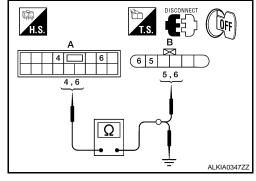
KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

- YES >> Replace main power window and door lock/unlock switch. Refer to <u>DLK-223, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>. After that, Refer to <u>PWC-8, "BASIC INSPECTION : Special</u> <u>Repair Requirement"</u>.
- NO >> GO TO 2

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front door lock assembly LH (key cylinder switch) connector (B).



Main power window and door lock/ unlock switch connector	Terminal	Front door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
	6	B. 010	5	165

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Power window main switch connec- tor	Terminal		Continuity
A: D7	4	Ground	No
	6		INU

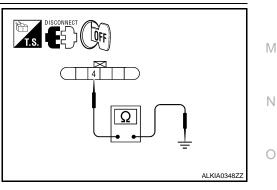
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

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



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Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Ground	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

< COMPONENT DIAGNOSIS >

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to DLK-71, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>.

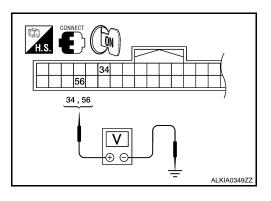
NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-223, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>. After that, Refer to <u>DLK-72, "Special Repair Requirement"</u>.

Diagnosis Procedure (With LH Anti-Pinch Only)

INFOID:000000003071007

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check voltage between BCM connector and ground.



	Terminals (+)				
(+)			Key position	Voltage (V) (Approx.)	
BCM connector	Terminal	()			
	56		Lock	0	
M18	50	Ground	Neutral / Unlock	Battery voltage	
IVITO	34	Ground	Unlock	0	
			Neutral / Lock	Battery voltage	

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-60</u>, "<u>Removal and Instal-lation</u>". After that, Refer to <u>PWC-8</u>, "<u>BASIC INSPECTION</u> : <u>Special Repair Requirement</u>".
 NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect front door lock assembly LH (key cylinder switch) connector.
- 3. Check continuity between front door lock assembly LH (key cylinder switch) connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes

Is the inspection result normal?

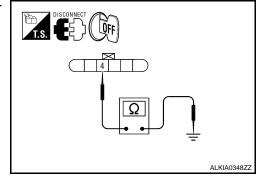
YES >> GO TO 3

NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Disconnect BCM connector M18.

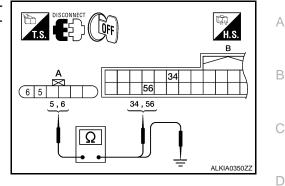




KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

 Check continuity between front door lock assembly LH (key cylinder switch) connector D10 (A) terminals 5, 6 and BCM connector M18 (B) terminals 34, 35.



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INFOID:000000003071008

Front door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
A: D10	5	B: M18	34	Yes
	6	D. WIG	56	103

3. Check continuity between front door lock assembly LH (key cylinder switch) connector D10 (A) terminals 5, 6 and ground.

Front door lock assembly LH connector	Terminal		Continuity	G
A: D10	5	Ground	No	
	6		No	Н

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to DLK-71, "Component Inspection".

Is the inspection result normal?

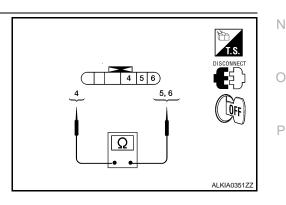
- YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
- NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-223</u>, "<u>FRONT DOOR</u> <u>LOCK : Removal and Installation</u>". After that, Refer to <u>PWC-8</u>, "<u>BASIC INSPECTION : Special</u> <u>Repair Requirement</u>".

Component Inspection

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).



KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

Terminal Front door lock assembly LH (key cylinder switch)		Key position	Continuity
Neutral / Lock	No		
6	Lock	Yes	
	Neutral / Unlock	No	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-223, "FRONT DOOR</u> <u>LOCK : Removal and Installation"</u>. After that, refer to <u>DLK-72, "Special Repair Requirement"</u>.

Special Repair Requirement

INFOID:000000003071009

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-8, "BASIC INSPECTION : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>.

UNLOCK SENSOR

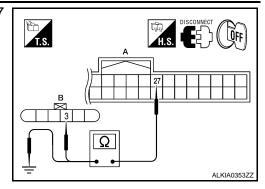
< COMPONENT DIAGNOSIS > UNLOCK SENSOR А Description INFOID:000000003071010 Detects door lock condition of driver door. В **Component Function Check** INFOID:000000003071011 **1.**CHECK FUNCTION (P)With CONSULT-III Check unlock sensor DR DOOR STATE in "DATA MONITOR" mode. D Monitor item Condition Front door lock (driver side) LOCK : OFF Ε DOOR STAT SW (DR DOOR STATE) Front door lock (driver side) UNLOCK : ON Is the inspection result normal? YES >> Unlock sensor is OK. F NO >> Refer to DLK-73, "Diagnosis Procedure". **Diagnosis** Procedure INFOID:000000003071012 1.CHECK UNLOCK SENSOR POWER SUPPLY Check signal between BCM connector and ground with oscilloscope. Н H.S. CONNECT OFF 6 ALKIA0352ZZ DLK Terminals L Front door lock assembly Voltage (V) (+) LH condition (Approx.) (-) BCM connector Terminal Μ 15 10 Locked Ν M18 27 Ground 10 ms JPMIA0011GB 0 Unlocked Is the inspection result normal? Ρ YES >> GO TO 6 NO >> GO TO 2 2.check unlock sensor circuit 1. Turn ignition switch OFF.

2. Disconnect BCM and front door lock assembly LH connector.

UNLOCK SENSOR

< COMPONENT DIAGNOSIS >

 Check continuity between BCM connector M18 (A) terminal 27 and front door lock assembly LH connector D10 (B) terminal 3.



BCM connector	Terminal	Front door lock assembly LH connector	Terminal	Continuity
A: M18	27	B: D10	3	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
A: M18	27	Giouna	No

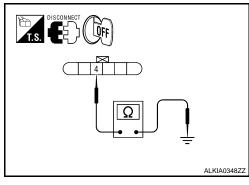
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and front door lock assembly LH.

3. CHECK UNLOCK SENSOR GROUND CIRCUIT

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



Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4	Cibana	Yes

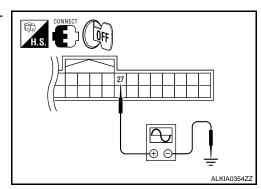
Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM harness connector.
- Check signal between BCM connector and ground with oscilloscope.



UNLOCK SENSOR

< COMPONENT DIAGNOSIS >

Terminals		lls	Voltage (V)
BCM connector	(+) Termin	(–)	(Approx.)
M18	27	Ground	(V) 15 10 5 0 10 ms JPMIA0011GB
the inspection result YES >> GO TO 5 NO >> Replace B		emoval and Installation"	
efer to <u>DLK-75, "Com</u>		n"	
s the inspection result YES >> GO TO 6	normal? ont door lock ass		<u> "FRONT DOOR LOCK : Removal ar</u>
CHECK INTERMIT	TENT INCIDENT		
Refer to <u>GI-42, "Interm</u>	<u>ittent Incident"</u> .		
>> INSPECTI			
Component Inspe			INFOID:000000003071
CHECK UNLOCK S	SENSOR		
			DISCONNECT
Termi	nal		
•••••		Front door lock assembly LH c	condition Continuity
Front door lock	-	Unlock	Yes
Front door lock	4	Lock	No

< COMPONENT DIAGNOSIS >

TRUNK LID OPENER SWITCH

Description

Transmits trunk lid open signal to BCM.

Component Function Check

1. CHECK TRUNK LID OPENER CANCEL SWITCH

Check trunk lid opener cancel switch position.

Does trunk lid opener cancel switch turn ON (CANCEL)?

Yes >> Turn off trunk lid opener cancel switch.

No >> GO TO 2

2. CHECK FUNCTION

(B) With CONSULT-III

Check trunk lid opener switch TR/BD OPEN SW in "DATA MONITOR" mode with CONSULT-III.

• When trunk lid opener switch is turned to "ON".

Monitor item	Condition
TR/BD OPEN SW	Trunk lid opener switch is pressed: ON
IN/BD OPEN SW	Trunk lid opener switch is released: OFF

Is the inspection result normal?

YES >> Trunk lid opener switch is OK.

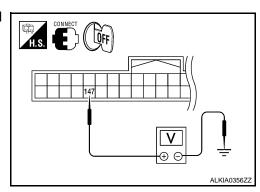
NO >> Refer to <u>DLK-76, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK TRUNK LID OPEN INPUT SIGNAL

1. Remove Intelligent Key from key slot.

- 2. Turn on trunk lid opener cancel switch.
- 3. Check voltage between BCM connector M21 terminal 147 and ground with an oscilloscope.



INFOID:000000003071014

INFOID:000000003071015

TRUNK LID OPENER SWITCH

< COMPONENT DIAGNOSIS >

	Terminals				
(-	+)		Condition of trunk lid opener switch	Voltage (V)	
BCM connector	Terminal	()	(Approx.)		(Approx.)
			ON (press and hold)	0	
M21	147	Ground		(V) 15 10	
			OFF (release)	5 0 10 ms	
				JPMIA0011GB	

Is the inspection result normal?

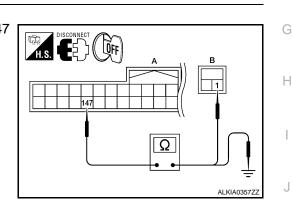
YES >> GO TO 5 NO

>> GO TO 2

2. CHECK TRUNK LID OPENER SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM connector M21 (A) terminal 147 and trunk lid opener switch connector M75 (B) terminal 1.



BCM connector	Terminal	Trunk lid opener switch connector	Terminal	Continuity
 A: M21	147	B: M75	1	Yes

3. Check continuity between BCM connector M21 (A) terminal 147 and ground.

BCM connector	Terminal	Ground	Continuity
A: M21	147	Ground	No

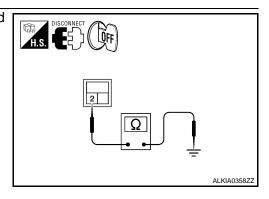
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

 ${f 3.}$ CHECK TRUNK LID OPENER SWITCH GROUND CIRCUIT

Check continuity between trunk lid opener switch connector and ground.



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TRUNK LID OPENER SWITCH

< COMPONENT DIAGNOSIS >

Trunk lid opener switch	Terminal	Ground	Continuity
M75	2	Ground	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK TRUNK LID OPENER SWITCH

Refer to DLK-78, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace trunk lid opener switch.

5. CHECK INTERMITTENT INCIDENT

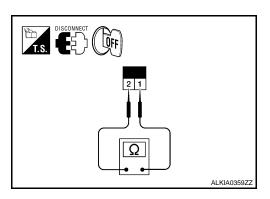
Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

Component Inspection

1. CHECK TRUNK LID OPENER SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect trunk lid opener switch connector.
- 3. Check continuity between trunk lid opener switch connector.



Ter	minal	Condition	Continuity	
Trunk lid o	pener switch	Condition		
1	2	ON (press and hold)	Yes	
Ι	2	OFF (release)	No	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace trunk lid opener switch.

TRUNK LID OPENER CANCEL SWITCH

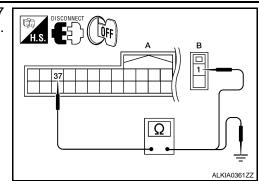
< COMPONENT DIAGNOSIS >

escription				
-				INFOID:000000003071018
	l open operation Function Cl			INFOID:000000003071019
.CHECK FUN	CTION			
) With CONSU heck trunk lid o		witch TR CAN	NCEL SW in "DATA MONIT	OR" mode with CONSULT-III.
	Monitor item			Condition
TR CANCEL SV	V		Trunk lid opener cancel switch Trunk lid opener cancel switch	
/ES >> Trun	result normal? Ik lid opener ca er to <u>DLK-79, "E</u>			
iagnosis Pr	ocedure			INFOID:000000003071020
.CHECK TRU	NK LID OPENE	R CANCEL	SIGNAL	
Check volta oscilloscope		CM connecto	or and ground with an	
				_
	Terminals		Condition of trunk lid opport	ALKIA0360ZZ
(BCM connector	Terminals +) Terminal	(-)	Condition of trunk lid opener cancel switch	_
BCM	+)	(-)		ALKIA0360ZZ
BCM	+)	(–) Ground	cancel switch	ALKIA0360ZZ

TRUNK LID OPENER CANCEL SWITCH

< COMPONENT DIAGNOSIS >

 Check continuity between BCM connector M18 (A) terminal 37 and trunk lid opener cancel switch connector M74 (B) terminal 1.



BCM connector	Terminal	Trunk lid opener cancel switch connector	Terminal	Continuity
A: M18	37	B: M74	1	Yes

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
A: M18	37	Clound	No

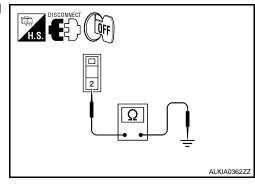
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness or connector.

${f 3.}$ CHECK TRUNK LID OPENER CANCEL SWITCH GROUND CIRCUIT

Check continuity between trunk lid opener switch connector and ground.



Trunk lid opener cancel switch	Terminal	Ground	Continuity
M74	2	Cround	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4.CHECK TRUNK LID OPENER CANCEL SWITCH

Refer to DLK-81, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace trunk lid opener cancel switch.

5.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

TRUNK LID OPENER CANCEL SWITCH

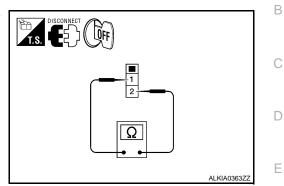
< COMPONENT DIAGNOSIS >

Component Inspection

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1. CHECK TRUNK LID OPENER CANCEL SWITCH

- 1. Disconnect trunk lid opener cancel switch connector.
- 2. Check continuity between trunk lid opener cancel switch terminals.



Terminal		Condition Continuity		F
Trunk lid opener sy	witch	Condition	Continuity	
	0	ON	Yes	G
1	2	OFF (cancel)	No	

Is the inspection result normal?

- YES >> INSPECTION END.
- NO >> Replace trunk lid opener cancel switch.

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< COMPONENT DIAGNOSIS >

TRUNK ROOM LAMP SWITCH

Description

Detects trunk open/close condition.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

Check TRNK/HAT MNTR in "DATA MONITOR" mode with CONSULT-III.

Monitor item	Condition		
TRNK/HAT MNTR	OPEN	: ON	
	CLOSE	: OFF	

Is the inspection result normal?

YES >> Trunk room lamp switch is OK.

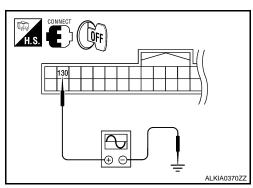
NO >> Refer to <u>DLK-82, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK TRUNK LAMP SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

2. Check voltage between BCM connector and ground using an oscilloscope.



	Terminals			
(+)			Trunk condition	Voltage (V) (Approx.)
BCM connector	Terminal	- (-)	Condition	(+ +)
			OPEN	0
M21	130	Ground	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 2

2. CHECK TRUNK LAMP SWITCH CIRCUIT

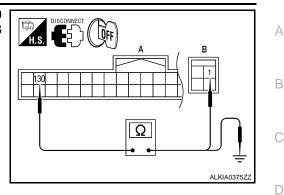
1. Disconnect BCM connector.

INFOID:000000003071023

TRUNK ROOM LAMP SWITCH

< COMPONENT DIAGNOSIS >

 Check continuity between BCM connector M21 (A) terminal 130 and trunk lamp switch and trunk release solenoid connector B28 (B) terminal 1.



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BCM connector	Terminal	Trunk lamp switch and trunk release solenoid connector	Terminal	Continuity
A: M21	130	B: B28	1	Yes

3. Check continuity between BCM connector M21 (A) terminal 130 and ground.

BCM connector	Terminal	Ground	Continuity
A: M21	130	Ground	No

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and trunk lamp switch and trunk release solenoid.

${\it 3.}$ Check trunk lamp switch ground circuit

Check continuity between trunk lid lock assembly connector and ground.

Trunk lamp switch and trunk release solenoid connector	Terminal	Ground	Continuity	
B28	2		Yes	J

DLK-83

Is the inspection result normal?

YES >> GO TO 4

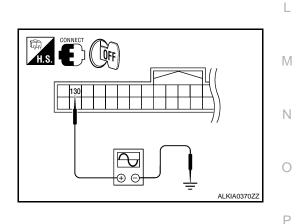
NO >> Repair or replace trunk lamp switch and trunk release solenoid ground circuit.

4.CHECK BCM OUTPUT SIGNAL

1. Insure trunk remains closed during this step.

2. Connect BCM connector.

3. Check voltage between BCM connector and ground.



TRUNK ROOM LAMP SWITCH

< COMPONENT DIAGNOSIS >

	Terminals			
(+)			Voltage (V) (Approx.)	
BCM connector	Terminal	- (-)	(//pp/0x.)	
M21	130	Ground	(V) 15 0 10 ms JDMA0011GB	

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace BCM. Refer to <u>BCS-85, "Removal and Installation"</u>.

5. CHECK TRUNK ROOM LAMP SWITCH

Refer to <u>DLK-84, "Component Inspection"</u>.

Is the inspection result normal?

YES >> GO TO 6

NO >> Replace trunk lamp switch and trunk release solenoid.

6.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

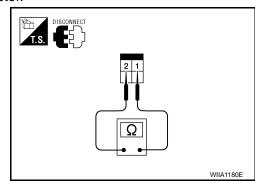
>> INSPECTION END.

Component Inspection

1.CHECK TRUNK LAMP SWITCH

1. Turn ignition switch OFF.

- 2. Disconnect trunk lamp switch and trunk release solenoid connector.
- 3. Check trunk lamp switch.



INFOID:000000003071025

Terr	Terminal		Continuity	
Trunk lamp switch and	trunk release solenoid	Trunk condition	Continuity	
1	1 2	OPEN	Yes	
I		CLOSE	No	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace trunk lamp switch and trunk release solenoid.

< COMPONENT DIAGNOSIS >	
DOOR REQUEST SWITCH	A
Description	NFOID:00000003071026
Transmits lock/unlock operation to BCM.	В
Component Function Check	INFOID:000000003071027
1.CHECK FUNCTION	С
With CONSULT-III Check door request switch REQ SW-DR, REQ SW	V-AS in "DATA MONITOR" mode.
Monitor item	Condition
REQ SW-DR REQ SW-AS	Door request switch is pressed : ON
	Door request switch is released : OFF
<u>Is the inspection result normal?</u> YES >> Door request switch is OK. NO >> Refer to <u>DLK-85, "Diagnosis Procedu</u>	<u>re"</u> .
Diagnosis Procedure	INFOID:000000003071028
1.CHECK DOOR REQUEST SWITCH OUTPUT	G
	SIGNAL
 Turn ignition switch OFF. Check voltage between BCM harness conr using an oscilloscope. 	Hector and ground

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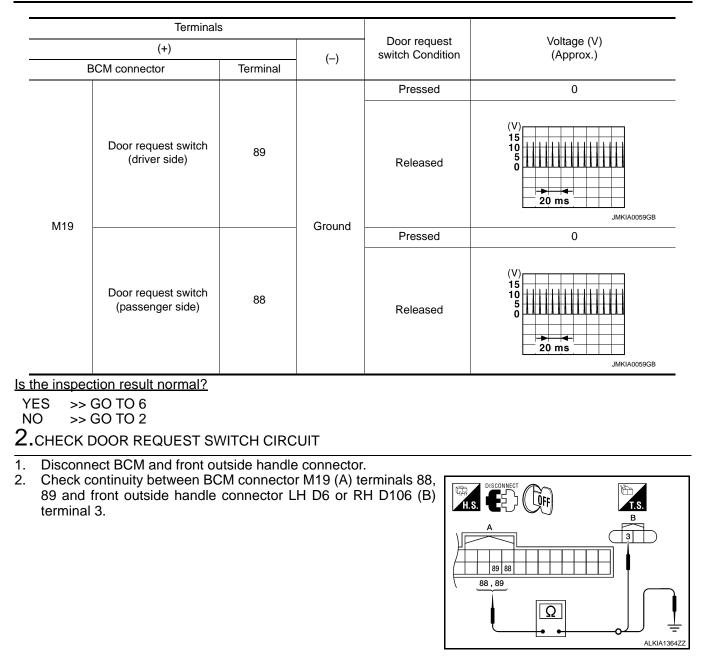
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< COMPONENT DIAGNOSIS >



BCM connector	Terminal	Front outside handle connector	Terminal	Continuity
A: M10	89	B: D6 (driver side)	3	Yes
A. M19	A: M19 88	B: D106 (passenger side)		res

3. Check continuity between BCM connector M19 (A) terminals 88, 89 and ground.

BCM connector	Terminal		Continuity
A: M19	89	Ground	No
A. MT9	88		NO

Is the inspection result normal?

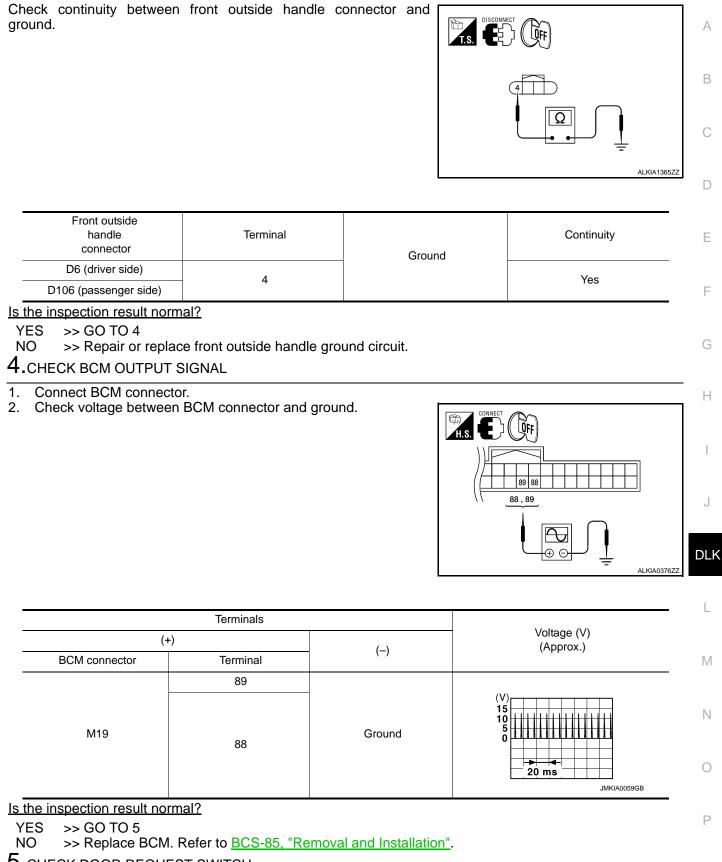
YES >> GO TO 3

NO >> Repair or replace harness between BCM and front outside handle.

 ${f 3.}$ CHECK DOOR REQUEST SWITCH GROUND CIRCUIT

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< COMPONENT DIAGNOSIS >



5.CHECK DOOR REQUEST SWITCH

Refer to DLK-88, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6

< COMPONENT DIAGNOSIS >

NO >> Replace malfunctioning front outside handle.

6. CHECK INTERMITTENT INCIDENT

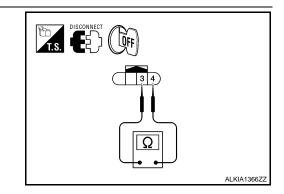
Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

Component Inspection

1. CHECK DOOR REQUEST SWITCH

Check front outside handle (request switch).



Terr	ninal	Door request switch condition	Continuity	
Front outside hand	dle (request switch)	Door request switch condition	Continuity	
2	Δ	Pressed	Yes	
3	3 4	Released	No	

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace malfunctioning front outside handle.

< COMPONENT DIAGNOSIS >		
TRUNK OPENER REQUEST SWI	ТСН	^
Description	INFOID:00000003071030	A
Performs trunk lid open request when it is pressed	d.	В
Component Function Check	INFOID:000000003071031	D
1.CHECK FUNCTION		С
With CONSULT-III Check trunk opener request switch REQ SW -BD/	TR in "DATA MONITOR" mode.	D
Monitor item	Condition	
REQ SW -BD/TR	Trunk opener request switch is pressed : ON	E
	Trunk opener request switch is released : OFF	_
Is the inspection result normal? YES >> Trunk opener request switch is OK. NO >> Refer to <u>DLK-89, "Diagnosis Procedu</u> Diagnosis Procedure	INFOID:00000003071032	F
1.CHECK TRUNK OPENER REQUEST SWITCH		G
 Turn ignition switch OFF. Check voltage between BCM connector and oscilloscope. 	d ground using an	Η
		J

	Terminals				
(+)		()	Trunk lid opener request switch condition	Voltage (V) (Approx.)	
CM connector	Terminal				
			Pressed	0	
M21	141	Ground	Released	(V) 15 10 5 0 10 ms JPMIA0016GB	

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Is the inspection result normal?

YES >> GO TO 6

NO >> GO TO 2

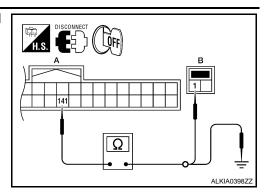
 $2. {\sf CHECK \ TRUNK \ OPENER \ REQUEST \ SWITCH \ CIRCUIT}$

1. Disconnect BCM and trunk opener request switch connector.

DLK-89

< COMPONENT DIAGNOSIS >

 Check continuity between BCM connector M21 (A) terminal 141 and trunk opener request switch connector B33 (B) terminal 1.



BCM connector	Terminal	Trunk opener request switch connector	Terminal	Continuity
A: M21	141	B: B33	1	Yes

3. Check continuity between BCM connector M21 (A) terminal 141 and ground.

BCM connector	Terminal	Ground	Continuity	
A: M21	141	Ground	No	

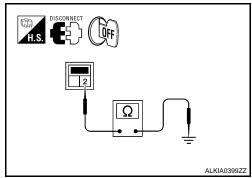
Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and trunk opener request switch.

 ${f 3.}$ CHECK TRUNK OPENER REQUEST SWITCH GROUND CIRCUIT

Check continuity between trunk opener request switch connector and ground.



Trunk opener request switch connector	Terminal	Ground	Continuity
B33	2	Ground	Yes

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace trunk opener request switch ground circuit.

4.CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.

< COMPONENT DIAGNOSIS >

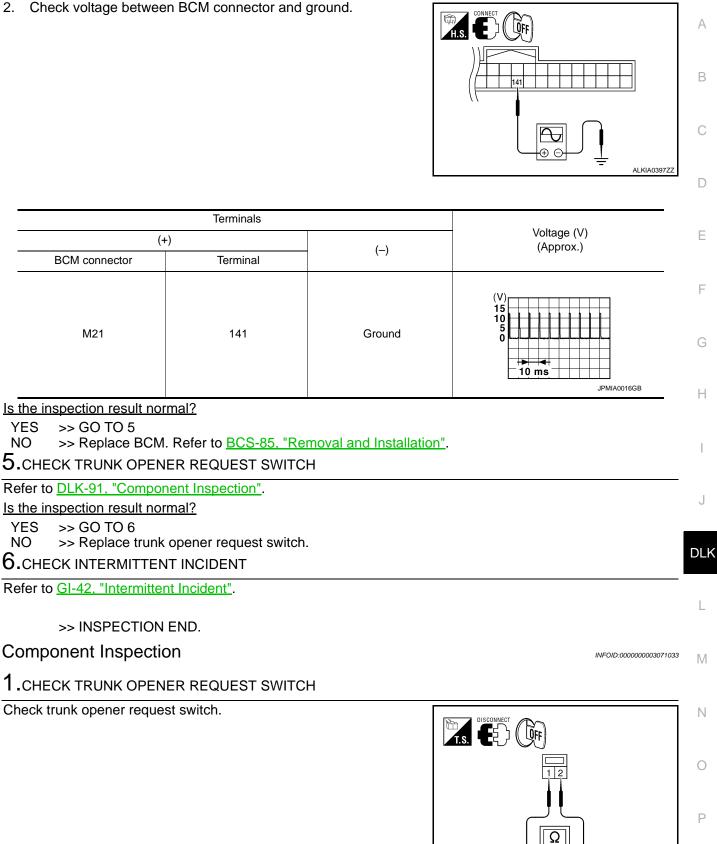
YES

NO

YES

NO

2. Check voltage between BCM connector and ground.



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< COMPONENT DIAGNOSIS >

Ter	minal	Trunk opener request switch condition	Continuity	
Trunk opene	r request switch	Turk opener request switch condition		
1	2	Pressed	Yes	
I	2	Released	No	

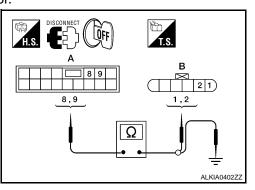
Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace trunk opener request switch.

< COMPONENT DIAG						i
DOOR LOCK A	CTUATOR					А
DRIVER SIDE						
DRIVER SIDE : D	DRIVER SIDE : Description					
Locks/unlocks the door	with the signal	from BCM.				
DRIVER SIDE : C	DRIVER SIDE : Component Function Check					
1. CHECK FUNCTION						
1. Use CONSULT-III t 2. Touch "ALL LOCK"	to perform Activ	e Test ("DOO	R LOCK").			D
Is the inspection result				any.		
YES >> Door lock a NO >> Refer to DI		SIDE : Diag	nosis Procedure".			Е
DRIVER SIDE : D		-	<u>10313 1 10000010</u> .		INFOID:000000003071036	
1. CHECK OUTPUT SIGNAL					F	
Check voltage betwee		stor M17 tor	minals 8 0 and F			
ground.				际 H.S.	CONNECT COFF	G
					8,9	Н
						I
			L		ALKIA0401ZZ	J
	Terminals					
(+)		(—)	Condition of door loc unlock switch	k and	Voltage (V) (Approx.)	DLK
BCM connector	Terminal	(-)				
M17	M17 $\begin{array}{c c} 8 \\ \hline 9 \\ \hline \end{array} Ground \\ \hline \\ Unlock \\ \hline 0 \rightarrow Battery voltage \rightarrow 0 \\ \hline \\ \hline \\ 0 \rightarrow Battery voltage \rightarrow 0 \\ \hline \\ \hline \\ \hline \\ \end{array}$					
Is the inspection result	-					
YES >> GO TO 3						\mathbb{M}
NO >> GO TO 2 2.CHECK DOOR LOO						
						N

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and front door lock actuator driver side connector.
- Check continuity between BCM connector M17 (A) terminals 8, 9 and front door lock actuator driver side connector D10 (B) terminals 1, 2.



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< COMPONENT DIAGNOSIS >

BCM connector	Terminal	Door lock actuator con- nector	Terminal	Continuity
A: M17	8	B: D10	1	Yes
A. WI17	9	D. D10	2	163

4. Check continuity between BCM connector M17 (A) terminals 8, 9 and ground.

BCM connector	Terr	Continuity	
A: M17	8	Ground	No
	9	Croana	NO

Is the inspection result normal?

YES >> Replace front door lock actuator LH.

NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END. 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").

2. Touch "ALL LOCK" or "ALL UNLOCK" to check that it works normally.

Is the inspection result normal?

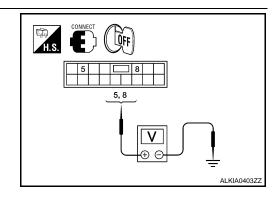
YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-94, "PASSENGER SIDE : Diagnosis Procedure"</u>.

PASSENGER SIDE : Diagnosis Procedure

1. CHECK DOOR LOCK ACTUATOR SIGNAL

Check voltage between BCM connector and ground.



Terminals (+) (-)				
		()	Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	Terminal	(-)		(
M17	8	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$
	5	Gibunu	Unlock	$0 \rightarrow Battery \ voltage \rightarrow 0$



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INFOID:000000003071038

Check continuity between BCM connector M17 (A) terminals 5, 8 and ground.

Front door lock actuator

RH connector

B: D108

E	CM connector	Те	Continuity	
	A: M17	8	Ground	No
		5	Ground	No

Is the inspection result normal?

BCM connector

A: M17

< COMPONENT DIAGNOSIS > Is the inspection result normal?

>> GO TO 3

>> GO TO 2

2. CHECK DOOR LOCK ACTUATOR CIRCUIT

Disconnect BCM and front door lock actuator RH connectors.

Terminal

8

5

8 and front door lock actuator RH D108 (B) terminals 5, 6.

YES

NO

1.

2.

3.

YES >> Replace front door lock actuator RH.

NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END. 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.

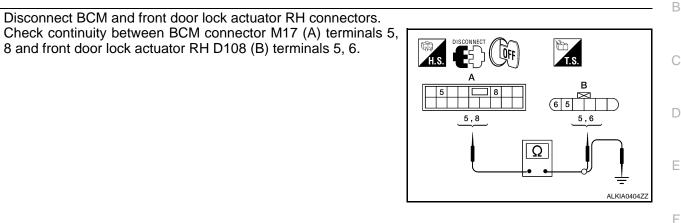
NO >> Refer to DLK-95, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

1.CHECK DOOR LOCK ACTUATOR SIGNAL

Check voltage between BCM connector M17 terminals 8, 10 and ground.

DLK-95



Continuity

Yes

Terminal

5

6

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А

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- Μ

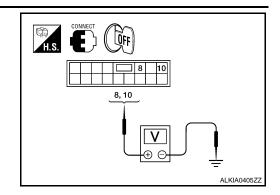
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< COMPONENT DIAGNOSIS >

Check trunk lamp switch.



	Terminals			
(+)		(-)	Condition of door lock and unlock switch	Voltage (V) (Approx.)
BCM connector	BCM connector Terminal			
M17	8	Ground	Lock	$0 \rightarrow Battery \ voltage \rightarrow 0$
	10	Ground	Unlock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$

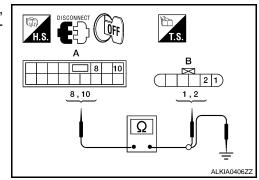
Is the inspection result normal?

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

2. CHECK DOOR LOCK ACTUATOR CIRCUIT

1. Disconnect BCM and rear door lock actuator LH connectors.

 Check continuity between BCM connector M17 (A) terminals 8, 10 and rear door lock actuator LH connectors D205 (B) terminals 1, 2.



BCM connector	Terminal	Door lock actuator con- nector	Terminal	Continuity
A: M17	8	B: D205	1	Yes
Δ . WH t	10	D. D203	2	163

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
A: M17	8	Ground	No
	10	- Ground	NO

Is the inspection result normal?

YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness.

3.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

		DOOR LOO	SK ACTUATOR	
< COMPONENT DI	AGNOSIS >			
REAR RH				A
REAR RH : Des	cription			INFOID:000000003071043
Locks/unlocks the do	or with the signa	al from BCM.		В
REAR RH : Com	ponent Fund	ction Chec	k	INFOID:000000003071044
1.CHECK FUNCTION	DN			С
1. Use CONSULT-I	II to perform Acti	ive Test ("DOC	OR LOCK").	
2. Touch "ALL LOC Is the inspection resu		JCK" to check	that it works normally.	D
YES >> Door loc	k actuator is OK.		o Duo oo duuro "	
NO >> Refer to REAR RH : Diag	DLK-97, "REAR	-	<u>s Procedure"</u> .	E
-				INFOID:00000003071045
1.CHECK DOOR LO			ningle 9 10 and	F
Check voltage betwo ground.				
				G
				<u></u> <u></u>
	Terminals			
(+		- (-)	Condition of door lock an unlock switch	d Voltage (V) (Approx.)
BCM connector	Terminal 8		Lock	$0 \rightarrow Battery voltage \rightarrow 0$
M17	10	Ground	Unlock	$0 \rightarrow \text{Battery voltage} \rightarrow 0$
Is the inspection resu	<u>ult normal?</u>			
YES >> GO TO 3 NO >> GO TO 2				
2.CHECK DOOR LO		RCIRCUIT		Μ
1. Disconnect BCM	and rear door lo	ock actuator RI		NI
			7 (A) terminals 8, 305 (B) terminals	
5, 6.				
				<u>8,10</u> <u>5,6</u> P
				Ω
			<u> </u>	ALKIA0407ZZ

< COMPONENT DIAGNOSIS >

BCM connector	Terminal	Door lock actuator con- nector	Terminal	Continuity
A: M17	8	B: D305	5	Yes
/ X. 1011 /	10	D. 0000	6	165

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
A: M17	8	Ground	No
Α. ΙΝΤΤ	10	- Grouna	NO

Is the inspection result normal?

>> Replace rear door lock actuator RH. >> Repair or replace harness. YES

NO

3. Check intermittent incident

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

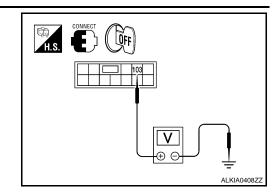
TRUNK LID OPENER ACTUATOR

< COMPONENT DIAGN	_		NER ACTUATOR	
TRUNK LID OPE		JATOR		
Description				INFOID:000000003071046
-	10 1 L C	DOM		INFOID.000000000011040
Performs trunk lid open v	-	BCM.		
Component Function	on Check			INFOID:00000003071047
1.CHECK TRUNK LID	OPENER CANO	CEL SWITCH		
Check trunk lid opener ca	-		N 2	
<u>Is trunk lid opener cance</u> Yes >> Turn on trun		•	<u>) </u>	
No >> GO TO 2.				
2.CHECK FUNCTION				
 Perform Active Test² Touch "OPEN" and c 			CONSULT-III.	
Is the inspection result ne				
YES >> Trunk lid ope				
NO >> Refer to <u>DLk</u>	-	<u>s Procedure"</u> .		
Diagnosis Procedui	е			INFOID:000000003303265
1. CHECK OUTPUT CIF	CUIT			
1. Turn ignition switch (unk rologog go	anaid connector	
 Disconnect trunk lan Check voltage betw solenoid connector a 	een trunk lam			
				ALKIA1051ZZ
	Terminals			
(+)			Condition of trunk lid open-	Voltage (V)
Trunk lamp switch and trunk release solenoid connector	Terminal	()	er switch	(Approx.)
B28	3	Ground	$OFF\toON$	$0 \rightarrow Battery \ voltage \rightarrow 0$
Is the inspection result no	ormal?			
YES >> GO TO 4 NO >> GO TO 2				
2. CHECK OUTPUT SIG	SNAL			

TRUNK LID OPENER ACTUATOR

< COMPONENT DIAGNOSIS >

Check voltage between BCM connector and ground.



	Terminals			
(+)		(_)	Condition of trunk lid open- er switch	Voltage (V) (Approx.)
BCM connector	Terminal	()		
M20	103	Ground	$OFF\toON$	$0 \rightarrow \text{Battery voltage} \rightarrow 0$

Is the inspection result normal?

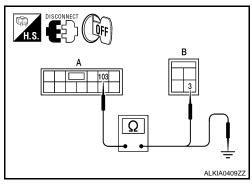
YES >> Repair or replace harness.

NO >> GO TO 3

3. CHECK TRUNK LID OPENER ACTUATOR CIRCUIT

1. Disconnect BCM.

2. Check continuity between BCM connector and trunk lamp switch and trunk release solenoid connector.



BCM connector	Terminal	Trunk lamp switch and trunk re- lease solenoid connector	Terminal	Continuity
A: M20	103	B: B28	3	Yes

3. Check continuity between BCM connector and ground.

BCM connector	Terr	Continuity	
A: M20	103	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-85, "Removal and Installation"</u>.

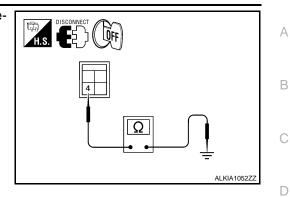
NO >> Repair or replace harness.

4. CHECK TRUNK LID OPENER GROUND CIRCUIT

TRUNK LID OPENER ACTUATOR

< COMPONENT DIAGNOSIS >

Check continuity between trunk lamp switch and trunk release solenoid connector and ground.



trunk lamp switch and trunk release solenoid connector	Terminal		Continuity
B28	4	Ground	Yes

Is the inspection result normal?

- YES >> Replace trunk lamp switch and trunk release solenoid.
- NO >> Repair or replace harness.

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INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

INTELLIGENT KEY WARNING BUZZER

Description

Answers back and warns for an inappropriate operation.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

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

Is the inspection result normal?

YES >> Intelligent Key warning buzzer (engine room) is OK.

NO >> Refer to <u>DLK-102, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK INTELLIGENT KEY WARNING BUZZER

Check voltage between BCM connector and ground.

	Terminals				
(+	+)	()	Warning buzzer opera- tion condition	Voltage (V) (Approx.)	
BCM connector	Terminal	()			
M21	144	Ground	Yes	0	
IVIZ I	144	Ground	No	Battery voltage	

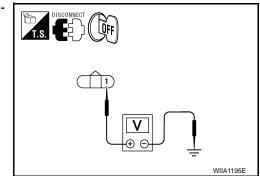
Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 2.

2.CHECK INTELLIGENT KEY WARNING BUZZER POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect Intelligent Key warning buzzer connector.
- 3. Check voltage between Intelligent Key warning buzzer connector and ground.



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INFOID:000000003071050

INTELLIGENT KEY WARNING BUZZER

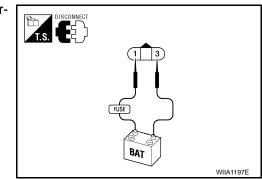
< COMPONENT DIAGNOSIS >

	Terminals					
(+)						oltage (V) Approx.)
Intelligent Key warning buzzer connector	Terminal		(-)		(Αρριοχ.)	
E73	1		Ground		Batt	ery voltage
 NO >> Repair or replace CHECK INTELLIGENT K Disconnect BCM connect Check continuity between and Intelligent Key war 3. 	EY WARNING BU	UZZER CIRCU or M21 (A) term				
BCM connector	Terminal	Intelligent Key w	-	Termina	al	Continuity
A: M21	144	B: E	73	3		Yes
Check continuity betwee BCM connector		nr M21 (A) term	inal 144 and	ground.		Continuity
A: M21		44	Ground			No
the inspection result norm DK >> GO TO 4. NG >> Repair or replac CHECK INTELLIGENT K	e harness betwee EY WARNING BI		telligent Key	warning bu	zzer.	
heck <u>DLK-103, "Compone</u> <u>the inspection result norm</u> (ES >> GO TO 5. NO >> Replace Intellige .CHECK INTERMITTENT	al? ent Key warning b	ouzzer.				
heck GI-42, "Intermittent Ir						
>> INSPECTION E	ND.					
omponent Inspectior	1					INFOID:0000000
.CHECK INTELLIGENT K	FY WARNING RI	JZZER				

INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

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



1 (BAT+) - 3 (BAT-)

: the buzzer sounds

Is the inspection result normal?

- OK >> INSPECTION END.
- NG >> Replace Intelligent Key warning buzzer.

OUTSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >	
OUTSIDE KEY ANTENNA	٥
Description	A
Detects whether Intelligent Key is outside the vehicle. Integrated in front outside handle (driver side, passenger side) and installed in rear bumper.	В
Component Function Check	С
1.CHECK DOOR REQUEST SWITCH	
Check that door request switch operates normally.	D
Is the inspection result normal? YES >> GO TO 2. NO >> Inspect door request switch. Refer to <u>DLK-85, "Component Function Check"</u> .	Е
2.CHECK FUNCTION Be sure that Intelligent Key is in each outside key antenna detection range.	F
Does door lock/unlock when each request switch is pressed?	
YES >> Outside key antenna is OK. NO >> Refer to <u>DLK-105, "Diagnosis Procedure"</u> .	G
Diagnosis Procedure	
1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 1	Η
 Turn ignition switch OFF. Check signal between BCM connector and ground with oscillo- 	Ι
scope.	
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	DUK
	DLK
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	Μ
	N.I.
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OUTSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

Terminals					Signal (Reference value.)				
(+) (-)			Condition						
BCN	/I conn	ector	Terminal	(-)				, , , , , , , , , , , , , , , , , , ,	
A: M19	Pas	ver side ssenger side	65 63	Ground	Request switch	When Intelligen is in the antenna tection area.		(V) 15 10 5 0 1 s JMKIA0061GB	
B: M21		Rear umper	119	Cicult	is pushed	When Intelligent Key is not in the antenna detection area.		(V) 15 0 5 0 1 s JMKIA0060GB	
Is the insp	bectio	on result	normal?						
1. Disco 2. Chec	nnec k co	t BCM a	ind front o between		RCUIT ndle connector nnector and c		(研) H.S.		
BCM conne	ector	Terminal	Outside k	ey antenna c	onnector Termin	al Continuity		A	
		65			1		严		
		64	C: I	D6 (driver sid	le) 2				
A: M19	9 63		0: D10	6 (passenger	r side)	Yes		В	
		62	C. D10	o (passerigei	2	165	卅		
B: M21		119		16 (rear bum	1				
D. 11/2 1		118	0.0-		2		~ ~ ~	DISCONNECT	
3. Chec	k cor	ntinuity b	etween B	CM conne	ctor and grour	ıd.	62, 63	<u>, 64, 65, 118, 119</u>	
BCM cor	BCM connector Terminal			Со	ntinuity				
A: M19			62			Ne			
			63						
			64 G		und				
			65			No			
B: M21		118						— <u> </u>	
		119						ALKIA13672	
Is the insp			normal?						
		D TO 3. epair or r	eplace ha	arness betv	ween BCM and	d outside key a	antenn	ia.	

3.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL 2

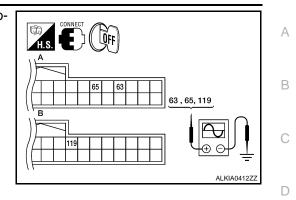
1. Replace outside key antenna. (New antenna or other antenna)

2. Connect BCM and outside key antenna connector.

OUTSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

3. Check signal between BCM connector and ground with oscilloscope.



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	Tern	ninals				<u>.</u>	
(+)		()	Condition		Signal (Reference value.)	E	
BCM	BCM connector Termina		()			х <i>У</i>	
	Driver side	65					F
A: M19	Passenger side	63	Ground	Door request und switch is pushed	When Intelligent Key is in the antenna de- tection area.	(V) 15 10 0 15 15 0 15 15 15 15 15 15 15 15 15 15	G
B: M21	Rear bumper	119			When Intelligent Key is not in the antenna detection area.	(V) 15 10 5 0 1 s JMKIA0060GB	I
s the insp	ection result	normal?					
YES >	 Replace o GO TO 4. 	utside key	antenna.				DL
4.CHEC	CHECK INTERMITTENT INCIDENT						
Refer to <u>G</u>	il-42, "Interm	ittent Incid	dent".				- L
>	> INSPECTI	ON END.					M

REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

REMOTE KEYLESS ENTRY RECEIVER

Description

Receives Intelligent Key operation and transmits to BCM.

Component Function Check

1. CHECK FUNCTION

With CONSULT-III

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

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

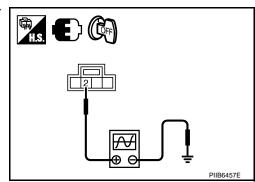
Is the inspection result normal?

YES >> Remote keyless entry receiver is OK. NO >> Refer to <u>DLK-108</u>, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between remote keyless entry receiver connector and ground with oscilloscope.



Terminals						
(+)			Quanditien	Signal		
Remote keyless entry receiver connector	Terminal	()	Condition	(Reference value)		
M27 2	2	Ground	Waiting (All doors closed)	(V) 15 10 5 0 1 1 1 1 m 1 m 1 m 1 m 1 1 1 1 1 1 1 1 1 1 1 1 1		
	_		When signal is received (All doors closed)	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		

Is the inspection result normal?

DLK-108

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INFOID:000000003071057

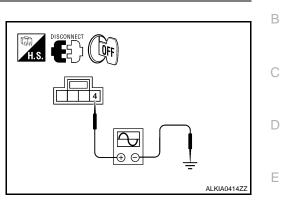
REMOTE KEYLESS ENTRY RECEIVER

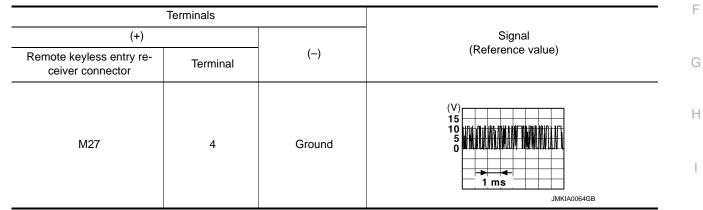
< COMPONENT DIAGNOSIS >

YES >> GO TO 7. NO >> GO TO 2.

2.CHECK REMOTE KEYLESS ENTRY RECEIVER POWER SUPPLY

- 1. Disconnect remote keyless entry receiver connector.
- 2. Check signal between remote keyless entry receiver connector and ground with oscilloscope.





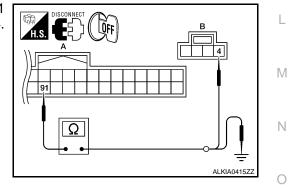
Is the inspection result normal?

	-
YES	>> GO TO 4.
NO	>> GO TO 3.

3.CHECK REMOTE KEYLESS ENTRY RECEIVER CIRCUIT 1

1. Disconnect BCM connector.

2. Check continuity between BCM connector M19 (A) terminal 91 and remote keyless entry receiver connector M27 (B) terminal 4.



BCM connector	Terminal	Remote keyless entry receiver connector	Terminal	Continuity
A: M19	91	B: M27	4	Yes

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
A: M19	91	Clound	No

Is the inspection result normal?

DLK-109

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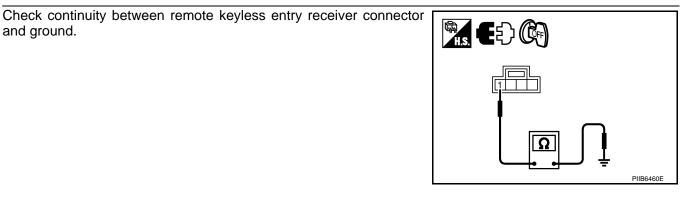
REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

YES >> Reconnect BCM, GO TO 4.

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

4.CHECK REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT



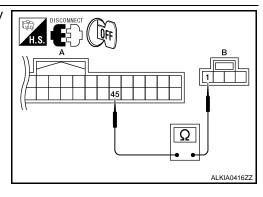
_	Remote keyless entry receiver connector	Terminal	Ground	Continuity
	M27	1		Yes

Is the inspection result normal?

YES >> GO TO 6. NO >> GO TO 5.

5.CHECK REMOTE KEYLESS ENTRY RECEIVER CIRCUIT 2

Check continuity between BCM connector and remote keyless entry receiver connector.



BCM connector	Terminal	Remote keyless entry receiver connector	Terminal	Continuity
A: M18	45	B: M27	1	Yes

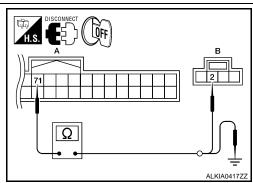
Is the inspection result normal?

YES >> GO TO 7.

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

6.CHECK REMOTE KEYLESS ENTRY RECEIVER CIRCUIT 3

1. Check continuity between BCM connector and remote keyless entry receiver connector.



REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

BCM connector	Terminal	Remote keyless entry receiv connector	ver Terminal	Continuity
A: M19	71	B: M27	2	Yes
Check continuity be	tween BCM conr	nector and ground.		
BCM connector		Terminal		Continuity
A: M19		71	Ground	No
ES >> GO TO 7. O >> Repair or re CHECK INTERMITTE		etween BCM and remote ke	eyless entry.	
er to <u>GI-42, "Intermit</u>	tent Incident".			

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INTELLIGENT KEY

< COMPONENT DIAGNOSIS >

INTELLIGENT KEY

Description

The following functions are available when having and carrying electronic ID.

Door lock/unlock

Trunk open

Remote control entry function and panic alarm function are available when operating the remote buttons.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

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

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

Is the inspection result normal?

- YES >> Intelligent Key is OK.
- NO >> Refer to <u>DLK-112, "Diagnosis Procedure"</u>.

Diagnosis Procedure

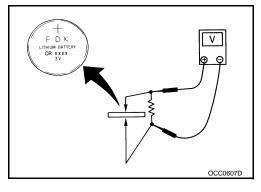
1.CHECK INTELLIGENT KEY BATTERY

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

Standard : Approx. 2.5 - 3.0V

Is the measurement value within specification?

- YES >> GO TO 2.
- NO >> Replace Intelligent Key battery.

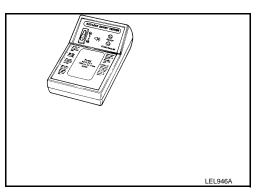


2. CHECK KEYFOB FUNCTION

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

YES >> Keyfob is OK.

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



Component Inspection

INFOID:000000003071062

1. REPLACE INTELLIGENT KEY BATTERY

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

DLK-112

INFOID:000000003071059

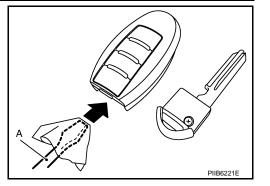
INFOID:000000003071060

INFOID:000000003071061

INTELLIGENT KEY

< COMPONENT DIAGNOSIS >

- Insert a flat-blade screwdriver (A) wrapped with a cloth into the slit of the corner and twist it to separate the upper part from the lower part.
 CAUTION:
 - Do not touch the circuit board or battery terminal.
 - The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.



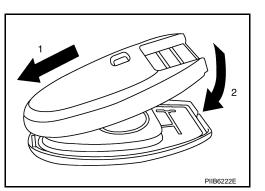
- 3. Replace the battery with new one.
- Align the tips of the upper and lower parts, and then push them together until it is securely closed.
 CAUTION:
 - When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.
 - After replacing the battery, check that all Intelligent Key functions work normally.

Is the inspection result normal?

- YES >> Intelligent Key is OK.
- NO >> Check remote keyless entry receiver. Refer to <u>DLK-108.</u> <u>"Component Function Check"</u>.

Special Repair Requirement

Refer to CONSULT-III Operation Manual.



INFOID:000000003071063



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< COMPONENT DIAGNOSIS >

KEY SLOT ILLUMINATION

Description

Blinks when Intelligent Key insertion is required.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

Check key slot illumination KEY SLOT ILLUMI in Active Test mode.

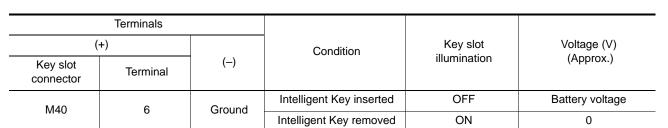
Is the inspection result normal?

YES >> Key slot function is OK. NO >> Refer to DLK-114, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK KEY SLOT ILLUMINATION OUTPUT SIGNAL

Check voltage between key slot connector and ground.



Is the inspection result normal?

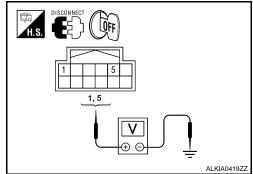
YES >> GO TO 6.

NO >> GO TO 2.

2. CHECK KEY SLOT POWER SUPPLY CIRCUIT

Turn ignition switch OFF. 1.

- Disconnect key slot connector. 2.
- 3. Check voltage between slot connector and ground.



INFOID:000000003071065

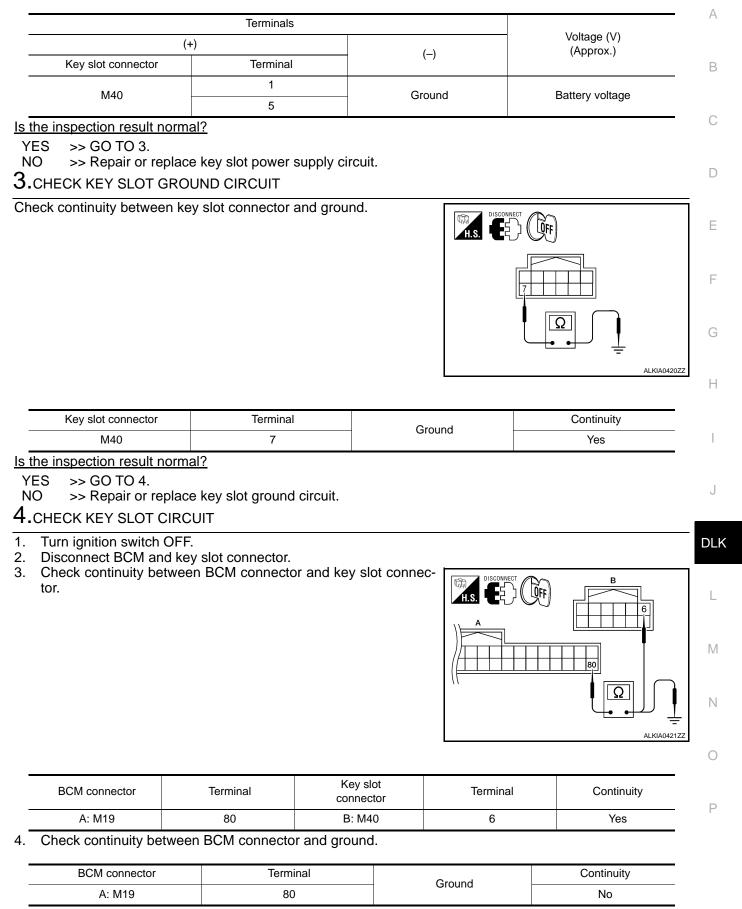
INFOID:000000003071066

INFOID:000000003071064

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KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >



Is the inspection result normal?

KEY SLOT ILLUMINATION

< COMPONENT DIAGNOSIS >

YES >> GO TO 5.

NO >> Repair or replace harness between BCM and key slot.

5. CHECK KEY SLOT

Refer to <u>DLK-67</u>, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.

NO >> Replace key slot.

6. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

HORN FUNCTION

< COMPONENT DIAGNOSIS >

			А
Description		INFOID:000000003071067	A
Perform answer-back for each operat Component Function Check		INFOID:000000003071068	В
1.CHECK FUNCTION			С
 Select HORN in "ACTIVE TEST" Check the horn (high/low) operati 			D
Test item		Description	
HORN ON	Horn relay	ON (for 20 ms)	F
Is the operation normal? YES >> INSPECTION END. NO >> Refer to <u>DLK-117</u> , "Diagn	osis Procedure".		F
Diagnosis Procedure		INFOID:00000003071069	
1. CHECK HORN FUNCTION			G
Check horn function with horn switch			
Do the horns sound?			ш
YES >> GO TO 2.	Die grom"		Η
NO >> Refer to <u>HRN-3, "Wiring I</u> 2.CHECK HORN RELAY POWER S			
	UPPLI		I
 Turn ignition switch ON. Perform "ACTIVE TEST" ("HORN") 	I") with CONSULT-III.		
3. Using an analog voltmeter or a between IPDM E/R connector E1	n oscilloscope, check volta		J
			DLK
			L
		ALKIA0424ZZ	M
IPDM E/R Gro	und Test item	Voltage (V)	Ν
Connector Terminal		(Approx.)	

_			Ground	Test item		Volidge (V)	N
	Connector	Terminal				(Approx.)	
	E17	44	Ground	HORN	ON	Battery voltage $\rightarrow 0 \rightarrow$ Battery voltage	
	L17		Ground	HORN	Other than above	Battery voltage	0

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Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK HORN RELAY CIRCUIT

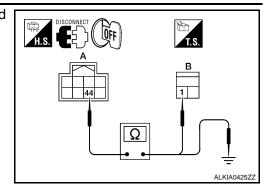
1. Turn ignition switch OFF.

2. Disconnect IPDM E/R and horn relay connector.

HORN FUNCTION

< COMPONENT DIAGNOSIS >

3. Check continuity between IPDM E/R harness connector (A) and horn relay harness connector (B).



IPDM E/R		Horn	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
A: E17	44	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	
A: E17	44	Ground	No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

Is the inspection result normal?

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

NO >> Repair or replace the malfunctioning part.

COMBINATION METER DISPLAY FUNCTION

< COMPONENT DIAGNOSIS >	
COMBINATION METER DISPLAY FUNCTION	А
Description	
Displays each operation method guide and warning for system malfunction.	В
Component Function Check	
1.CHECK FUNCTION	С
With CONSULT-III Check the operation with ("LCD") in the Active Test.	D
Is each warning displayed on meter display?	
Is the inspection result normal?	Е
YES >> Meter display is OK. NO >> Refer to <u>DLK-119, "Diagnosis Procedure"</u> .	
Diagnosis Procedure	F
1. CHECK COMBINATION METER	
Refer to <u>MWI-71, "DTC Index"</u> .	G
<u>Is the inspection result normal?</u> YES >> GO TO 2.	
NO >> Check combination meter. Refer to <u>MWI-35, "Diagnosis Description"</u> .	Н
2. CHECK INTERMITTENT INCIDENT	
Refer to GI-42, "Intermittent Incident".	Ι
>> INSPECTION END.	

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WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS >

WARNING CHIME FUNCTION

Description

Performs operation method guide and warning with buzzer.

Component Function Check

1.CHECK FUNCTION

With CONSULT-III

1. Check the operation with "INSIDE BUZZER" in the Active Test.

2. Touch "TAKE OUT", "KNOB" or "KEY" on screen.

Is the inspection result normal?

Yes >> Warning buzzer into combination meter is OK.

No >> Refer to <u>DLK-120, "Diagnosis Procedure"</u>.

Diagnosis Procedure

1.CHECK METER BUZZER CIRCUIT

Refer to WCS-17, "Component Function Check".

Is the inspection result normal?

Yes >> GO TO 2.

No >> Repair or replace meter buzzer circuit.

2. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END.

INFOID:000000003071073

INFOID:000000003071074

INFOID:000000003071075

HAZARD FUNCTION

< COMPONENT DIAGNOSIS >	
HAZARD FUNCTION	А
Description INFOID:000000000000000000000000000000000000	A
Perform answer-back for each operation with number of blinks.	В
Component Function Check	
1.CHECK FUNCTION	С
Check hazard warning lamp ("FLASHER") in Active Test. <u>Is the inspection result normal?</u> YES >> Hazard warning lamp circuit is OK. NO >> Refer to <u>DLK-121, "Diagnosis Procedure"</u> .	D
Diagnosis Procedure	Е
1. CHECK HAZARD SWITCH CIRCUIT	
Refer to <u>EXL-17</u> . "System Description". <u>Is the inspection result normal?</u>	F
YES >> GO TO 2. NO >> Repair or replace hazard warning switch circuit. 2.CHECK INTERMITTENT INCIDENT	G
Refer to GI-42, "Intermittent Incident".	Н
>> INSPECTION END.	I

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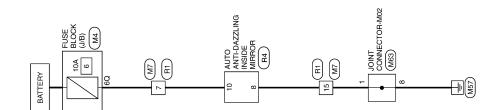
HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

HOMELINK UNIVERSAL TRANSCEIVER

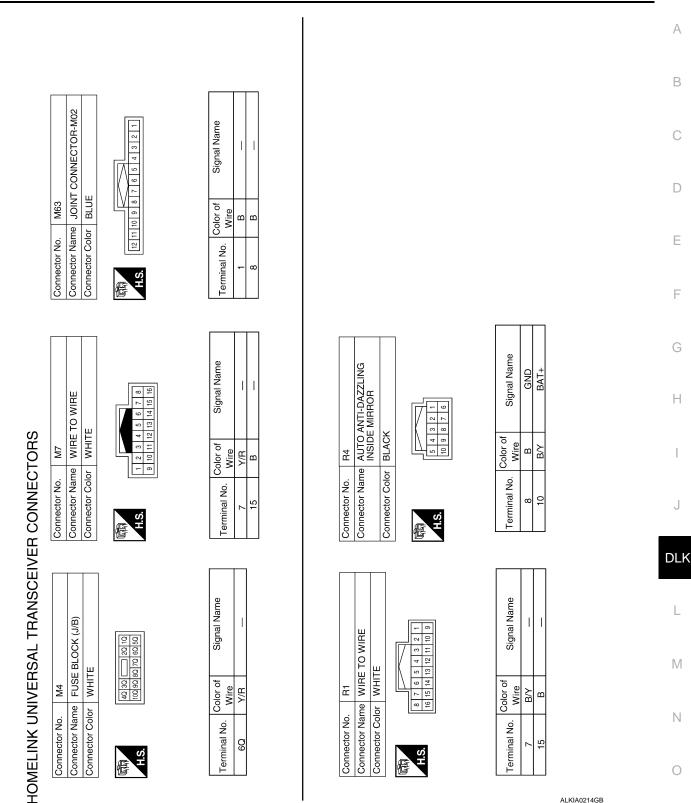
Wiring Diagram

INFOID:000000003303273



HOMELINK UNIVERSAL TRANSCEIVER

ALKWA0025GE



Description

INFOID:000000003071079

Homelink universal transceiver can store and transmit a maximum of 3 radio signals. Allows operation of garage doors, gates, home and office lighting, entry door locks and security system, etc. Homelink universal transceiver power supply uses vehicle battery, which enables it to maintain every program in case battery is discharged or removed.

HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

Component Function Check

INFOID:000000003071080

1.CHECK FUNCTION

Check that system receiver (garage door opener, etc.) operates with original hand-held transmitter. Is the inspection result normal?

YES >> GO TO 2.

NO >> Receiver or hand-held transmitter is malfunctioning.

2. CHECK ILLUMINATE

1. Turn ignition switch "OFF".

2. Press each of the transmitter buttons and watch for the red light to illuminate with each button.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to <u>DLK-124</u>, "Diagnosis Procedure".

3.CHECK TRANSMITTER

Check transmitter with Tool*.

*:For details, refer to Technical Service Bulletin.

Is the inspection result normal?

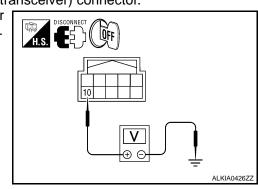
- YES >> Receiver or hand-held transmitter malfunction, not vehicle related.
- NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver). Refer to <u>MIR-15.</u> <u>"Removal and Installation"</u>.

Diagnosis Procedure

INFOID:000000003071081

1.CHECK POWER SUPPLY

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



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal		Condition	Voltage (V) (Approx.)
R4	10	Ground	Ignition switch position: LOCK	Battery voltage

Is the inspection result normal?

YES >> GO TO 2. NO >> Check t

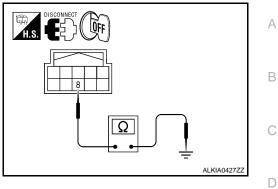
- >> Check the following.
 - 10A fuse [No. 6 located in the fuse block (J/B)]
 - Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

2. CHECK GROUND CIRCUIT

HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

Check continuity between auto anti-dazzling inside mirror (homelink universal transceiver) harness connector and ground.



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal	Ground	Continuity
R4	8		Yes
s the inspection result normal?			
YES >> GO TO 3. NO >> Repair harness.			
3.check intermittent incident			
Refer to GI-42, "Intermittent Incident".			
>> INSPECTION END.			

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< ECU DIAGNOSIS >

ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000003303274

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
	Other than front wiper switch HI	OFF
FR WIPER HI	Front wiper switch HI	ON
	Other than front wiper switch LO	OFF
FR WIPER LOW	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
FR WASHER SW	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
	Front wiper is not in STOP position	OFF
FR WIPER STOP	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
	Other than lighting switch 1ST and 2ND	OFF
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
	Lighting switch HI	ON
	Other than lighting switch 2ND	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
	Other than lighting switch 2ND	OFF
HEAD LAMP SW 2	Lighting switch 2ND	ON
	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
	Other than lighting switch AUTO	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
	Front door LH closed	OFF
DOOR SW-DR	Front door LH opened	ON
	Front door RH closed	OFF
DOOR SW-AS	Front door RH opened	ON
	Rear door RH closed	OFF
DOOR SW-RR	Rear door RH opened	ON
	Rear door LH closed	OFF
DOOR SW-RL	Rear door LH opened	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF
	Other than power door lock switch LOCK	OFF
CDL LOCK SW	Door lock/unlock switch LOCK	ON
	Other than door lock/unlock switch UNLOCK	OFF
CDL UNLOCK SW	Door lock/unlock switch UNLOCK	ON
	Other than front door LH key cylinder LOCK position	OFF
KEY CYL LK-SW	Front door LH key cylinder LOCK position	ON
	Other than front door LH key cylinder UNLOCK position	OFF
KEY CYL UN-SW	Front door LH key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF
	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
FAN ON SIG	When AUTO switch or fan switch is pressed	ON
AIR COND SW	When A/C switch is pressed	ON
	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
	When LOCK button of Intelligent Key is pressed	ON
	When UNLOCK button of Intelligent Key is not pressed	OFF
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON
	When PANIC button of Intelligent Key is not pressed	OFF
RKE-PANIC	When PANIC button of Intelligent Key is pressed	ON
	When UNLOCK button of Intelligent Key is not pressed and held	OFF
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON
	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL (LIGHT) SEN-	When outside of the vehicle is bright	Close to 5 V
SOR	When outside of the vehicle is dark	Close to 0 V
	When front door LH request switch is not pressed	OFF
REQ SW-DR	When front door LH request switch is pressed	ON
	When front door RH request switch is not pressed	OFF
REQ SW-AS	When front door RH request switch is pressed	ON
	When trunk request switch is not pressed	OFF
REQ SW-BD/TR	When trunk request switch is pressed	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
PUSH SW	When push-button ignition switch is not pressed	OFF
10011000	When push-button ignition switch is pressed	ON
IGN RLY -F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
ACC RLY -F/B	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
DIVARE OW 1	When the brake pedal is depressed	OFF
DETE/CANCL SW	When selector lever is in P position	OFF
DETERMINE SW	When selector lever is in any position other than P	ON
SFT PN/N SW	When selector lever is in any position other than P or N	OFF
SFT PIN/IN SW	When selector lever is in P or N position	ON
S/L -LOCK	Electronic steering column lock LOCK status	OFF
	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L -UNLOCK	Electronic steering column lock LOCK status	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-F/B	Ignition switch ON	ON
	Front door LH UNLOCK status	OFF
UNLK SEN-DR	Front door LH LOCK status	ON
PUSH SW -IPDM	When push-button ignition switch is not pressed (IPDM E/R sends via CAN)	OFF
	When push-button ignition switch is pressed (IPDM E/R sends via CAN)	ON
	Ignition switch OFF or ACC	OFF
IGN RLY1 F/B	Ignition switch ON	ON
	When selector lever is in P position (IPDM E/R sends via CAN)	OFF
DETE SW -IPDM	When selector lever is in any position other than P (IPDM E/R sends via CAN)	ON
SFT PN -IPDM	When selector lever is in any position other than P or N (IPDM E/R sends via CAN)	OFF
	When selector lever is in P or N position (IPDM E/R sends via CAN)	ON
	When selector lever is in any position other than P (combination meter sends via CAN)	OFF
SFT P -MET	When selector lever is in P position (combination meter sends via CAN)	ON
OFT N MET	When selector lever is in any position other than N (combination meter sends via CAN)	OFF
SFT N -MET	When selector lever is in N position (combination meter sends via CAN)	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Electronic steering column lock LOCK status (IPDM E/R sends via CAN)	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status (IPDM E/R sends via CAN)	ON

< ECU DIAGNOSIS >

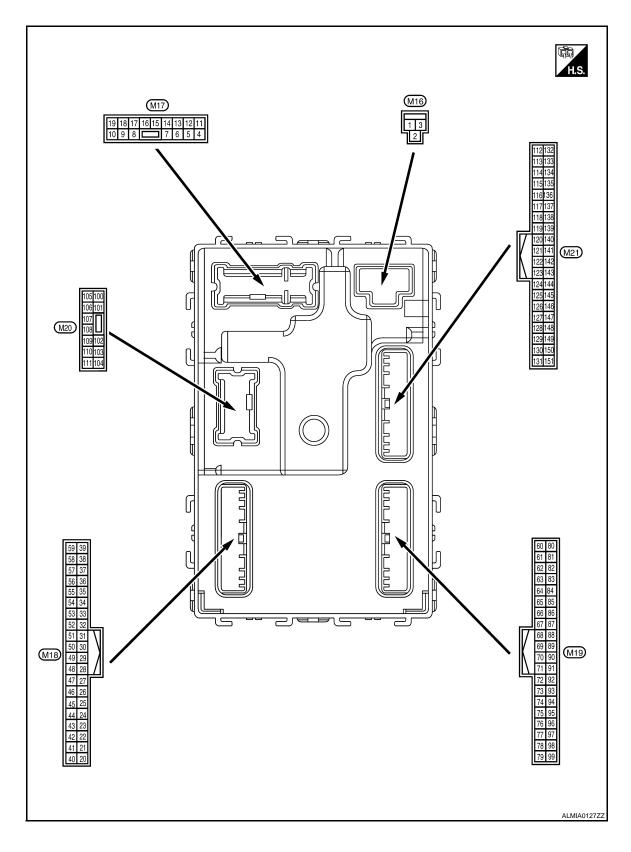
Monitor Item	Condition	Value/Status
	Electronic steering column lock UNLOCK status (IPDM E/R sends via CAN)	OFF
S/L UNLCK-IPDM	Electronic steering column lock LOCK status (IPDM E/R sends via CAN)	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Front door LH LOCK status	LOCK
DR DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Front door LH UNLOCK status	UNLK
	Front door RH LOCK status	LOCK
AS DOOR STATE	Wait with selective UNLOCK operation (5 seconds)	READY
	Front door RH UNLOCK status	UNLK
ID OK FLAG	Ignition switch ACC or ON	RESET
	Ignition switch OFF	SET
PRMT ENG STAT	When the hybrid system start is prohibited	RESET
PRIMI ENG STAT	When the hybrid system start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
RET 3W -3LOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
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	When ID of front LH tire transmitter is registered (refer to <u>WT-6, "ID</u> <u>Registration Procedure"</u>)	DONE
	When ID of front LH tire transmitter is not registered (refer to <u>WT-6.</u> <u>"ID Registration Procedure"</u>)	YET
	When ID of front RH tire transmitter is registered (refer to <u>WT-6, "ID</u> <u>Registration Procedure"</u>)	DONE
ID REGST FR1	When ID of front RH tire transmitter is not registered (refer to <u>WT-6.</u> <u>"ID Registration Procedure"</u>)	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered (refer to <u>WT-6, "ID</u> <u>Registration Procedure"</u>)	DONE
	When ID of rear RH tire transmitter is not registered (refer to <u>WT-6.</u> <u>"ID Registration Procedure"</u>)	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered (refer to <u>WT-6, "ID</u> <u>Registration Procedure"</u>)	DONE
ID REGOLALI	When ID of rear LH tire transmitter is not registered (refer to <u>WT-6</u> , <u>"ID Registration Procedure"</u>)	YET

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON

Terminal Layout

INFOID:000000003303275



< ECU DIAGNOSIS > Physical Values

INFOID:000000003303276

А

	inal No.	Description				Value	В
(Wire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	С
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage	D
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage	
4	Ground	Interior room lamp	Output	After passing the in er operation time	nterior room lamp battery sav-	٥V	E
(P/W)	Giouna	power supply	Output	Any other time after lamp battery save	er passing the interior room r operation time	Battery voltage	F
5	Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage	
(G/Y)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	٥V	G
7	Ground	Stop Jamp	Output	Poom lamp timer	ON	Battery voltage	
(R/W)	Ground	Step lamp	Output	Room lamp timer	OFF	0V	Н
8	Ground	All doors LOCK	Quitout	All doors	LOCK (actuator is activat- ed)	Battery voltage	
(V)	Ground	All doors LOCK	Output	All doors	Other than LOCK (actuator is not activated)	0V	
9	Ground	Front door LH UN-	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage	J
(G)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	٥V	
10	Ground	Rear door RH and rear door LH UN-	Output	Rear door RH	UNLOCK (actuator is activated)	Battery voltage	DLł
(G/Y)	Giouna	LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	٥V	L
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	
13 (B)	Ground	Ground		Ignition switch ON	l	٥V	Μ
14 (R/Y)	Ground	Push-button ignition switch illumination ground	Input	Tail lamp	OFF	0V NOTE: When the illumination brighten- ing/dimming level is in the neutral position (V) 10 0 2 ms JSNIA0010GB	N O P
15					OFF	Battery voltage	
(Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	ACC	0V	

	nal No.	Description				Value
	e color)	Signal name	Input/		Condition	(Approx.)
(+)	(-)	olghar hamo	Output		1	
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF	0V (V) 15 0 1 s PKID0926E 6.5V
					Turn signal switch OFF	OV
18 (G/O)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5
19	Oneveral	Room lamp timer	Outrast	Interior room	Lamps fully OFF	Battery voltage
(Y)	Ground	control	Output	lamp	Lamps fully ON	OV
21	21	Ignition switc	Ignition switch	When outside of the vehi- cle is bright	Close to 5V	
(P/B)	Ground	Optical sensor signal	Input	ON	When outside of the vehi- cle is dark	Close to 0V
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage
				Stop lamp switch	OFF (brake pedal is not de- pressed)	٥V
26 (O/L)	Ground	Stop lamp switch 2	Input		ON (brake pedal is de- pressed)	Battery voltage
				ICC brake hold	OFF	0V
				relay (with ICC)	ON	Battery voltage
27 (G/W)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V
					UNLOCK status	OV
29	Ground	Key slot switch	Input	When Intelligent K	ey is inserted into key slot	Battery voltage
(Y)	Ground		input	When Intelligent K	ey is not inserted into key slot	0V
30	Ground	ACC feedback signal	Input	Ignition switch	OFF	0
(V/Y)	Ground		input		ACC or ON	Battery voltage
31	Ground	Ignition relay-2 feed-	Input	Ignition switch	OFF	0V
(G)	Cround	back signal	input	ignition switch	ON	Battery voltage

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inal No.	Description					
e color) (-)	Signal name	Input/ Output		Condition	value (Approx.)	A
Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	B C D
				ON (when front door RH opens)	OV	_
Ground	Compressor ON sig-	Innut	A/C switch	OFF	Battery voltage	E
Ground	nal	input	A/C Switch	ON	0V	
	Front door lock as-	1	Front door lock	OFF (neutral)	Battery voltage	F
Ground	der switch) (unlock)	Input	cylinder switch)	ON (unlock)	0V	
			Door lock/unlock	Lock	Battery Voltage	
Ground	Lock switch signal	Input	switch	Unlock	0V	G
Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB	H
						J
Ground	Rear window defog-	Input	Rear window de-	OFF	V	DLK
	ger ON signal		logger switch	ON	0V	
			Door lock/unlock	Unlock	Battery Voltage	
Ground	Unlock switch signal	Input	switch	Lock	0V	L
Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 10 10 10 10 10 10 10 10 10	M
			Ignition switch OF	F or ACC	0V	0
	Duch hetter in it.		Engine switch	ON	5.5V	
Ground	Push-button ignition switch illumination	Output	(push switch) illu-			Ρ
Ground	LOCK indicator lamp	Output	LOCK indicator			
Ground	Receiver & sensor ground	Input	Ignition switch ON		0V	
	 color) (-) Ground Ground Ground Ground Ground Ground Ground Ground 	a color) Signal name (-) Signal name (-) Signal name Ground Front door RH switch Ground Compressor ON signal Ground Front door lock assembly LH (key cylinder switch) (unlock) Ground Lock switch signal Ground Lock switch signal Ground Rear window defog- ger ON signal Ground Unlock switch signal Ground Power window serial link Ground Power window serial link	a color)Imput/ Signal nameImput/ Output(-)Signal nameImput/ Output(-)Front door RH switchImputGroundCompressor ON sig- alImputGroundFront door lock as- sembly LH (key cylin- der switch) (unlock)ImputGroundLock switch signalImputGroundIck switch signalImputGroundRear window defog- ger ON signalImputGroundInlock switch signalImputGroundPower window serial linkImput/ OutputGroundPower window serial inkImput/ OutputGroundLOCK indicator lampOutput	Signal name Input/ Output (·) Signal name Input/ Output Ground Front door RH switch Input Front door RH switch Ground Compressor ON sig- nal Input A/C switch Ground Compressor ON sig- nal Input Front door lock assembly LH (key cylin- der switch) (unlock) Input Front door lock assembly LH (key cylinder switch) Ground Lock switch signal Input Door lock/unlock switch Ground Crunk lid opener can- cel switch Input Rear window defog- ger ON signal Input Ground Rear window defog- ger ON signal Input Boor lock/unlock switch Ground Unlock switch signal Input Boor lock/unlock switch Ground Power window serial ink Input Boor lock/unlock switch Ground Power window serial ink Input Input Input Ground Power window serial ink Input Input Input Ground Power window serial ink Input Input Input Ground Push-button ignition switch i	a color) (·) Signal name Input/ Output Condition Ground Ground Input and Front door RH switch Input Input Front door RH switch OFF (when front door RH opens) OFF (when front door RH opens) Ground Input and Compressor ON sige result (hunock) Input Input A/C switch OFF (noutral) Ground Input and Compressor ON sige result (hunock) Input Input A/C switch OFF (noutral) Ground Ground Conswitch signal Input Input Front door lock assembly LH (key cylinder switch) ON (unlock) Ground Lock switch signal Input Input Front door lock witch assembly LH (key cylinder switch) Oor lock/unlock index Lock Ground Rear window defog- ger ON signal Input Input Rear window defog- switch ON ON Ground Rear window defog- ger ON signal Input Rear window defog- switch On lock/unlock witch Unlock Unlock Ground Power window serial Input Input Coor lock/unlock witch Unlock Unlock Ground Power window serial Input Input Door lock/unlock witch	color Value Value <t< td=""></t<>

	inal No.	Description				
(Wire	e color)	Signal name	Input/		Condition	Value (Approx.)
(+)	(-)	Oignaí name	Output			, , , , , , , , , , , , , , , , , , ,
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V
(V/W)	Ground	power supply output	Output	Ignition Switch	ACC or ON	5.0V
47	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 4 2 0 ••• 0.2s OCC3881D
(G/O)	Ground	er signal	Output		When receiving the signal from the transmitter	(V) 4 2 0 + 0.25 OCC3880D
48	Ground	Selector lever P/N	Input	Selector lever	P or N position	12.0V
(R/B)	Cround	position signal	mput		Except P and N positions	0V
					ON	0V
49 (L/O)	Ground	Security indicator sig- nal	Output	Security indicator	Blinking	(V) 15 0 15 15 15 15 15 15 15 15 15 15
					OFF	Battery voltage
					All switch OFF	0V
					Lighting switch 1ST	
					Lighting switch high-beam	
50		Combination switch		Combination switch	Lighting switch 2ND	
(LG/ B)	Ground	OUTPUT 5	Output	(Wiper intermit- tent dial 4)	Turn signal switch RH	5 0 2 ms 10.7V
					All switch OFF	
					(Wiper intermittent dial 4)	0V
					Front wiper switch HI (Wiper intermittent dial 4)	(V) 15
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	15 0 2 ms JPMIA0032GB

Terminal No.		Description				Value	
(Wire color) (+) (-)		Signal name	Input/ Output		Condition	(Approx.)	
(+)	(-)		Output		All switch OFF (Wiper intermittent dial 4)	0V	
					Front washer switch ON (Wiper intermittent dial 4)	(<u>)</u>	
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	15 10 5 0 2 ms J J J J J MIA0033GB 10.7V	
					All switch OFF	0V	
					Front wiper switch INT		
					Front wiper switch LO	(V) 15	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB	
						10.7V	
					All switch OFF	00	
			Output	(wiper intermit-	Front fog lamp switch ON Lighting switch 2ND	(V)	
54 (G/Y)	Ground	Combination switch OUTPUT 4			Lighting switch flash-to- pass		
				tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GB	
55				F eenthlessen and	ON	Battery voltage	
(BR/ W)	Ground	Front blower monitor	Input	Front blower mo- tor switch	OFF	0V	
		Front door lock as-		Front door lock	OFF (neutral)	Battery voltage	
56 (L/B)	Ground	sembly LH (key cylin- der switch) (lock)	Input	assembly LH (key cylinder switch)	ON (lock)	0V	
57 (W)	Ground	Tire pressure warn- ing check switch	Input	Symucer Switch)		Battery voltage	
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	
					ON (front door LH OPEN)	OV	
59		Rear window defog-		Rear window de-	Active	Battery voltage	
(G/R)	Ground	ger relay	Output	fogger	Not activated	0V	

	inal No.	Description		Ocea dition		Value
(vvire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
60	Ground	Front console anten-	Output	June 1 Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 5 10 15 10 15 10 15 10 15 10 10 15 10 10 15 10 10 15 10 10 15 10 10 15 10 10 15 10 10 15 10 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10
(B/R)		na 2 (-)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1
61	Ground	Center console an- tenna 2 (+)	an- Output	Itput Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 5 0 1 s
(W/R)					When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB
62	Ground	Ground Front outside handle Outp		When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 0 15 15 15 15 15 15 15 15 15 15
62 (B/Y)	Ground		Jouput	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

	inal No.	Description				Value	
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
63	0	Front outside handle	0.444	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 50 1 s JMKIA0062GB	B C D
(LG)	Ground	RH antenna (+)	Output	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	E
64	Ground	nd Front outside handle LH antenna (-)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 0 5 0 1 s JMKIA0062GB	G H I
(V)					When Intelligent Key is not in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	J DLK
65	Ground	d Front outside handle LH antenna (+) Output		When the front	When Intelligent Key is in the antenna detection area	(V) 15 0 15 15 15 15 15 15 15 15 15 15	M
(P)	Ground		door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 10 1 1 1 1 1 1 J J J J J J J J J J J J J	O P	

(Wire color) Signal name Input/Output Condition Value (Approx.) (*) (·) Signal name Input/Output Condition (*) (*) (6) Ground Instrument panel an- tenna (·) Output Ignition switch When Intelligent Key is in the passenger compart- ment (*) (*) (6) Ground Instrument panel an- tenna (·) Output Ignition switch When Intelligent Key is not in the passenger compart- ment (*) (67) Ground Instrument panel an- tenna (+) Output Ignition switch When Intelligent Key is not in the passenger compart- ment (*) (67) Ground Instrument panel an- tenna (+) Output Ignition switch When Intelligent Key is not in the passenger compart- ment (*) (67) Ground Instrument panel an- tenna (+) Output Ignition switch When Intelligent Key is not in the passenger compart- ment (*) (68) Ground NATS antenna amp (Output Input/ Output During waiting While inserting the Intelligent Key slot. Just atter pressing lightlon move. (69) Ground NATS antenna amp (Output Input/ Output During waiting Output Iphiton switch is pressed While inserting the Intelligent Key slot. Just atter pressing lightlon move. (70) Ground		inal No.	Description				Value
66 (R) Ground Instrument panel and () Output Ignition switch OFF When Intelligent Key is in the passenger compart. ment Immunouscesse 67 (G) Ground Instrument panel and () Output Ignition switch OFF When Intelligent Key is not in the passenger compart. ment Immunouscesse 67 (G) Ground Instrument panel and (+) Output Ignition switch OFF When Intelligent Key is in the passenger compart. ment Immunouscesse 67 (G) Ground Instrument panel and (+) Output Ignition switch OFF When Intelligent Key is in the passenger compart. ment Immunouscesse 68 (G/O) Ground NATS antenna amp (built in key slot) Input/ Output During waiting Ignition switch is pressed while inserting the Intelligent Key is not in the passenger compart. ment Just after pressing ignition switch is pressed while inserting the Intelligent Key is not in the passenger compart. ment Immunouscesse 68 (G/O) Ground NATS antenna amp (built in key slot) Input/ Output During waiting Ignition switch is pressed while inserting the Intelligent Key is not in the passenger compart. ment Just after pressing ignition switch is pressed while inserting the Intelligent Key is not in the passenger compart. Ment Immunouscesse 69 (G) Ground NATS antenna amp (b		-	Signal name			Condition	
(K) Lemis (-) (K) (K) (K) (K) (K) (K) (K) (K) (G) (K) (K) (K) (K) (K) (G) (K) (K) (K) (K) (K) (K) (G) (K) (K) (K) (K) (K) (K) (K) (G) (K) (K) (K)		Ground		Outout		the passenger compart-	
67 (G) Ground Instrument panel an- tenna (+) Output Ignition switch OFF When Intelligent Key is in the passenger compart- ment Image: Compart- ment 67 (G) Ground Instrument panel an- tenna (+) Output Ignition switch OFF When Intelligent Key is not in the passenger compart- ment Image: Compart- sent 68 (G/O) Ground NATS antenna amp (built in key slot) Input/ Output During waiting Output Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move. 69 (G) Ground NATS antenna amp (built in key slot) Input/ Output During waiting Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Just after pressing ignition switch. Pointer of tester should move. 70 (C) Ground Ignition relay-2 con- (built in key slot) Output Ignition switch OFF or ACC OV	(R)		tenna (-)	Gutput	OFF	in the passenger compart-	
(G) Image: I		Ground		Output		the passenger compart-	
68 (G/O)GroundNATS antenna amp (built in key slot)Input/ OutputDuring waitingwhile inserting the Intelli- gent Key into the key slot.switch. Pointer of tester should move.69 (O)GroundNATS antenna amp (built in key slot)Input/ OutputDuring waitingIgnition switch is pressed while inserting the Intelli- gent Key into the key slot.Just after pressing ignition switch. Pointer of tester should move.69 (O)GroundNATS antenna amp (built in key slot)Input/ OutputDuring waitingIgnition switch is pressed while inserting the Intelli- gent Key into the key slot.Just after pressing ignition switch. Pointer of tester should move.70 (D)GroundIgnition relay-2 con- (built in key slot)Output Ignition switchOFF or ACCOV	(G)	Ground				in the passenger compart-	
69 (O) Ground INALS antenna amp (built in key slot) Input Output During waiting while inserting the Intelli- gent Key into the key slot. switch. Pointer of tester should move. 70 (a reput) Ground Ignition relay-2 con- tor relation Output Ignition switch OFF or ACC OV		Ground			During waiting	while inserting the Intelli-	switch. Pointer of tester should
Ground Ground Output Ignition switch		Ground			During waiting	while inserting the Intelli-	switch. Pointer of tester should
		Ground		Output	Ignition switch		

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Terminal No. (Wire color)		Description			0	Value	
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
71 (L/O) Ground		Remote keyless entry Input/ receiver signal Output		During waiting		(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1	
				When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB	
75 (R/Y)		Combination switch INPUT 5			All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0041GB 1.4V	
	Ground			Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0037GB 1.3V	
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 2 ms JPMIA0040GB 1.3V	

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	inal No.	Description				Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0041GB 1.4V
76 (R/G)	Ground	Combination switch INPUT 3	Input	Combination	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3V
				switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 0 2 ms JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 0 2 ms JPMIA0040GB 1.3V
77 (BR)	Ground	Push-button ignition switch	Input	Engine switch (push switch)	Pressed	0V
78	Ground	CAN-L	Input/		Not pressed	Battery voltage
(P) 79	Ground	CAN-H	Output Input/			
(L)	Cround		Output		OFF	OV
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 1 1 1 1 1 1 1 1 1 1 1 1
					ON	Battery voltage

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Terminal No. (Wire color)		Description			0	Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
81	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage	
(LG)	Giouna		Output	Ignition switch	ON	0V	
83	Ground	ACC relay control	Output	Ignition switch	OFF	OV	
(L)	Clound		Output	Ignition Switch	ACC or ON	Battery voltage	
84 (Y/R)	Ground	ECTV device (detent switch)	Output		_	Battery voltage	
85	Oracial	Electronic steering	la a ch	Electronic steer-	Lock status	OV	
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage	
86		Electronic steering		Electronic steer-	Lock status	Battery voltage	
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V	
87	Ground	ECTV device (detent	Incut		P position	0V	
(G/B)	Ground	switch)	Input	Selector lever	Any position other than P	Battery voltage	
		d Front door RH re- quest switch			ON (pressed)	٥V	
88 (P/L) G	Ground		Input	Front door RH re- quest switch	OFF (not pressed)	(V) 15 10 10 ms JPMIA0016GI 1.0V	
		d Front door LH re- quest switch			ON (pressed)	OV	
89 (B/W)	Ground		Innut	rt Front door LH re- quest switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GI 1.0V	
90	Ground	Front blower motor	Output	Ignition switch	OFF or ACC	0V	
(Y)		relay control		0	ON	Battery voltage	
91 (L/R)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch OFF	=	Battery voltage	
94		Electronic steering	A 1		OFF or ACC	Battery voltage	
(G/Y) G	Ground		Output	Ignition switch	ON	0V	

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	inal No.	Description				Value	
(VVire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)	
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4V	
					Turn signal switch LH	(V) 15 0 5 0 2 ms JPMIA0037GB 1.3V	
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 0 2 ms JPMIA0036GB 1.3V	
					Front wiper switch LO	(V) 15 0 0 2 ms JPMIA0038GB 1.3V	
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V	

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Terminal No. (Wire color)		Description				Value	^
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switch OFF (Wiper intermittent dial 4)	(V) 15 0 2.ms JPMIA0041GB 1.4V	B C D
96	Ground	Combination switch	bination switch JT 4 Input	nput Combination switch	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0038GB 1.3V	F
(P/B)					Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 0 2 ms JPMIA0036GB 1.3V	G H I
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 0 2 ms JPMIA0039GB 1.3V	J DLK L

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	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF	(V) 15 10 0 2 ms JPMIA0041GB 1.4V
					Lighting switch flash-to- pass	(V) 15 0 2 ms JPMIA0037GB 1.3V
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 0 0 2 ms JPMIA0036GB 1.3V
					Front wiper switch INT	(V) 15 0 2 ms JPMIA0038GB 1.3V
					Front wiper switch HI	(V) 15 0 2 ms 1.3V
					Pressed	0 V
98 (G/R)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 0 5 10 5 10 5 10 5 10 5 10 5 10 5 1

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	inal No.	Description				Value	Δ
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	A
					LOCK status	Battery voltage	В
99 (L/Y)	Ground	Electronic steering column lock CPU communication	Input/ Output	Electronic steer- ing column lock	LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB	C
					For 15 seconds after UN- LOCK	Battery voltage	E
					15 seconds or later after UNLOCK	٥V	_
103	Ground	Trunk lid opening	Output	Trunk lid	Open (trunk lid opener ac- tuator is activated)	Battery voltage	F
(V)	Cround		Output		Close (trunk lid opener ac- tuator is not activated)	٥V	G
110	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V	
(V/W)	Cround		output		OFF	Battery voltage	Н
114		Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	l
(B)	Ground	1 (-)	Output	OFF			DLI
					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	L

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< ECU DIAGNOSIS >

	inal No.	Description				Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
115	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(W)		1 (+)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 5 0 1 s JMKIA0063GB
118	Ground	Rear bumper anten-	Output	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(L/O)		na (-)		is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB
119 (BR/	Ground	Rear bumper anten-	Output	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 0 1 s JMKIA0062GB
(BK/ W)	Ground	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 5 0 1 s JMKIA0063GB

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	inal No.	Description					
	e color)	Signal name	Input/	-	Condition	Value (Approx.)	A
(+)	(-)	Cignarhamo	Output		0		
127 (BR/	Ground	Ignition relay (IPDM	Output	Ignition switch	OFF or ACC	Battery voltage	В
(Dr.)	0.04.14	E/R) control	e aip ai	-gritteri ettiteri	ON	0V	
130 (Y/G)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 0 5 0 10 ms JPMIA0011GB	C
						11.8V	Е
					ON (trunk is open)	0V	
132		2		Ignition switch	When selector lever is in P or N position and the brake peddle is not depressed	0V	F
(R)	Ground	Start signal	Output	ŎN	When selector lever is in P or N position and the brake peddle is depressed	Battery voltage	G
					ON (pressed)	0V	
141 (G/R)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 0 10 10 10 10 10 10 10 10 10	H I J
144	0	Request switch buzz-	0.1.1	Request switch	Sounding	0V	
(GR)	Ground	er	Output	buzzer	Not sounding	Battery voltage	DLK
					Pressed	0V	
147 (L/R)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Not pressed	(V) 15 10 10 10 ms JPMIA0011GB 11.8V	L M N
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	O P
					ON (when rear door RH opens)	٥V	

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	inal No.	Description				Value
(VVire	e color)	Signal name	Input/		Condition	(Approx.)
(+)	(-)	Oignaí name	Output			
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 0 10 10 10 10 11.8V
					ON (when rear door LH opens)	0V

*: With LH and RH front window anti-pinch system

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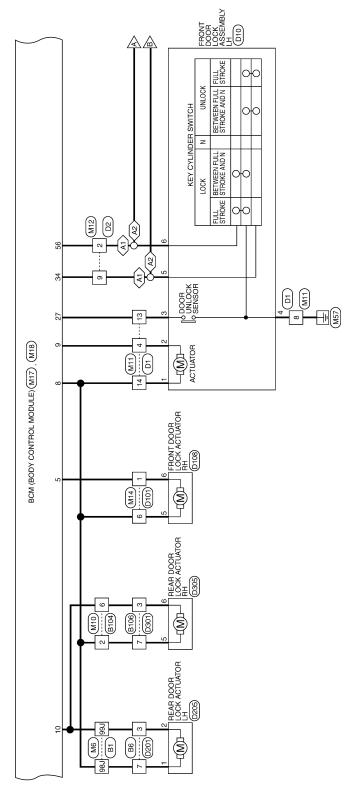
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 (A1): WITH LEFT FRONT ONLY POWER

 WINDOW ANTI-PINCH SYSTEM

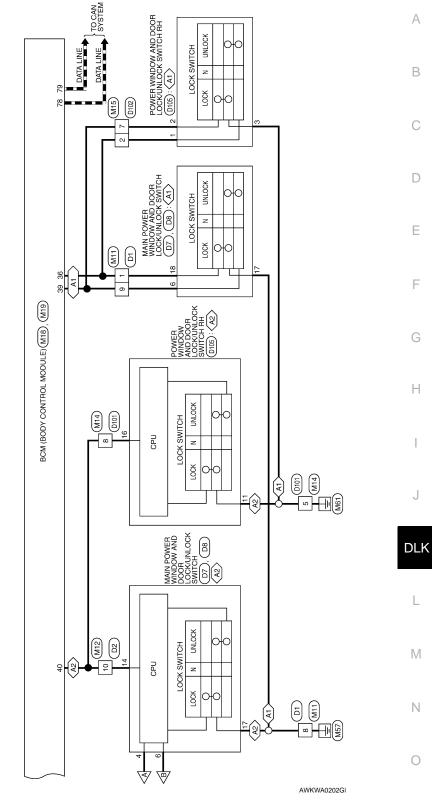
 (A2): WITH LEFT AND RIGHT FRONT POWER

 (A2): WINDOW ANTI-PINCH SYSTEM



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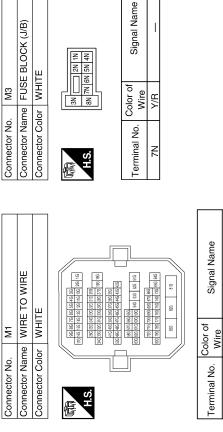
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 (A1)
 WITH LEFT FRONT ONLY POWER WINDOW ANTI-PIKCH SYSTEM

 (A2)
 WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PIKCH SYSTEM

 ■=
 DATA LINE



253/244/233/223 353/284/284/234/284/214/284/194/194/

 27.1
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 58.0
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 58.0
 58.0

 68.1
 4.4.1
 4.2.1
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 4.0.1
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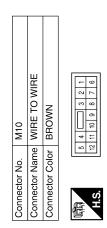
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Connector Name WIRE TO WIRE Connector Color WHITE

9W

Connector No.

Signal Name	I	ļ	ļ	
Color of Wire	٨	G/Y	R/B	R/W
Terminal No.	2	9	10	11



AWKIA0523GB

BCM (BODY CONTROL MODULE)

Signal Name

Color of

Wire

Terminal No.

W/B

82G

SB R/B V/G

17J 22J 25J 98J 99J

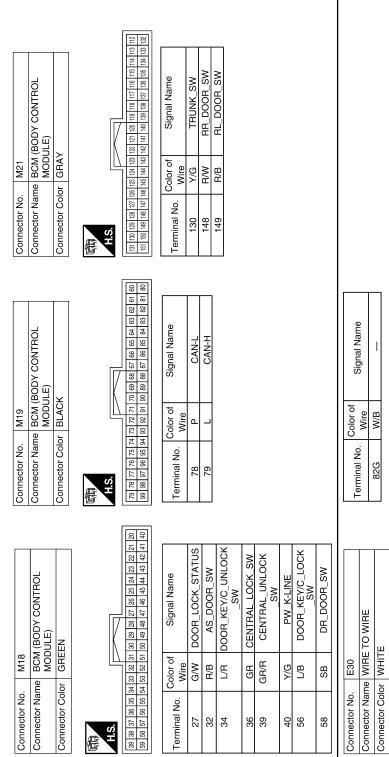
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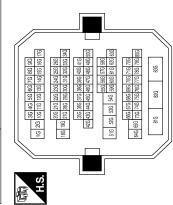
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		A
Connector No. M14 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Signal Name Tarminal No. F Signal Name 6 V/G 7 Color of Signal Name	Connector No. M17 Connector Name BCM (BODY CONTROL Connector Name BCM (BODY CONTROL MODULE) MODULE) Connector Color WHITE Monage Game Monage Game Monage Game Monage Game Monage Game Monage Galor Mathematication Mathematication Mathematication Color of Signal Name Signal Name Galor Galor Galor Galor Galor Signal Name Signal Name	C D E F
Connector No. M12 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Solor MHTE Connector Solor MHTE Connector Solor MITE Connector Solor MITE Connector Solor MITE Connector Solor MITE Connector Solor Material No. Color of Signal Name O UR UR O O O O O O O	Connector No. M16 Connector Name BCM (BODY CONTROL Connector Color BLACK Image: Signal Name Image: Signal Name Image: Terminal No. Color of Nire Signal Name Image: No. Color of Nire Signal Name	G H I J
Connector No. M11 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Maine I 1 2 3 Terminal No. Color of Mire Signal Name 1 G/M - 13 G/M - 14 V -	Connector No. M15 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Signal Name Table 1 Z Connector Signal Name Z Connector Signal Name	L M N O
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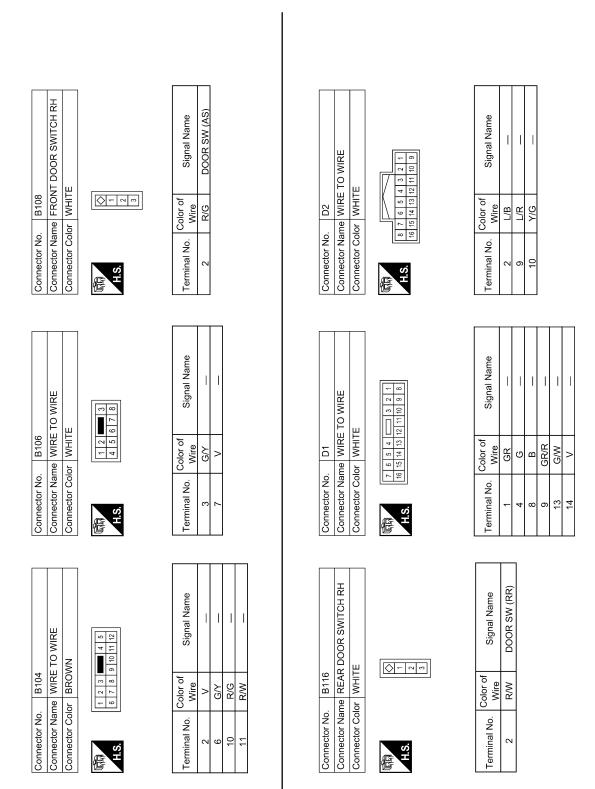


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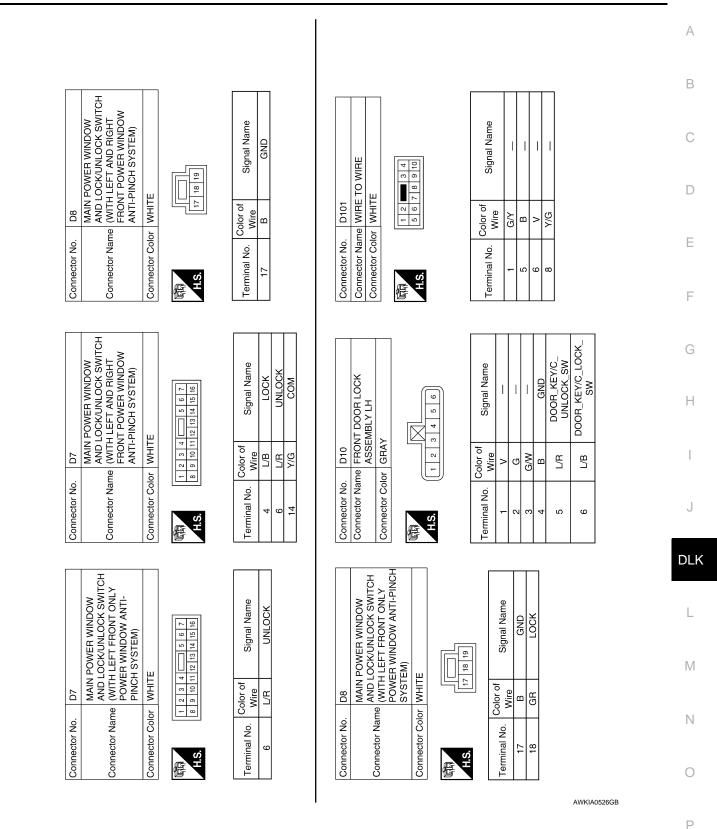
А В Connector Name TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID Signal Name Signal Name С Connector Name WIRE TO WIRE 1 2 - 3 4 5 6 7 8 2 1 4 3 D Connector Color WHITE WHITE Color of Wire Color of B28 Wire Bg B ¥G G/Y > Connector Color Ε Connector No. Connector No. Terminal No. Terminal No. ~ ო N H.S. H.S. 佢 E F G Connector Name REAR DOOR SWITCH LH DOOR SW(RL) Signal Name Signal Name T Н Connector Color WHITE Color of B18 Color of Wire Wire R/B SB B/B Y/G G∖ > Connector No. Terminal No. Terminal No. J 22J 25J 98J 99J 17J 2 H.S. E DLK Connector Name FRONT DOOR SWITCH LH DOOR SW(DR) Signal Name L Connector Name WIRE TO WIRE
 NN
 NN< 11 21 (0) (1) (2) (3) (4) (3) (4) (3) 161 161 201 211 261 261 261 261 261 31.4 (22.1 (33.1 34.4 (35.1 35.4 (32.1 45.1 45.1 45.1 145.1 Μ Connector Color WHITE Connector Color WHITE N N → Q Color of Wire SB ᇤ B8 Л Connector No. Ν Connector No. Terminal No. \$ H.S. H.S. E E 0 AWKIA0525GB

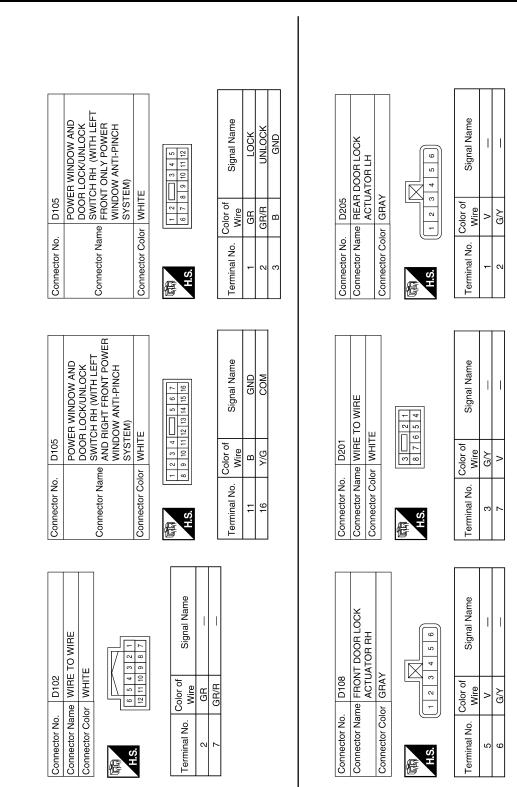
BCM (BODY CONTROL MODULE)



ALKIA0247GB

BCM (BODY CONTROL MODULE)





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AWKIA0527GB

	REAR DOOR LOCK ACTUATOR RH		4 5 6	Signal Name	
D305	ne REAF ACTU	or GRA	1 2 3	Color of Wire	
Connector No.	Connector Name REAR DOOR LOCK ACTUATOR RH	Connector Color GRAY	赋 H.S.	Terminal No.	
				ame	

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H.S. E

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

Signal Name		1
Color of Wire	G/Y	٨
Terminal No.	e	7

Signal Name	Ι	-
Color of Wire	>	G/Y
Terminal No.	5	9

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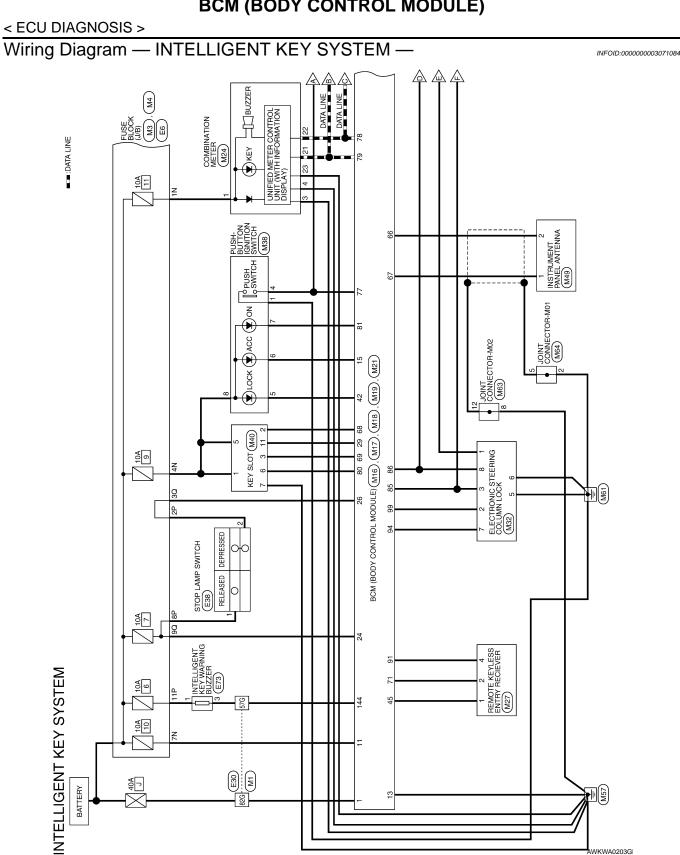
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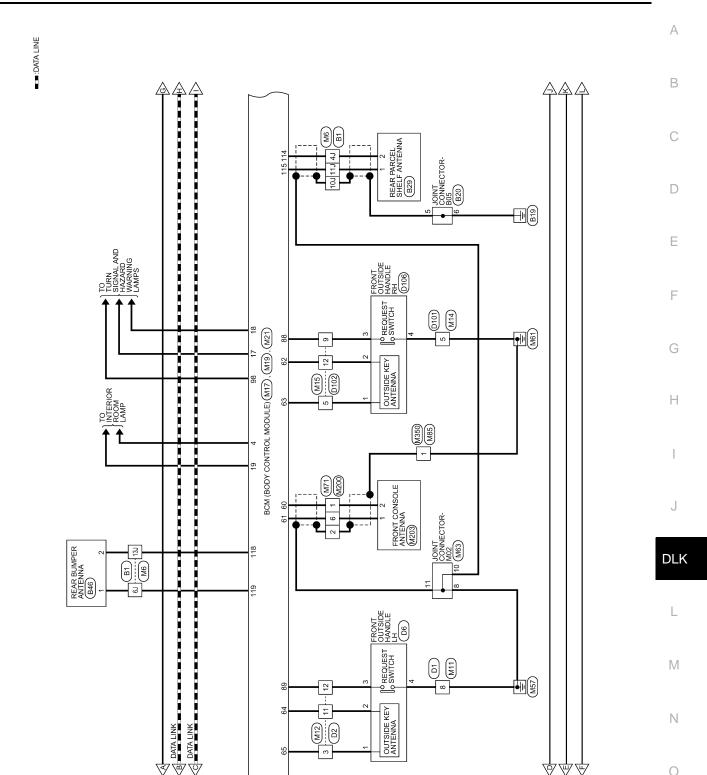
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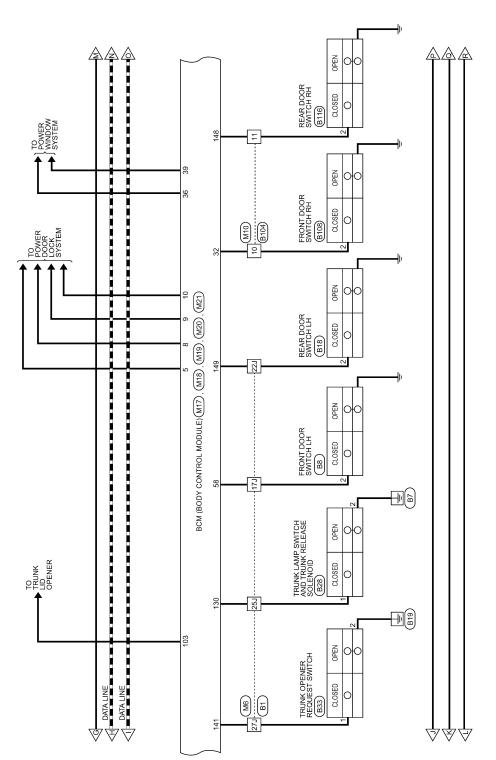
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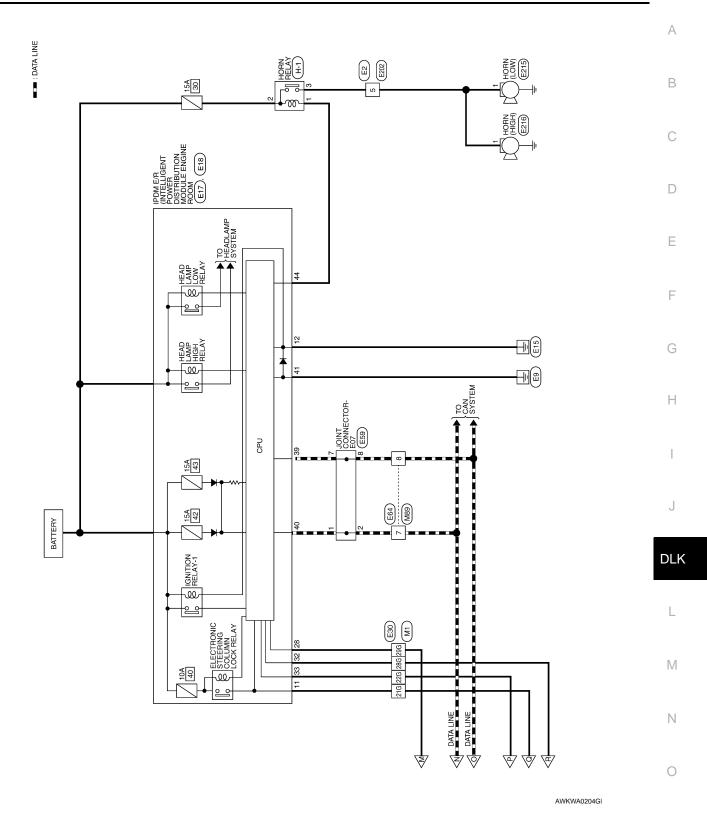
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ETT : DATA LINE

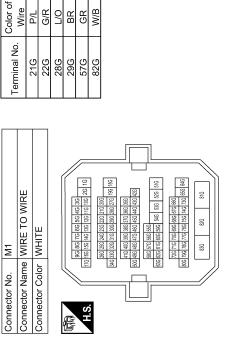


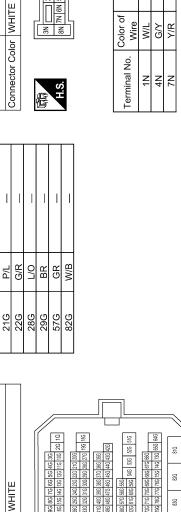
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INTELLIGENT KEY SYSTEM CONNECTORS





Signal Name

Color of

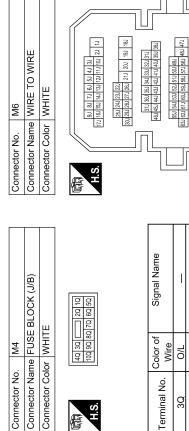
Wire

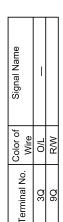
W/L G/Y

I

Y/R

L 1





87.1 86.1 85.1 84.1 92.1 91.1 90.1 88.1 88.1 83.1 82.1 80.1

ALKIA0248GB

Connector Name FUSE BLOCK (J/B)

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Connector No.

Signal Name

3N 7N 6N 5N 4N

BCM (BODY CONTROL MODULE)

Signal Name

Color of

Wire

Terminal No.

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SHIELD BR/W

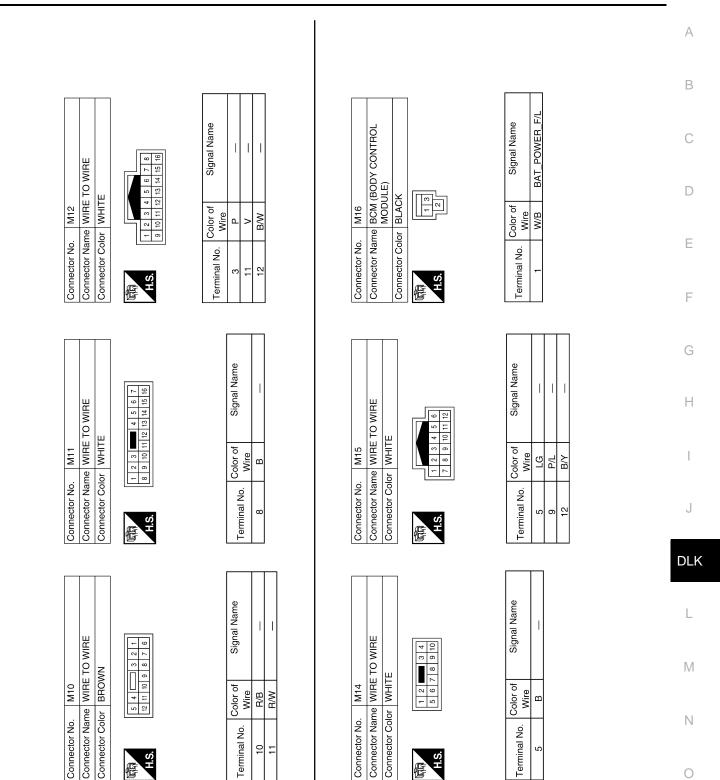
L/O

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R/B V/W

G/R

BCM (BODY CONTROL MODULE)



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Connector No. M19	Connector Name	Connector Color BLACK		H.S.	4 22 22 21 20 4 4 22 22 14 20 9 38 97 36 56 34 58 28 29 150 28 14 20 9 38 97 36 56 34 38 22 31 30 28 88 87 36 56 44 58 28 151 80	Vame Color of Signal Name Wire	60	N 61 W/R ROOM_ANT_2_A	AP_HIGH_ 62 B/Y AS_DOOR_ANT_B		SW_1 64 V DR_DOOR_ANT_B	R_SW 65 P DR_DOOR_ANT_A	OCK_SW 66 R ROOM_ANT_1_B	UNLOCK67 G ROOM_ANT_1_A	W 68 G/O FOB_READER_CLOCK	K_LED 69 0 FOB_READER_DATA	2_A/L 71 L/O RF1_TUNER_SIGNAL	IR_SW 77 BR ENG_START_SW	79 L CAN-H	80 R/L FOB_SLOT_ ILLUMINATION	81 LG IGN_ON_LED	85 L/O S/L CONDITION 1	
	DDY CONTROL	()			28 27 26 25 24 23 22 21 20 48 47 46 45 44 43 42 41 40	Signal Name	STOP_LAMP_LOW_	SW	STOP_LAMP_HIGH_	SW	FOB_IN_SW_1	AS_DOOR_SW	ENTRAL_LOCK_SW	CENTRAL_UNLOCK_	SW	S/L_LOCK_LED	GND_RF2_A/L	DR DOOR SW					

Connector No.	M18	
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	or GREEN	EN
同间 H.S.		
39 38 37 36 35 34 59 58 57 56 55 54	33 32 31 30 53 52 51 50) 29 28 27 26 25 24 29 22 21 20 1 49 48 47 46 45 44 43 42 41 40
Terminal No.	Color of Wire	Signal Name
24	R/W	STOP_LAMP_LOW_ SW
26	O/L	STOP_LAMP_HIGH_ SW
59	٨	FOB_IN_SW_1
32	R/B	AS_DOOR_SW
36	ЯÐ	CENTRAL_LOCK_SW
39	GR/R	CENTRAL_UNLOCK_ SW
42	Ч	S/L_LOCK_LED
45	Ч	GND_RF2_A/L
58	SB	DR DOOR SW

Connector No.	M17
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE
H C 1112	4 5 6 7 <u>3</u> 8 9 10 11 12 13 14 15 16 17 18 19
2	

Signal Name	ROOM_LAMP_BAT_S AVER	CDL_AS	CDL_COMMON	CDL_DR/FL	CDL_RR_RL_BACK	BAT_BCM_FUSE	GND1	ACC_LED	FR_FLASHER	FL_FLASHER	ROOM_LAMP_OUTPUT
Color of Wire	P/W	G/Y	٧	G	G/Y	Y/R	В	Y/L	G/B	G/Y	×
Terminal No.	4	5	8	6	10	11	13	15	17	18	19

AWKIA0528GB

RF1_POWER_SUPPLY S/L_POWER_SUPPLY_ 12V S/L_K-LINE

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AS_REQUEST SWITCH

Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 19 20 21 22 23 24 25 24 26 23 34 35 38 37 38 39 40	Terminal No. Color of Signal Name	M/L	4 B GND		<u>ط</u> ۱	23 B GND	Terminal No. Color of Signal Name	1 P/L S/L_12V_MECHANICA	2 L/Y S/L_COM		G/Y S/L 12	8 G/R S/L CONDITION 2	
Connector No. M21 Connector Name BCM (BODY CONTROL Connector Color GRAY		113 112 133 132	No. Color of Signal Name Vire	114 B TRUNK ANT 1 B 115 W TRUNK ANT 1 A		119 BR/W BACK DOOR ANT A	en e	R/W RR R/B RL		Connector Name ELECT HONIC S LEEKING Connector Color WHITE		7			
Connector No. M20 Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE	(100) [100]	Terminal No. Color of Wire Signal Name 103 V CDL_BACK_TRUNK							Connector No. M27	Connector Name REMULE KEYLESS ENTRY Connector Color BLACK	_	HS		Terminal No. Color of Signal Name	

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GND SIGNAL 12V

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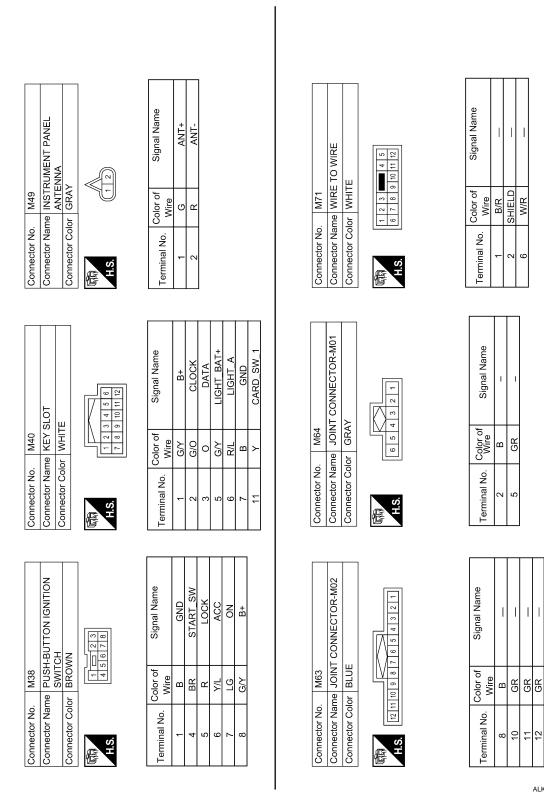
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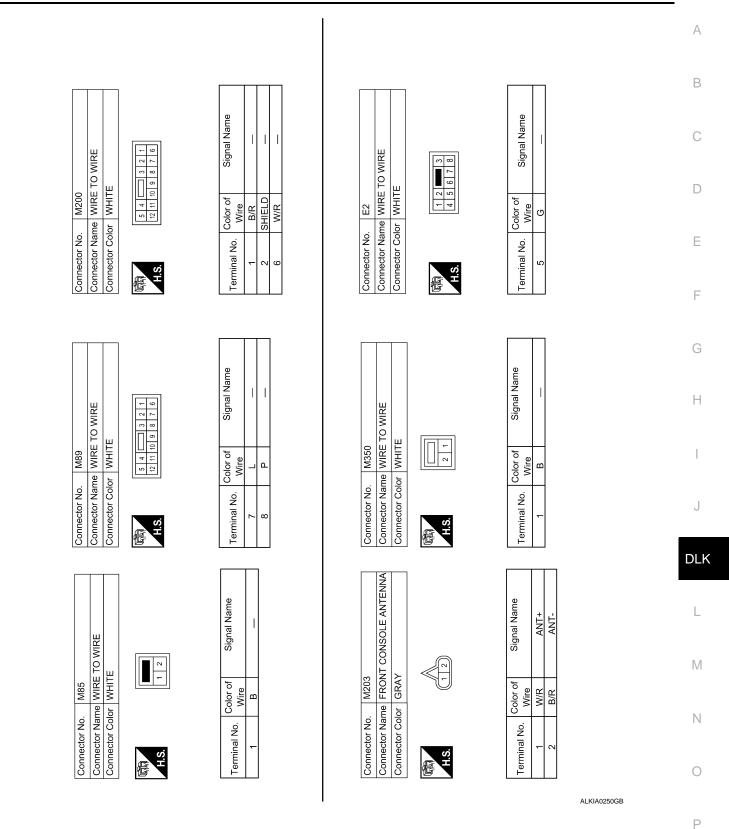
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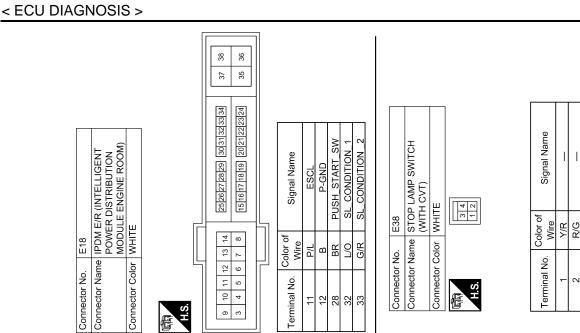
BCM (BODY CONTROL MODULE)



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BCM (BODY CONTROL MODULE)





	Connector No.	. E17	
	Connector Na		Connector Name IPDM E/R (INTELLIGENT
		MOD	POWER DISTRIBUTION MODULE ENGINE ROOM)
	Connector Color WHITE	lor WHIT	Э.
			Γ
	E	Ľ	
	H.S.	42 41 40 39 46 45 44 43	10 39 4 43
	Terminal No	Color of	Signal Name
		Wire	
	39	٩	CAN-L
ſ			

 7P
 6P
 5P
 4P
 3P
 2P
 1P

 16P
 15P
 14P
 13P
 12P
 11P
 10P
 9P
 8P

H.S.

Connector Name FUSE BLOCK (J/B)

E6

Connector No.

Connector Color WHITE

Signal Name		I	I	
Color of Wire	R/G	Y/R	γ/B	
Terminal No.	2P	8P	11P	

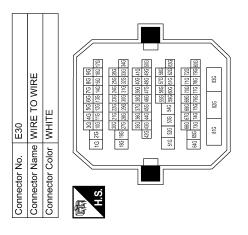
CAN-H S-GND HORN_RLY

G/W

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41 40

Cianol Nomo	olgriar Name	I	I	I	I	Ι	1	
Color of	Wire	P/L	G/R	Г/О	BR	GR	W/B	
Torminol No		21G	22G	28G	29G	57G	82G	

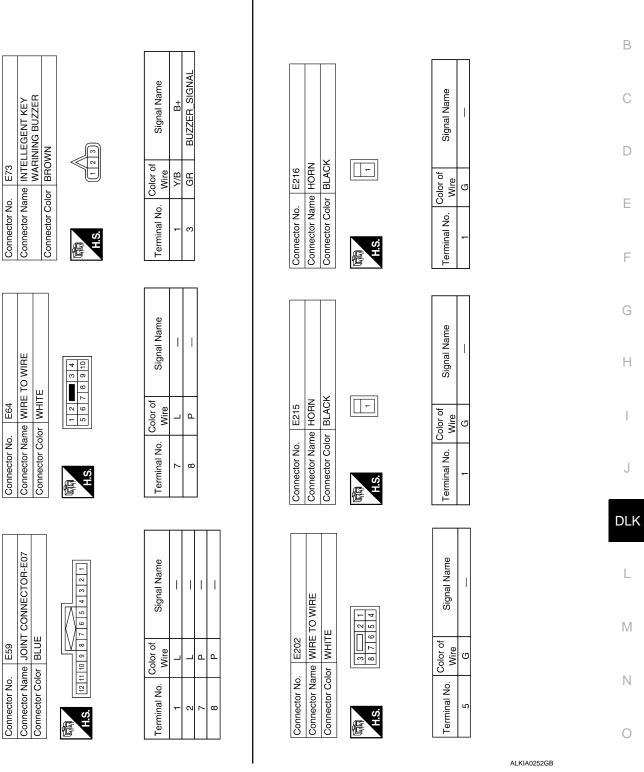


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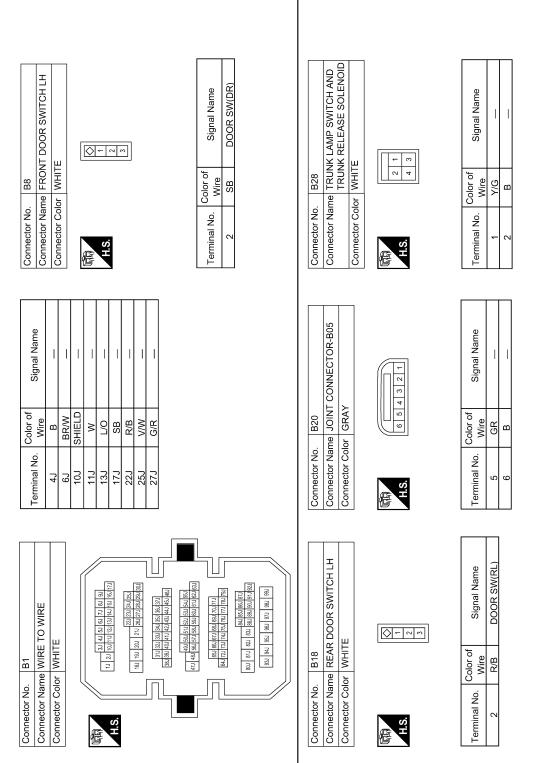
BCM (BODY CONTROL MODULE)

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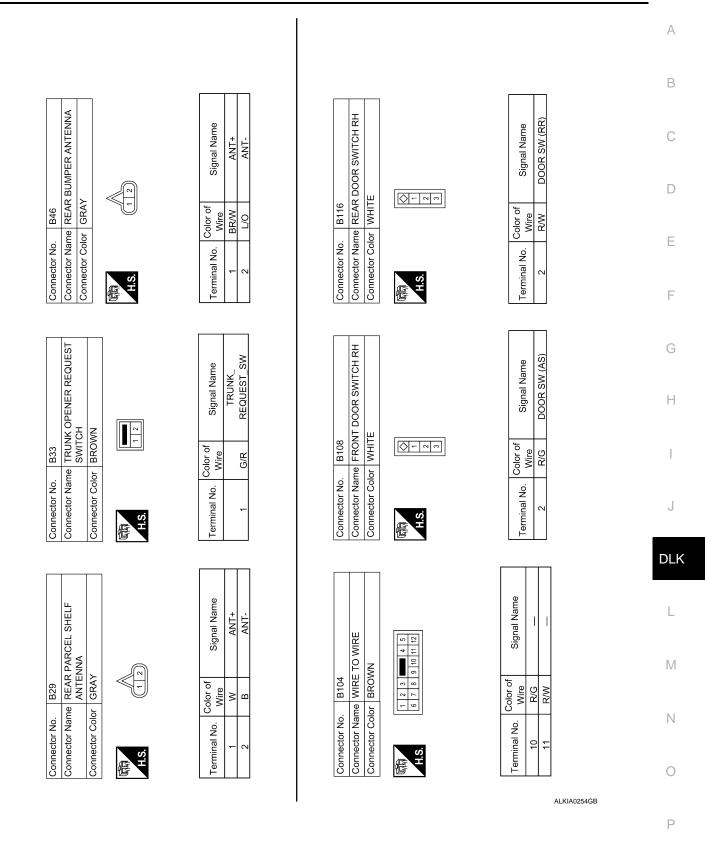


BCM (BODY CONTROL MODULE)



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BCM (BODY CONTROL MODULE)



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BCM (BODY CONTROL MODULE)

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of

Terminal No.

Signal Name

Color of Wire

Terminal No.

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Wire

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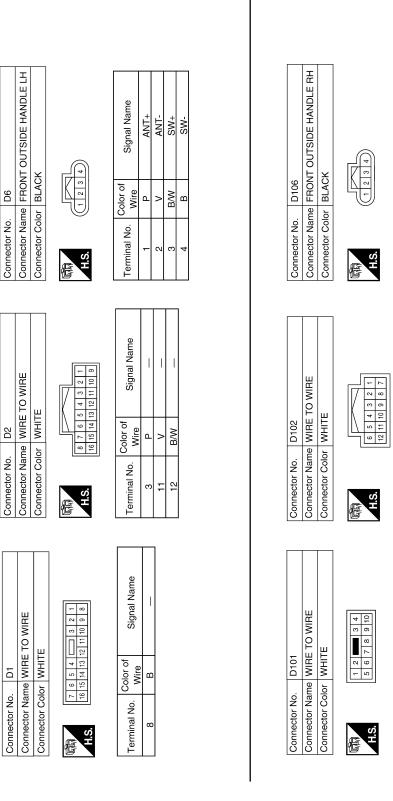
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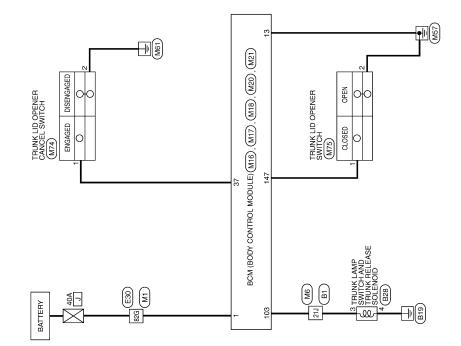
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Connector No.

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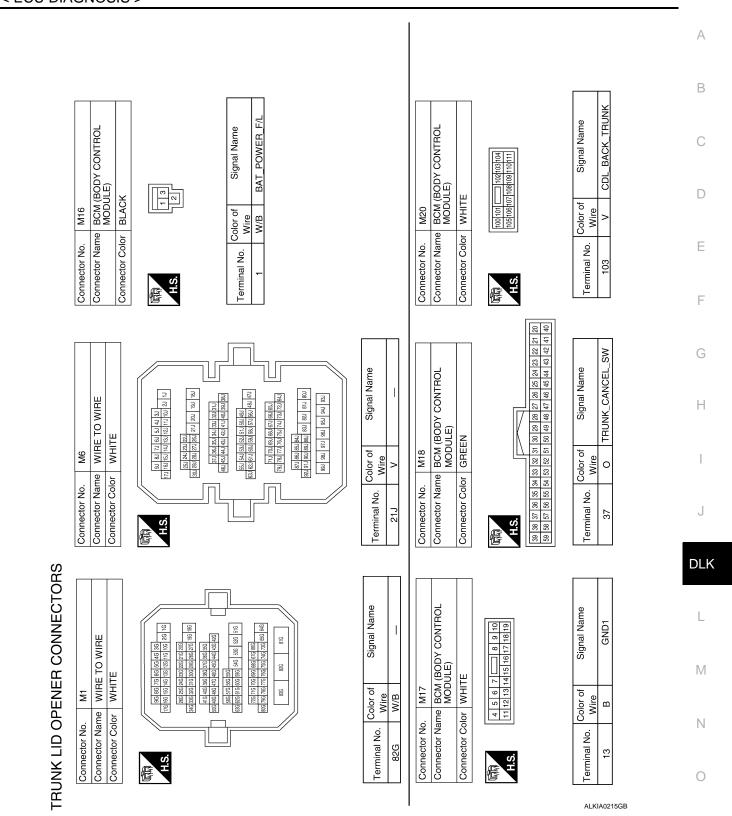
Wiring Diagram — TRUNK LID OPENER SYSTEM —

INFOID:000000003071085

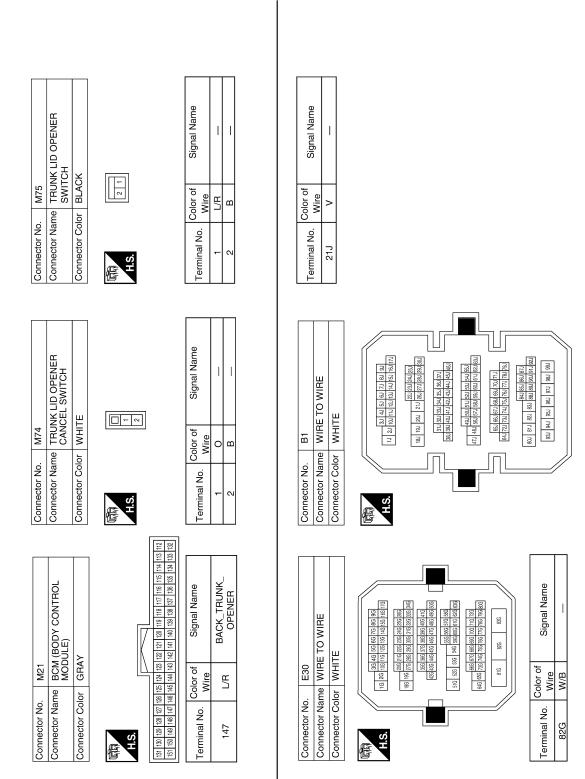


TRUNK LID OPENER

ALKWA0039GE



BCM (BODY CONTROL MODULE)



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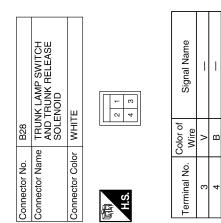
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Fail Safe

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Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit hybrid system crank- ing	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit hybrid system crank- ing	Erase DTC



< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit hybrid system crank- ing	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit hybrid system crank- ing	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit hybrid system crank- ing	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit hybrid system crank- ing	Erase DTC
B2195: ANTI-SCANNING	Inhibit hybrid system crank- ing	Erase DTC
B2557: VEHICLE SPEED	Inhibit electronic steering column lock	When normal vehicle speed signals have been received from brake ECU actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit hybrid system crank- ing	500 ms after the following CAN signal communication status has become consistentStarter control relay signalStarter relay status signal
B2562: LOW VOLTAGE	 Inhibit hybrid system cranking Inhibit electronic steering column lock 	100 ms after the power supply voltage increases to more than 8.8 V
B2563: HI VOLTAGE	 Inhibit hybrid system cranking Inhibit electronic steering column lock 	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit electronic steering column lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit electronic steering column lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit electronic steering column lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF

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Display contents of CONSULT	Fail-safe	Cancellation
B2605: PNP SW	Inhibit electronic steering column lock	 500 ms after any of the following BCM recognition conditions is fulfilled Ignition switch is in the ON position Power position: IGN Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (battery voltage) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit hybrid system crank- ing	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit hybrid system crank- ing	 500 ms after the following CAN signal communication status has become consistent Electronic steering column lock relay signal (Request signal) Electronic steering column lock relay signal (Condition signal)
B2608: STARTER RELAY	Inhibit hybrid system crank- ing	500 ms after the following signal communication status becomes consistentStarter motor relay control signalStarter relay status signal (CAN)
B2609: S/L STATUS	 Inhibit hybrid system cranking Inhibit electronic steering column lock 	 When the following electronic steering column lock conditions agree BCM electronic steering column lock control status Electronic steering column lock condition No. 1 signal status Electronic steering column lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit hybrid system crank- ing	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilledPower position changes to ACCReceives hybrid system status signal (CAN)
B2612: S/L STATUS	 Inhibit hybrid system cranking Inhibit electronic steering column lock 	 When any of the following conditions is fulfilled Electronic steering column lock unit status signal (CAN) is received normally The BCM electronic steering column lock control status matches the electronic steering column lock status recognized by the electronic steering column lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit hybrid system crank- ing	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit hybrid system crank- ing	1 second after the ignition relay (IPDM E/R) control inside BCM be- comes normal
B2619: BCM	Inhibit hybrid system crank- ing	1 second after the electronic steering column lock unit power sup- ply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit hybrid system crank- ing	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit hybrid system crank- ing	 When any of the following conditions is fulfilled Power position changes to ACC Receives hybrid system status signal (CAN)

DTC Inspection Priority Chart

INFOID:000000003303295

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

< ECU DIAGNOSIS >

Priority	DTC
1	 B2562: LOW VOLTAGE B2563: HI VOLTAGE B261E: VEHICLE TYPE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2555: STOP LAMP B2556: FUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2603: SHIFT POSITION B2606: S/L RELAY B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B2609: SI ARTER RELAY B2601: GNITION RELAY B2601: SHIFT POSITION B2602: STARTER RELAY B2603: STARTER RELAY B2604: PNP SW B2605: S/L RELAY B2605: S/L RELAY B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B2604: IGNITION RELAY B2605: STEERING LOCK UNIT B2605: STEERING LOCK UNIT B2606: STEERING LOCK UNIT B2607: ENG STATE SIG LOST B2611: ACC RELAY B2611: ACC RELAY B2612: S/L STATUS B2614: ACC RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2614: PUSH-BTN IGN SW B2614: PUSH-BTN IGN SW B2614: PUSH-BTN IGN SW B2615: ENG STATE NO RECIV C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED SIG

< ECU DIAGNOSIS >

Priority	DTC	
	C1704: LOW PRESSURE FL	
	C1705: LOW PRESSURE FR	
	C1706: LOW PRESSURE RR	
	C1707: LOW PRESSURE RL	
	• C1708: [NO DATA] FL	
	• C1709: [NO DATA] FR	
	• C1710: [NO DATA] RR	
	• C1711: [NO DATA] RL	
	C1712: [CHECKSUM ERR] FL	
	C1713: [CHECKSUM ERR] FR	
	C1714: [CHECKSUM ERR] RR	
	C1715: [CHECKSUM ERR] RL	
5	C1716: [PRESSDATA ERR] FL	
	C1717: [PRESSDATA ERR] FR	
	C1718: [PRESSDATA ERR] RR	
	C1719: [PRESSDATA ERR] RL	
	C1720: [CODE ERR] FL C1720: [CODE ERR] FL	
	C1721: [CODE ERR] FR	
	 C1722: [CODE ERR] RR C1723: [CODE ERR] RL 	
	C1723. [CODE ERK] KL C1724: [BATT VOLT LOW] FL	
	C1724. [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR	
	C1726: [BATT VOLT LOW] RR	
	C1727: [BATT VOLT LOW] RL	
	C1734: CONTROL UNIT	
	B2621: INSIDE ANTENNA	
6	B2622: INSIDE ANTENNA	
	B2623: INSIDE ANTENNA	

DTC Index

INFOID:000000003303296

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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 \rightarrow 2 \rightarrow 3...38 \rightarrow 39 after returning to the normal condition whenever ignition switch OFF \rightarrow 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 \rightarrow ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
No DTC is detected. further testing may be required.	_	_	_	_	
U1000: CAN COMM CIRCUIT	—	—	—	PCS-45	
U1010: CONTROL UNIT (CAN)	-	—	—	PCS-46	
U0415: VEHICLE SPEED SIG	—	—	—	BCS-38	
B2013: ID DISCORD BCM-S/L	×	—	—	<u>SEC-35</u>	
B2014: CHAIN OF S/L-BCM	×	—	—	<u>SEC-36</u>	
B2190: NATS ANTENNA AMP	×	—	—	<u>SEC-28</u>	
B2191: DIFFERENCE OF KEY	×	—	—	<u>SEC-32</u>	
B2192: ID DISCORD BCM-ECM	×	—	—	<u>SEC-33</u>	
B2193: CHAIN OF BCM-ECM	×	—	—	<u>SEC-34</u>	
B2553: IGNITION RELAY	—	—	—	PCS-47	
B2555: STOP LAMP	—	—	—	<u>SEC-40</u>	

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2556: PUSH-BTN IGN SW	_	×		<u>SEC-43</u>
B2557: VEHICLE SPEED	×	×		<u>SEC-45</u>
B2560: STARTER CONT RELAY	×	×		<u>SEC-46</u>
B2562: LOW VOLTAGE	_	_		BCS-39
B2563: HI VOLTAGE	×	×		<u>BCS-40</u>
B2601: SHIFT POSITION	×	×		<u>SEC-47</u>
B2602: SHIFT POSITION	×	×		<u>SEC-51</u>
B2603: SHIFT POSI STATUS	×	×		<u>SEC-54</u>
B2604: PNP SW	×	×		<u>SEC-58</u>
B2607: S/L RELAY	×	×		<u>SEC-60</u>
B2608: STARTER RELAY	×	×		<u>SEC-62</u>
B2609: S/L STATUS	×	×		<u>SEC-64</u>
B260A: IGNITION RELAY	×	×		PCS-49
B260B: STEERING LOCK UNIT	_	×		<u>SEC-69</u>
B260C: STEERING LOCK UNIT		×		<u>SEC-70</u>
B260D: STEERING LOCK UNIT	_	×		<u>SEC-71</u>
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-72</u>
B2611: ACC RELAY				PCS-50
B2612: S/L STATUS	×	×	_	<u>SEC-73</u>
B2614: ACC RELAY CIRC		×		PCS-52
B2615: BLOWER RELAY CIRC		×		PCS-55
B2616: IGN RELAY CIRC		×		PCS-58
B2617: STARTER RELAY CIRC	×	×		<u>SEC-78</u>
B2618: BCM	×	×		PCS-61
B2619: BCM	×	×		<u>SEC-80</u>
B261A: PUSH-BTN IGN SW		×		<u>SEC-81</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	<u>SEC-84</u>
B2621: INSIDE ANTENNA	_	_		DLK-42
B2622: INSIDE ANTENNA		_		DLK-45
B2623: INSIDE ANTENNA	_	_		DLK-48
C1704: LOW PRESSURE FL	_	_	×	<u>WT-8</u>
C1705: LOW PRESSURE FR		_	×	<u>WT-8</u>
C1706: LOW PRESSURE RR			×	<u>WT-8</u>
C1707: LOW PRESSURE RL		-	×	<u>WT-8</u>
C1708: [NO DATA] FL			×	<u>WT-13</u>
C1709: [NO DATA] FR			×	<u>WT-13</u>
C1710: [NO DATA] RR			×	<u>WT-13</u>
C1711: [NO DATA] RL			×	<u>WT-13</u>
C1712: [CHECKSUM ERR] FL			×	<u>WT-14</u>
C1713: [CHECKSUM ERR] FR	_	_	×	WT-14
C1714: [CHECKSUM ERR] RR	_		×	WT-14
C1715: [CHECKSUM ERR] RL		_	×	WT-14

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-15</u>	
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-15</u>	-
C1718: [PRESSDATA ERR] RR	—	—	×	<u>WT-15</u>	
C1719: [PRESSDATA ERR] RL	—	—	×	<u>WT-15</u>	
C1720: [CODE ERR] FL	—	—	×	<u>WT-14</u>	
C1721: [CODE ERR] FR	—	—	×	<u>WT-14</u>	
C1722: [CODE ERR] RR	—	—	×	<u>WT-14</u>	
C1723: [CODE ERR] RL	—	_	×	<u>WT-14</u>	
C1724: [BATT VOLT LOW] FL	—	_	×	<u>WT-14</u>	
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-14</u>	
C1726: [BATT VOLT LOW] RR	—	—	×	<u>WT-14</u>	
C1727: [BATT VOLT LOW] RL	—	—	×	<u>WT-14</u>	-
C1729: VHCL SPEED SIG ERR	_	—	×	<u>WT-16</u>	

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< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS INTELLIGENT KEY SYSTEM SYMPTOMS

Symptom Table

INFOID:000000003071090

ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-5, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

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

Symptom		Diagnosis/service procedure	Reference page
All functions of Intelligent Key system do not operate.	1.	Check BCM power supply and ground circuit.	BCS-41
	2.	Check Intelligent Key function and battery inspection.	DLK-112
	3.	Check remote keyless entry receiver.	DLK-108
	4.	Check Intermittent Incident.	<u>GI-42</u>

DOOR LOCK FUNCTION SYMPTOMS

DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

JOR LOCK AND UNLOCK S	5001	ICH		
DOR LOCK AND UNLOCK S	NIT	CH : Symptom Table		INFOID:00000000307105
OR LOCK/UNLOCK FUNCTION	MALI	FUNCTION		
DTE: Before performing the diagnosis in the Check that vehicle is under the condition				
heck each symptom. the following symptoms are detected this order.	l, che	ck systems shown in the "	Diagnosis/service pi	ocedure" colum
nditions of Vehicle (Operating Conditions LOCK/UNLOCK BY I-KEY" is ON whe ntelligent Key is out of key slot. Il doors are closed.		ting on CONSULT-III.		
Symptom		Diagnosis/service pr	ocedure	Reference page
	1.	Check BCM Power supply and	BCS-41	
Power door lock does not operate with door	2.	Check door lock and unlock sw	DLK-56	
lock and unlock switch.	3. Check door lock actuator (driver side)			DLK-93
	4.	Check Intermittent Incident.	GI-42	
Power door lock does not operate with door				01-42
•	1.	Check key cylinder switch.		DLK-68
Power door lock does not operate with door key cylinder operation. (Power door lock operate properly with door lock and unlock switch.)	1. 2.	Check key cylinder switch. Replace power window main s	witch.	
key cylinder operation. (Power door lock operate properly with door			witch.	<u>DLK-68</u>
key cylinder operation. (Power door lock operate properly with door	2.	Replace power window main s		DLK-68 INT-11
key cylinder operation. (Power door lock operate properly with door			Driver side	DLK-68 INT-11 DLK-93
key cylinder operation. (Power door lock operate properly with door lock and unlock switch.)	2.	Replace power window main s	Driver side Passenger side	DLK-68 INT-11 DLK-93 DLK-94

DOOR REQUEST SWITCH

DOOR REQUEST SWITCH : Symptom Table

DOOR LOCK/UNLOCK FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-5, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- Intelligent Key is out of key slot.
- All doors are closed.

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INFOID:000000003071092

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DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Diagnosis/service procedure	Reference page
	1.	Check BCM power supply and ground circuit.	BCS-41
Door lock/unlock do not operate by door re-	2.	Check door switch.	DLK-52
quest switch.	3.	Check key slot.	DLK-65
	4.	Check Intermittent Incident.	<u>GI-42</u>
Door lock/unlock does not operate by request switch (driver side).	1.	Check door request switch (driver side).	DLK-85
	2.	Check outside key antenna (driver side).	DLK-105
	3.	Check Intermittent Incident.	<u>GI-42</u>
Door lock/unlock does not operate by request switch (passenger side).	1.	Check door request switch (passenger side).	<u>DLK-85</u>
	2.	Check outside key antenna (passenger side).	DLK-105
	3.	Check Intermittent Incident.	<u>GI-42</u>
Selective unlock function does not operate by	1.	Check "DOOR LOCK-UNLOCK SET" setting in "WORK SUPPORT".	<u>DLK-35</u>
door request switch (driver side) (other door lock function operate).	2.	Check selective unlock function with a remote controller or door key cylinder.	<u>DLK-11</u>
	3.	Check Intermittent Incident.	<u>GI-42</u>
Selective unlock function does not operate by door request switch (passenger side) (other	1.	Check "DOOR LOCK-UNLOCK SET" setting in "WORK SUPPORT".	<u>DLK-35</u>
door lock function operate).	2.	Check Intermittent Incident.	<u>GI-42</u>
	1.	Check "AUTO LOCK SET" setting in "WORK SUP- PORT".	<u>DLK-35</u>
Auto lock function does not operate.	2.	Check door switch.	<u>DLK-52</u>
	3.	Check key slot.	DLK-65
	4.	Check Intermittent Incident.	<u>GI-42</u>

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:000000003071093

REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-5, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is out of key slot.
- Ignition switch is in OFF or ACC position.
- All doors are closed.
- Retaind power operation does not operate. Refer to <u>DLK-16, "INTELLIGENT KEY : System Description"</u>.

Symptom	Diagnosis/service procedure		Reference page
All of the remote keyless entry functions do		Check Intelligent Key battery inspection.	DLK-112
not operate.	2.	Check Intermittent Incident.	<u>GI-42</u>
Selective unlock function does not operate by Intelligent Key.	1.	Check "DOOR LOCK-UNLOCK SET" setting in "WORK SUP- PORT".	DLK-35
	2.	Check Intelligent Key battery inspection.	DLK-112
		Check Intermittent Incident.	<u>GI-42</u>

DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom	Diagnosis/service procedure	Reference page	A
	1. Check "AUTO LOCK SET" setting in "WORK SUPPORT".	DLK-35	_
Auto lock function does not operate nor-	2. Check door switch.	DLK-52	- B
mally.	3. Check key slot.	DLK-65	D
	4. Check Intermittent Incident.	<u>GI-42</u>	=
Power window down function does not op-	1. Check "PW DOWN SET" setting in "WORK SUPPORT".	DLK-112	С
erate.	2. Check Intelligent Key battery inspection.	DLK-112	_

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< SYMPTOM DIAGNOSIS >

TRUNK OPEN FUNCTION SYMPTOMS TRUNK LID OPENER SWITCH

TRUNK LID OPENER SWITCH : Symptom Table

INFOID:000000003071094

TRUNK OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-5. "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is out of key slot.
- All doors are closed.

Symptom		Diagnosis/service procedure	Reference page
	1.	Check trunk opener switch.	<u>DLK-76</u>
Trunk open function does not operate by trunk opener switch.	2.	Check trunk lid opener cancel switch.	<u>DLK-79</u>
	3.	Check Intermittent Incident.	<u>GI-42</u>

TRUNK REQUEST SWITCH

TRUNK REQUEST SWITCH : Symptom Table

INFOID:000000003071095

TRUNK OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-5, "Work Flow"</u>.
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is out of key slot.
- All doors are closed.

Symptom	Diagnosis/service procedure	Reference page
	1. Check trunk opener request switch.	DLK-89
Trunk open function does not operate by trunk	2. Check trunk lid opener cancel switch.	<u>DLK-79</u>
opener request switch.	3. Check outside key antenna (trunk room).	<u>DLK-105</u>
	4. Check Intermittent Incident.	<u>GI-42</u>

INTELLIGENT KEY

INTELLIGENT KEY : Symptom Table

INFOID:000000003071096

TRUNK OPEN FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to DLK-5, "Work Flow".
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Intelligent Key is out of key slot.
- All doors are closed.

TRUNK OPEN FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom	Diagnosis/service procedure	Reference page	A
	1. Check "TRUNK OPEN DELAY" setting in "WORK SUPPORT".	<u>DLK-34</u>	
Trunk open function does not operate by Intel-	2. Check trunk open function.	DLK-25	В
ligent Key.	3. Check trunk room lamp switch.	DLK-82	
	4. Check Intelligent Key battery inspection.	DLK-112	0
	5. Check Intermittent Incident.	<u>GI-42</u>	С

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< SYMPTOM DIAGNOSIS >

WARNING FUNCTION SYMPTOMS

Symptom Table

INFOID:000000003071097

WARNING FUNCTION MALFUNCTION

NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-5, "Work Flow"</u>.
 Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

Warning chime functions operating condition is extremely complicated, during operating confirmations, reconfirm the list above twice in order to ensure proper operation.

Sym	ptom	Diagnosis/service procedure	Reference page
		1. Check push button ignition switch position indicator.	<u>SEC-43</u>
	For internal	2. Check door switch.	<u>DLK-52</u>
	For internal	3. Check warning chime function.	DLK-120
OFF position warn-		4. Check Intermittent Incident.	<u>GI-42</u>
ing does not oper- ate.		1. Check push button ignition switch position indicator.	<u>SEC-43</u>
		2. Check door switch.	<u>DLK-52</u>
	For external	3. Check Intelligent Key warning buzzer.	<u>DLK-102</u>
		4. Check Intermittent Incident.	<u>GI-42</u>
I		1. Check Park position switch.	<u>SEC-58</u>
		2. Check door switch.	<u>DLK-52</u>
		3. Check Intelligent Key warning buzzer.	<u>DLK-102</u>
P position warning d	oes not operate.	4. Check warning chime function.	<u>DLK-120</u>
		5. Check combination meter display function.	<u>MWI-4</u>
		6. Check Intermittent Incident.	<u>GI-42</u>
		1. Check push button ignition switch position indicator.	<u>SEC-43</u>
		2. Check warning chime function.	DLK-120
ACC warning does r	iot operate	3. Check combination meter display function.	<u>MWI-4</u>
		4. Check Intermittent Incident.	<u>GI-42</u>

WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Diagnosis/service proce	dure	Reference page
		1. Check door switch.	DLK-52	
			DLK-42	
		2. Check inside key antenna. Console		DLK-45
			Trunk room	DLK-48
	Door open to close	3. Check Intelligent Key warning buzzer.	DLK-102	
		4. Check warning chime function.		DLK-120
		5. Check key slot illumination.		DLK-114
		6. Check combination meter display function	on.	DLK-119
		7. Check Intermittent Incident.		<u>GI-42</u>
		1. Check push button ignition switch position	on indicator.	<u>SEC-43</u>
			Instrument center	DLK-42
		2. Check inside key antenna.	Console	DLK-45
	Push-button igni-		Trunk room	DLK-48
	tion switch opera- tion	3. Check warning chime function.		DLK-120
		4. Check key slot illumination.	Check key slot illumination.	
ake away warning		5. Check combination meter display function	DLK-119	
oes not operate.		6. Check Intermittent Incident.	<u>GI-42</u>	
		1. Check push button ignition switch position	<u>SEC-43</u>	
	Door is open	Instrument ce		DLK-42
		2. Check inside key antenna.	Console	DLK-45
			Trunk room	DLK-48
		3. Check combination meter display function	DLK-119	
		4. Check Intermittent Incident.	<u>GI-42</u>	
		1. Check "TAKE OUT FROM WIN WARN" SUPPORT".	DLK-34	
			Instrument center	DLK-42
		2. Check inside key antenna.	Console	DLK-45
	Take away through		Trunk room	DLK-48
	window	3. Check warning chime function.	1	DLK-120
		4. Check key slot illumination.		DLK-114
		5. Check combination meter display function	on.	DLK-119
		6. Check Intermittent Incident.	<u>GI-42</u>	
	1	1. Check key slot.		DLK-65
		2. Check door switch.		DLK-52
	L	3. Check warning chime function.		DLK-120
Key warning chime of	does not operate.	4. Check key slot illumination.		DLK-114
	5. Check combination meter display function.		on.	<u>MWI-4</u>
		6. Check Intermittent Incident.		<u>GI-42</u>

WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Diagnosis/service proced	ure	Reference page
		1. Check door switch.		DLK-52
		Check key slot illumination.	<u>DLK-114</u>	
		Check Intelligent Key warning buzzer.	DLK-102	
Door lock operation warning chime does not operate.			Instrument center	DLK-42
		Check inside key antenna.	Console	DLK-45
			Trunk room	DLK-48
	5.	Check Intermittent Incident.		<u>GI-42</u>

KEY REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

KEY REMINDER FUNCTION SYMPTOMS

Symptom Table

KEY REMINDER FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to <u>DLK-5, "Work Flow"</u>.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK FUNCTION" is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Intelligent Key is out of key slot.

Symptom	Diagnosis/service procedure	Reference page	
	1. Check "ANTI KEY LOCK IN FUNCTI" setting in "WORK SUPPORT".	DLK-65	
Key reminder function does not operate.	2. Check door switch.	DLK-52	
	3. Check inside key antenna.	DLK-120	
	4. Check unlock sensor.	<u>DLK-114</u>	
	5. Check Intelligent Key battery inspection.	DLK-112	
	6. Check Intermittent Incident.	<u>GI-42</u>	

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HAZARD FUNCTION

< SYMPTOM DIAGNOSIS >

HAZARD FUNCTION

Symptom Table

INFOID:000000003071099

HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to <u>DLK-5, "Work Flow"</u>.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK FUNCTION" is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Intelligent Key is out of key slot.

Symptom		Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request	1.	Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	<u>DLK-35</u>
switch. (Buzzer reminder operate.)	2.	Check hazard function.	DLK-121
	3.	Check Intermittent incident.	<u>GI-42</u>
Hazard reminder does not operate by Intelligent Key.		Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	<u>DLK-35</u>
(Buzzer reminder operate.)	2.	Check hazard function.	DLK-121
	3.	Check Intelligent Key battery inspection.	DLK-112
Buzzer reminder does not operate by request		Check "ANS BACK I-KEY LOCK" or "ANS BACK I-KEY UNLOCK" setting in "WORK SUPPORT".	<u>DLK-35</u>
switch. (Hazard reminder operate.)	2.	Check Intelligent Key warning buzzer.	DLK-102
	3.	Check Intermittent incident.	<u>GI-42</u>
	1.	Check "TRUNK OPEN DELAY" setting in "WORK SUP- PORT".	<u>DLK-35</u>
Buzzer reminder does not operate by trunk opener	2.	Check Intelligent Key warning buzzer.	DLK-102
request switch.	3.	Check trunk open function.	DLK-22
	4.	Check Intermittent incident.	<u>GI-42</u>

HORN FUNCTION

< SYMPTOM DIAGNOSIS >

HORN FUNCTION

Symptom Table

HAZARD AND HORN REMINDER FUNCTION MALFUNCTION NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to <u>DLK-5, "Work Flow"</u>.
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column С in this order.

Conditions of Vehicle (Operating Conditions)

- "ANSWER BACK FUNCTION" is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.

Symptom		Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request		1. Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	
switch. (Horn reminder operate.)	2.	Check hazard function.	DLK-121
()	3.	Check Intermittent Incident.	<u>GI-42</u>
Hazard reminder does not operate by Intelligent Key.	1.	Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	DLK-35
(Horn reminder operate.)	2.	Check hazard function.	DLK-121
	3.	Check Intelligent Key battery inspection.	
Horn reminder does not operate by request switch.	1.	Check "ANSWER BACK WITH I-KEY LOCK" or "AN- SWER BACK WITH I-KEY UNLOCK" setting in "WORK SUPPORT".	DLK-35
(Hazard reminder operate.)	2.	Check Intelligent Key warning buzzer.	DLK-102
	3.	Check Intermittent Incident.	<u>GI-42</u>
Horn reminder does not operate by Intelligent Key.	1.	Check "HORN WITH KEYLESS LOCK" setting in "WORK SUPPORT".	<u>DLK-35</u>
(Hazard reminder operate.)	2.	Check horn function.	DLK-117
	3.	Check Intermittent Incident.	<u>GI-42</u>

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INTEGRATED HOMELINK TRANSMITTER

< SYMPTOM DIAGNOSIS >

INTEGRATED HOMELINK TRANSMITTER

Symptom Table

INFOID:000000003071101

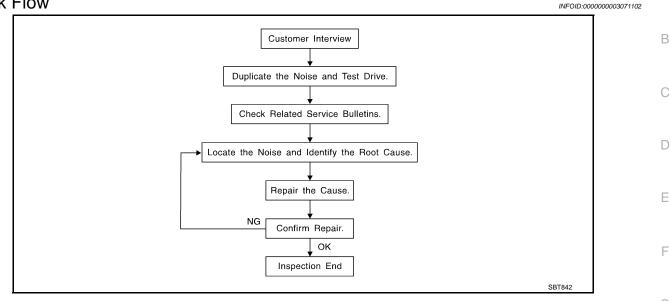
HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom		Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1.	Check homelink universal transceiver function.	DLK-124
	2.	Check Intermittent Incident.	<u>GI-42</u>

< SYMPTOM DIAGNOSIS >

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



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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 Н customer's comments; refer to DLK-203, "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) DLK 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 depen-L dent 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 Μ 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.
- Ρ 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 and mechanics stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- removing the components in the area that you suspect the noise is coming from.
 Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
- tapping or pushing/pulling the component that you suspect is causing the noise.
 Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- looking for loose components and contact marks. Refer to <u>DLK-201</u>, "Inspection Procedure".

REPAIR THE CAUSE

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

CAUTION:

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

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005: 100 \times 135 mm (3.94 \times 5.31 in)/76884-71L01: 60 \times 85 mm (2.36 \times 3.35 in)/76884-71L02: 15 \times 25 mm (0.59 \times 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 \times 50 mm (1.97 \times 1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick, 50×50 mm (1.97 \times 1.97 in)

INSULATOR (Light foam block)

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

FELT CLOTHTAPE

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

68370-4B000: 15 \times 25 mm (0.59 \times 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

< SYMPTOM DIAGNOSIS > Insulates where slight movement is present. Ideal for instrument panel applications. SILICONE GREASE А Used in place of UHMW tape that will be visible or not fit. Will only last a few months. SILICONE SPRAY Use when grease cannot be applied. В DUCT TAPE Use to eliminate movement. CONFIRM THE REPAIR Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet. Inspection Procedure D INFOID:000000003071103 Refer to Table of Contents for specific component removal and installation information. INSTRUMENT PANEL Е Most incidents are caused by contact and movement between: 1. The cluster lid A and instrument panel F Acrylic lens and combination meter housing Instrument panel to front pillar garnish Instrument panel to windshield Instrument panel mounting pins Wiring harnesses behind the combination meter 7. A/C defroster duct and duct joint Н These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness. CAUTION: Do not use silicone spray to isolate a squeak or rattle. If you saturate the area with silicone, you will not be able to recheck the repair. CENTER CONSOLE Components to pay attention to include: DLK Shifter assembly cover to finisher 2. A/C control unit and cluster lid C 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: M Finisher and inner panel making a slapping noise Inside handle escutcheon to door finisher Ν Wiring harnesses tapping 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 Ρ Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for: Trunk lid dumpers out of adjustment

- Trunk lid striker out of adjustment
- 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:

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

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

SEATS

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

Cause of seat noise include:

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

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

UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

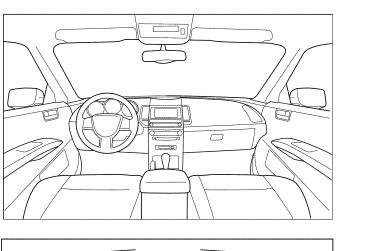
Dear Customer:

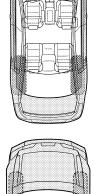
We are concerned about your satisfaction with your vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your vehicle right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked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

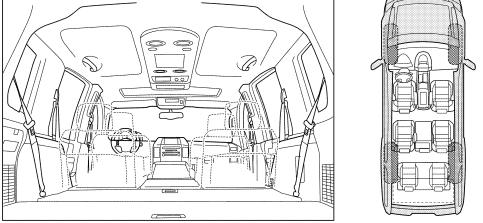
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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

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







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

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SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

II. WHEN DOES IT OCCUR? (please check the boxes that apply) Anytime After sitting out in the rain 1 st time in the morning When it is raining or wet Only when it is cold outside Dry or dusty conditions Other: Only when it is hot outside **III. WHEN DRIVING:** IV. WHAT TYPE OF NOISE Squeak (like tennis shoes on a clean floor) Through driveways Over rough roads Creak (like walking on an old wooden floor) Over speed bumps Rattle (like shaking a baby rattle) Only about mph Knock (like a knock at the door) On acceleration Tick (like a clock second hand) Coming to a stop Thump (heavy muffled knock noise) On turns: left, right or either (circle) Buzz (like a bumble bee) With passengers or cargo Other: After driving _____ miles or _____ minutes

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

	YES	NO	Initials of persor performing
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confirm repa	air		
VIN:0	Customer Name		
W.O.# I	Date:		

This form must be attached to Work Order

LAIA0071E

< PRECAUTION > PRECAUTION PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" INFOID:000000003071105

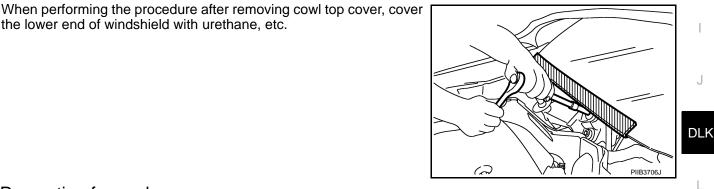
The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air 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. D 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.

Procedure without Cowl Top Cover

the lower end of windshield with urethane. etc.



Precaution for work

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INFOID-000000003071106

- 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.

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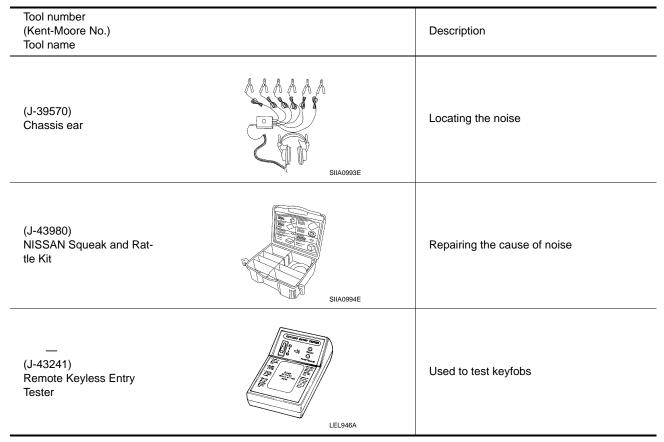
PREPARATION

< PREPARATION > PREPARATION PREPARATION

Special Service Tools

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



Commercial Service Tools

INFOID:000000003071109

Tool name		Description
Engine ear	SIIA0995E	Locating the noise
Power tool	PIB1407E	

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

HOOD

HOOD ASSEMBLY

HOOD ASSEMBLY : Removal and Installation

REMOVAL

1. Remove the hinge nuts (a) and the hood assembly (1). CAUTION:

Operate with two workers, because of its large size.

INSTALLATION Installation is in the reverse order of removal. **NOTE:** After installing, perform hood fitting adjustment. Refer to <u>DLK-208. "HOOD ASSEMBLY : Adjustment"</u>.

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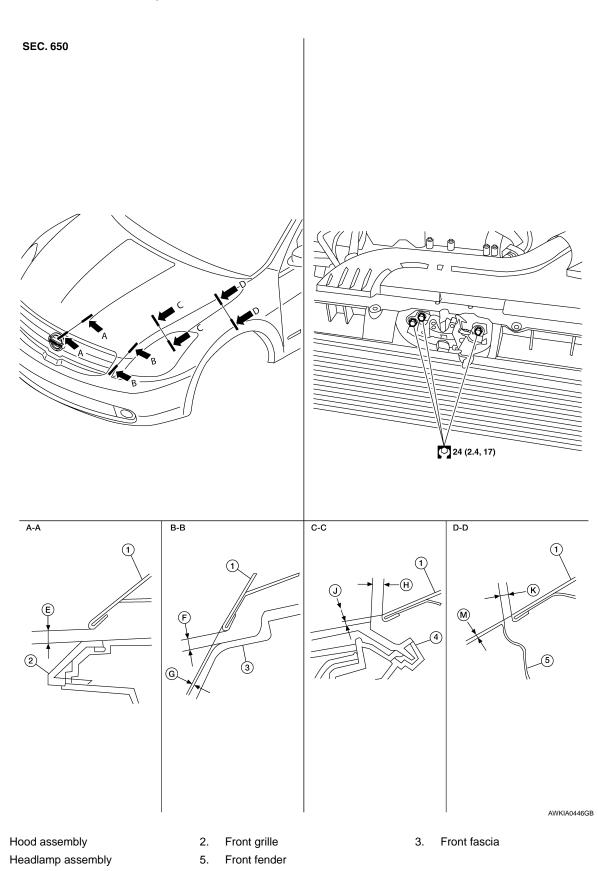
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4.

HOOD ASSEMBLY : Adjustment

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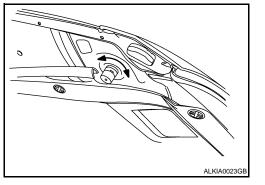
FRONT END HEIGHT ADJUSTMENT AND LATERAL/LONGITUDUNAL CLEARANCE ADJUST-MENT

< ON-VEHICLE REPAIR >

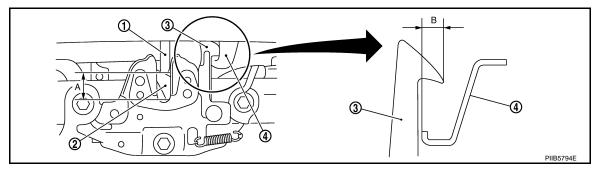
Section	Item	Measurement	Standard	Parallelism	Equality
A - A	E	Clearance	5.0 ± 2.0 (0.20 ± 0.079)	<= 2.0 (0.079)	—
B – B	F	Clearance	$5.0\pm2.0\;(0.20\pm0.079)$	<= 2.0 (0.079)	<= 2.2 (0.087)
	G	Surface height	1.0 ± 2.0 (0.04 ± 0.079)	<= 2.0 (0.079)	<= 2.0 (0.079)
C – C	н	Clearance	$4.5 \pm (0.18 \pm 0.079)$	_	2.1 (0.083)
	J	Surface height	1.0 ± 2.1 (0.04 ± 0.083)	_	< 2.0 (0.079)
D – D	К	Clearance	$4.0 \pm 1.0 \; (0.16 \pm 0.04)$	1.0 (0.04)	1.0 (0.04)
	М	Surface height	$0.2 \pm 1.0 \; (0.01 \pm 0.04)$	1.0 (0.04)	1.0 (0.04)

FRONT END HEIGHT ADJUSTMENT

- 1. Check the surface height between the hood and each part by visual and tactile feeling.
- 2. Remove the front grille. Refer to EXT-16, "Removal and Installation".
- 3. Remove the hood lock.
- 4. Adjust the surface level difference of the hood, fender and head lamp by rotating the hood bumpers until the hood becomes 1 to 1.5 mm (0.04 to 0.059 in) lower than the fender.



- 5. Install and align the hood lock center with the center of the hood striker. Engage the lock with the striker and check for looseness.
- 6. Adjust A and B shown in the figure to the following value with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing the hood closed lightly (approx. 29 N (3 kg)).



3.

Secondary striker

- 1. Hood striker
- 2. Primary latch
- 4. Secondary latch

A : 20 mm (0.79 in)

- B : 6.8 mm (0.27 in)
- 7. After adjustment tighten the hood lock bolts to the specified torque.

LATERAL/LONGITUDUNAL CLEARANCE ADJUSTMENT

- 1. Check the clearance between the hood and each part by visual and tactile feeling.
- 2. Loosen the hood hinge bolts.

NOTE:

The anticorrosive agent applied between the hoodledge and the hood hinges also acts as an adhesive. This seal must be broken before the hinges will move.

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HOOD

< ON-VEHICLE REPAIR >

- 3. Move the hood so that the clearance measurements are within specifications.
- 4. Tighten the hood hinge bolts. **NOTE:**

After installation apply touch-up paint onto the hinge bolts and around the base of the hinge.

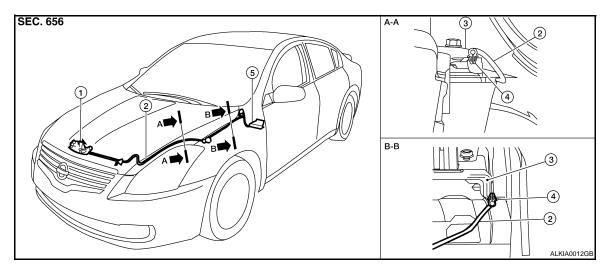
5. If the clearance measurements between the hood and fender cannot be corrected by moving the hood, the fender must be adjusted. Refer to <u>DLK-215, "Removal and Installation"</u>.

HOOD LOCK CONTROL

HOOD LOCK CONTROL : Component Parts Location

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INFOID:000000003071113



- 1. Hood lock assembly
- 2. Hood lock cable

Hood lock release handle

3. Hoodledge reinforcement

HOOD LOCK CONTROL : Removal and Installation

REMOVAL

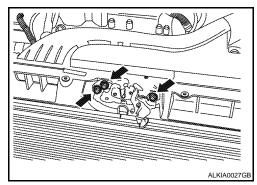
Clip

4.

- 1. Remove the front grill. Refer to EXT-16. "Removal and Installation".
- 2. Remove the LH fender protector. Refer to EXT-18. "Removal and Installation".

5.

3. Remove the hood lock assembly bolts.



4. Disconnect the hood lock cable from the hood lock, and unclip it from the hoodledge.

HOOD

< ON-VEHICLE REPAIR >

Remove the screws (A) with power tool, and separate the hood 5. lock release handle (1) from the hood lock release cable (2).

Remove the grommet from the upper dash, and pull the hood lock cable into the passenger compartment. 6. CAUTION:

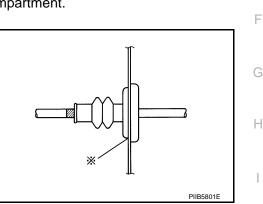
While pulling, be careful not to damage (peel) the outside of the hood lock cable.

INSTALLATION

1. Pull the hood lock cable through the upper dash into the engine compartment. CAUTION:

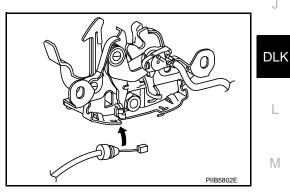
Be careful not to bend the cable too much, keep the radius 100 mm (3.94 in) or more.

- 2. Check that the cable is not offset from the center of the grommet, and seat the grommet into the upper dash hole.
- Apply the sealant around the grommet at * mark.



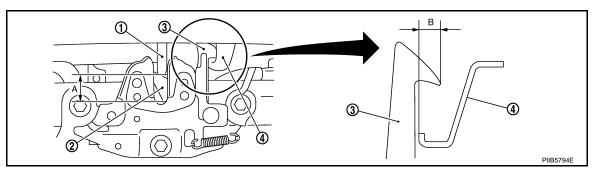
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- 4. Position the hood lock cable and clip it into place.
- 5. Connect the hood lock cable to the hood lock assembly.
- Loosely install the hood lock assembly.
- 7. Perform hood fitting adjustment. Refer to DLK-208, "HOOD ASSEMBLY : Adjustment".
- 8. Check the hood lock control operation.



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

Check that the secondary latch is properly engaged with the secondary striker (B: 6.8 mm (0.268 in) 1. shown in the figure) with hood's own weight.



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HOOD

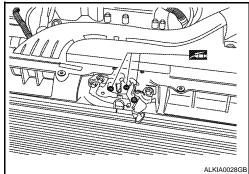
< ON-VEHICLE REPAIR >

1. Hood striker

2. Primary latch

3. Secondary striker

- 4. Secondary latch
- 2. While operating the hood opener, carefully check that the front end of the hood is raised by approx. 20 mm (0.79 in). Also check that the hood opener returns to the original position.
- 3. Check that the hood opener operating is 294 N (30 kg, 66.1lb) or below.
- 4. Install so the static closing force of the hood is 344 431 N·m (35– 44 kg-m, 254-318 ft-lb).
- 5. Check the hood lock lubrication condition. If necessary, apply "body grease" as shown.



< ON-VEHICLE REPAIR >

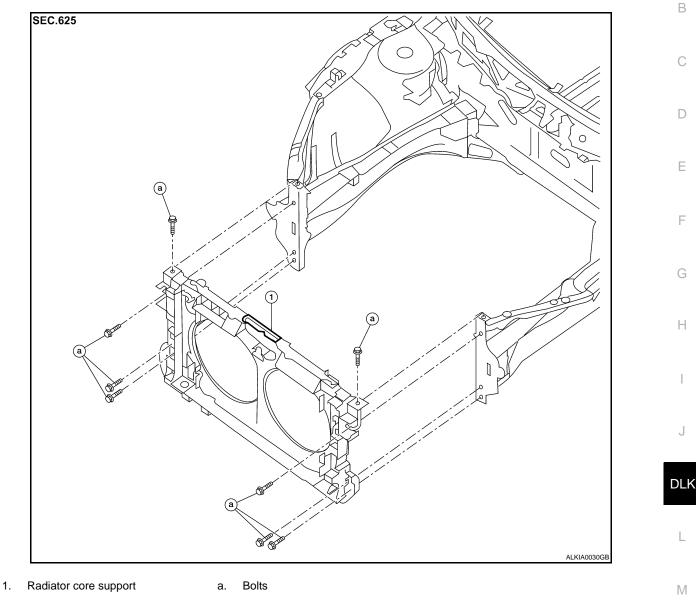
RADIATOR CORE SUPPORT

Removal and Installation

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REMOVAL

- 1. Remove front bumper reinforcement. Refer to EXT-12, "Removal and Installation".
- 2. Remove head lamps (LH/RH). Refer to EXL-153, "Removal and Installation".
- 3. Remove washer tank. Refer to <u>WW-44, "WASHER TANK : Removal and Installation"</u>.
- 4. Remove air duct. Refer to <u>EM-23, "Removal and Installation"</u>.
- 5. Remove the radiator cooling fans. Refer to CO-16, "Removal and Installation".
- 6. Remove the radiator. Refer to <u>CO-14, "Removal and Installation"</u>.
- 7. Remove the hood lock control. Refer to DLK-210, "HOOD LOCK CONTROL : Removal and Installation". P
- 8. Remove ambient sensor. Refer to <u>VTL-11, "Removal and Installation"</u>.
- 9. Remove crash zone sensor. Refer to SRS-12, "Removal and Installation".
- 10. Remove air guides (LH/RH).
- 11. Remove power steering tube assembly. Refer to <u>ST-12, "Exploded View"</u>.
- 12. Remove horn (High/Low). Refer to HRN-7, "Removal and Installation".
- 13. Remove the harness clips from the radiator core support assembly, the harness is separate.

RADIATOR CORE SUPPORT

< ON-VEHICLE REPAIR >

14. Remove the bolts and the radiator core support.

INSTALLATION

Installation is in the reverse order of removal.

FRONT FENDER

< ON-VEHICLE REPAIR > FRONT FENDER

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Re	emoval and Installation	~
RE	MOVAL	В
1.	Remove the head lamp. Refer to EXL-153, "Removal and Installation".	
2.	Remove the front fender protector. Refer to EXT-18, "Removal and Installation".	
3.	Remove the inner fender bolt cover.	С
4.	Remove the center mud guard. Refer to EXT-19, "Removal and Installation".	
5.	Remove the bolts and the front fender. CAUTION:	D
	 While removing use a shop cloth to protect body from damaging. Use care when removing the front fender. The front fender baffle foam adheres the front fender to the body side outer. Carefully release the foam or damage to the fender may occur. 	E
INS	STALLATION	
Ins	tallation is in the reverse order of removal.	_
	UTION:	F
• A	fter installing, apply touch-up paint (the body color) onto the head of the front fender bolts.	
AD	JUSTMENT	G
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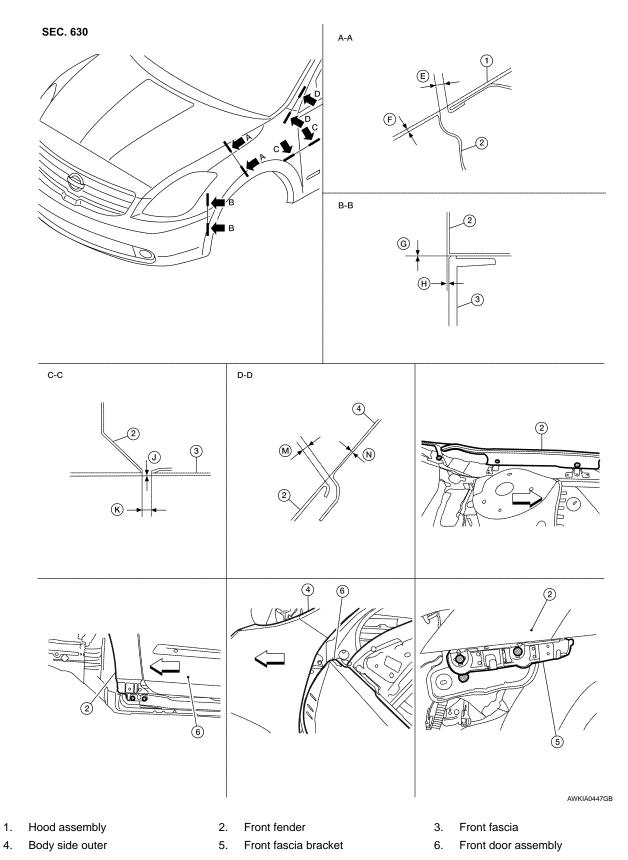
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FRONT FENDER



Unit	: mm	(in)
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Section	Item	Measurement	Standard	Parallelism	Equality
A-A	E	Clearance	$\textbf{4.0} \pm \textbf{1.0} \; \textbf{(0.16} \pm \textbf{0.04)}$	1.0 (0.04)	1.0 (0.04)
~~~	F	Surface height	$0.2 \pm 1.0 \ (0.01 \pm 0.04)$	1.0 (0.04)	1.0 (0.04)

# **FRONT FENDER**

# < ON-VEHICLE REPAIR >

	Section	Item	Measurement	Standard	Parallelism	Equality		
	B-B	G	Clearance	0.0 + 0.8 (0.0 +0.031)	—	—		
		Н	Surface height	$\textbf{0.7} \pm \textbf{1.0} \ \textbf{(0.028} \pm \textbf{0.04)}$	1.0 (0.04)	1.0 (0.04)		
ľ	C-C	J	Clearance	3.6 $\pm$ 1.0 (0.14 $\pm$ 0.04)	1.0 (0.04)	_		
		K	Surface height	$0.0 \pm 1.0 \ (0.0 \pm 0.04)$	—	_		
	D-D	Μ	Clearance	$2.3 \pm 1.0 \; (0.09 \pm 0.04)$	1.0 (0.04)	_		
	0-0	N	Surface height	$0.0 \pm 1.0 \ (0.0 \pm 0.04)$	_	—		
Re	move the	inner fe	nder bolt cover.					
Remove the front fender protector. Refer to EXT-18, "Removal and Installation".								
Re	move the	center i	mud guard. Refer t	o <u>EXT-19, "Removal and</u>	Installation".			
Loosen the front fender bolts and screws.								
Ad	Adjust the clearance (J) and surface height (K) between the front fender and the front door.							
Tig	Tighten the rear upper and lower front fender bolts.							
Ad	Adjust the clearance (E) and surface height (F) between the front fender and the hood.							
Ad	just the cle	earance	e (M) and surface h	eight (N) between the fro	nt fender and the b	ody side outer		
Tig	hten the in	nner fro	nt fender bolts.					
. Adjust the clearance (G) and the surface height (H) between the front fender and the front fascia.								
. Tig	hten the f	ront fen	der to front fascia	and bracket screws.				
<ol><li>Apply touch-up paint (the body color) onto the head of the front fender bolts.</li></ol>								
3. Ins	tall the ce	nter mu	d guard.Refer to <u></u>	EXT-19, "Removal and Ins	stallation".			
I. Ins	. Install the front fender protector. Refer to EXT-18, "Removal and Installation".							
. Install the inner fender bolt cover.								

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# FRONT DOOR

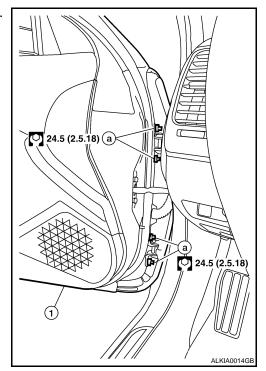
# FRONT DOOR : Removal and Installation

INFOID:000000003071116

# REMOVAL

#### CAUTION:

- When removing and installing the front door assembly, support the door with a jack and cloth to protect the door and body.
- When removing and installing front door assembly, be sure to carry out the fitting adjustment. Refer to <u>DLK-219, "FRONT DOOR : Adjustment"</u>.
- After installing, apply touch-up paint (the body color) onto the head of the hinge nuts.
- Check the hinge rotating parts for lubrication. If necessary, apply "body grease".
- Operate with two workers, because of its heavy weight.
- Check front door open/close operation after installation.
- 1. Pull the grommet and wire harness out of the front pillar until the harness connectors are accessible. Then disconnect the wire harness connectors.
- 2. Remove the check link bolt from the front pillar.
- 3. Remove the door-side hinge nuts (a) and the door assembly (1).



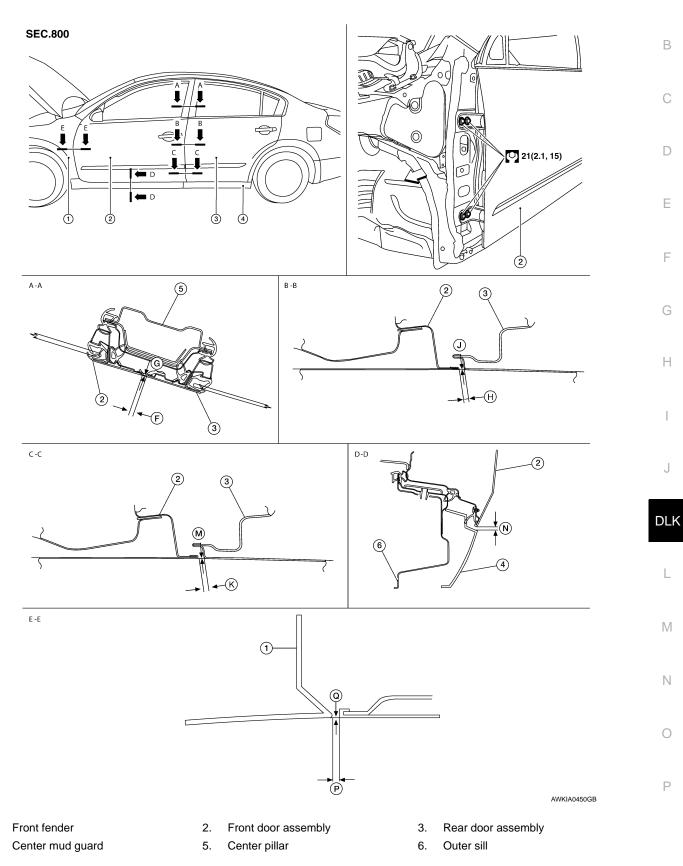
INSTALLATION Installation is in the reverse order of removal. **NOTE:** Adjust the door. Refer to <u>DLK-219, "FRONT DOOR : Adjustment"</u>.

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# FRONT DOOR : Adjustment





			Unit: mm (in)
Section	ltem	Measurement	Standard
A-A	F	Clearance	4.5 $\pm$ 1.5 (0.18 $\pm$ 0.06)
A-A	G	Surface height	0.0 ± 1.5 (0.0 ± 0.06)
B-B	Н	Clearance	4.2 $\pm$ 1.0 (0.17 $\pm$ 0.04)
8-8	J	Surface height	0.0 ± 1.0 (0.0 ± 0.04)
C-C	K	Clearance	4.2 $\pm$ 1.0 (0.17 $\pm$ 0.04)
0-0	Μ	Surface height	0.0 ± 1.0 (0.0 ± 0.04)
D-D	N	Clearance	5.1 ± 1.7 (0.20 ± 0.07)
E-E	Р	Clearance	3.6 $\pm$ 1.0 (0.14 $\pm$ 0.04)
C-C	Q	Surface height	0.0 ± 1.0 (0.0 ± 0.04)

#### LONGITUDINAL CLEARANCE

- 1. Confirm the back door adjustments and adjust if necessary. Refer to <u>DLK-220, "BACK DOOR : Removal</u> <u>and Installation"</u>.
- 2. Remove the front fender. Refer to <u>DLK-215, "Removal and Installation"</u>.
- 3. Loosen the hinge bolts. Raise or lower the front door at rear edge to adjust.
- 4. Install the front fender. Refer to <u>DLK-215, "Removal and Installation"</u>.

#### SURFACE HEIGHT ADJUSTMENT

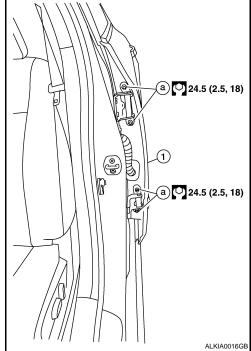
- 1. Loosen the front door hinge nuts.
- 2. Move the top and or bottom in or out as necessary until it is within specifications.
- 3. Tighten the hinge nuts to specifications.

# BACK DOOR

# BACK DOOR : Removal and Installation

#### REMOVAL

- 1. Pull out grommet and disconnect rear door harness connector.
- 2. Remove the check link bolt from the center pillar.
- 3. Remove the door-side hinge nuts (a) and the door assembly (1). CAUTION:
  - When removing and installing the rear door assembly, support the door with a jack and cloth to protect the door and body.
  - When removing and installing rear door assembly, be sure to carry out the fitting adjustment.
  - Check the hinge rotating parts for poor lubrication. If necessary, apply "body grease".
  - After installing, apply touch-up paint (the body color) onto the head of the hinge nuts.
  - Operate with two workers, because of its heavy weight.
  - Check rear door open/close operation after installation.



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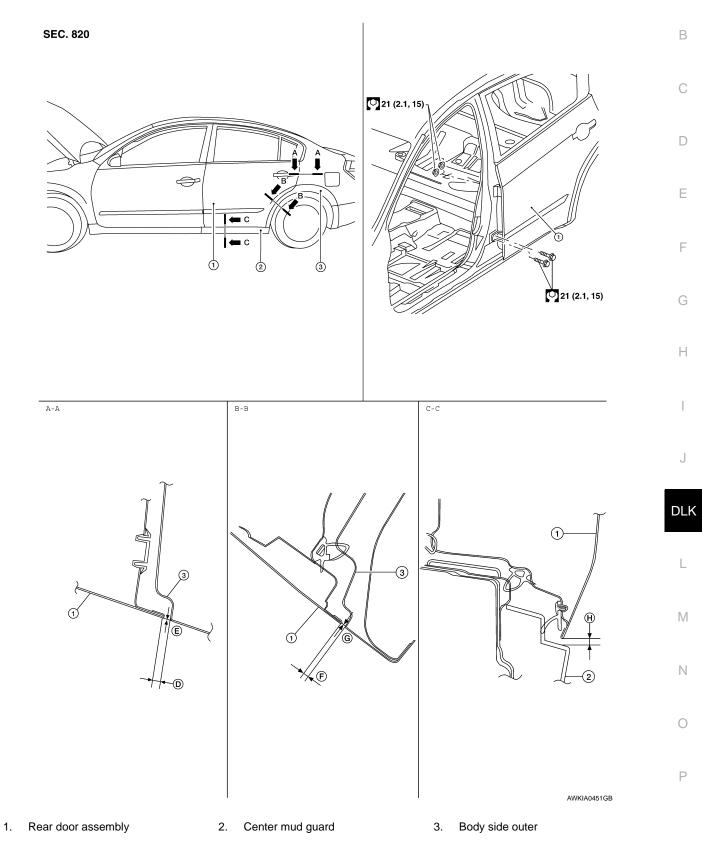
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#### < ON-VEHICLE REPAIR >

# Installation is in the reverse order of removal.

# ADJUSTMENT



			Unit: mm (in)
Section	ltem	Measurement	Standard
A-A	D	Clearance	3.6 $\pm$ 1.0 (0.14 $\pm$ 0.04)
A-A	E	Surface height	0.0 ± 1.0 (0.0 ± 0.04)
B-B	F	Clearance	3.6 $\pm$ 1.0 (0.14 $\pm$ 0.04)
0-0	G	Surface height	0.0 ± 1.0 (0.0 ± 0.04)
C-C	Н	Clearance	5.3 ± 1.7 (0.21 ± 0.07)

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#### LONGITUDINAL CLEARANCE

- 1. Remove the center pillar upper and lower trim. Refer to INT-12, "Exploded View".
- 2. Loosen the upper pillar hinge nuts.
- 3. Loosen the lower pillar hinge bolts.
- 4. Raise or lower the door at the rear edge to adjust.
- 5. Tighten the lower pillar hinge bolts.
- 6. Tighten the upper pillar hinge nuts.
- 7. Install the center pillar upper and lower trim. Refer to INT-12, "Exploded View".

#### SURFACE HEIGHT ADJUSTMENT

- 1. Loosen the hinge nuts.
- 2. Move the top and or the bottom in or out as necessary until it is within specification.
- 3. Tighten the hinge nuts to specification.

# DOOR LOCK FRONT DOOR LOCK

FRONT DOOR LOCK : Component Parts Location



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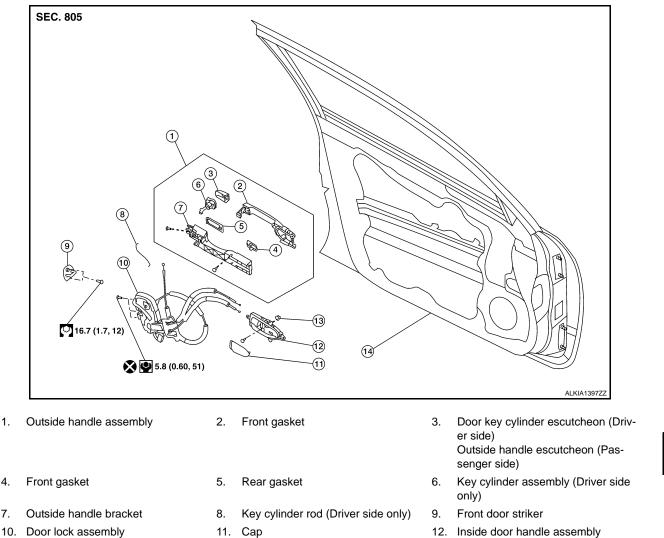
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13. Grommet

- 11. Cap
- 14. Front door assembly

# FRONT DOOR LOCK : Removal and Installation

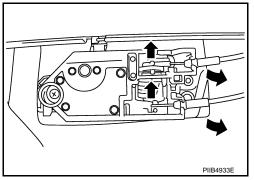
# REMOVAL

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- Remove the front door finisher. Refer to INT-11, "Removal and Installation". 1.
- Disconnect the inside handle knob cable and lock knob cable 2. from the back side of the front door finisher.





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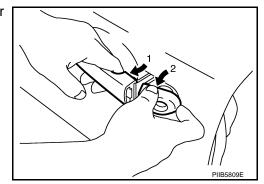
# **DOOR LOCK**

#### < ON-VEHICLE REPAIR >

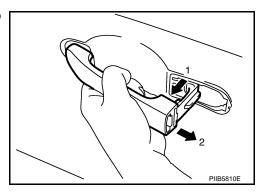
- 3. Remove the front door window and front door module assembly. Refer to <u>GW-18</u>, "<u>Removal and Installa-</u><u>tion</u>".
- 4. Remove door side grommet, and remove door key cylinder assembly (driver side) and outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.

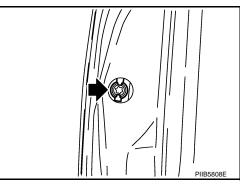
5. Disconnect door antenna and door request switch connector and remove harness clamp.

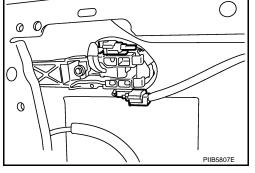
- 6. Disconnect the key cylinder rod.
- 7. Disconnect door key cylinder switch harness connector.
- 8. While pulling the outside handle (1), remove door key cylinder assembly (2).



- 9. Disconnect front door request switch harness connector.
- 10. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle (2).







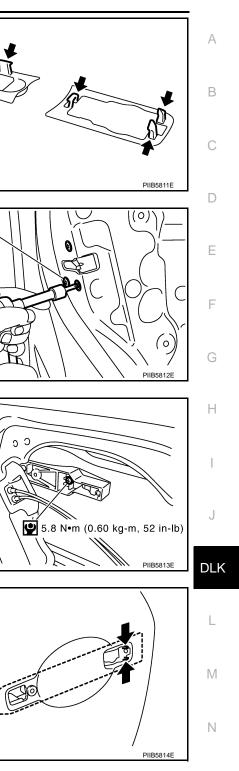
11. Remove the front gasket and rear gasket.

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

13. Remove the TORX bolt (T30) of the outside handle bracket.

14. While pulling outside handle bracket, slide toward rear of vehicle to remove outside handle bracket.

15. Disconnect the door lock actuator connector and remove the door lock assembly.



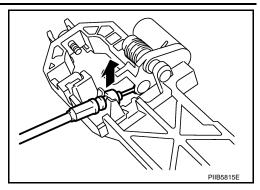
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16. Disconnect the outside handle cable from the outside handle bracket connection.

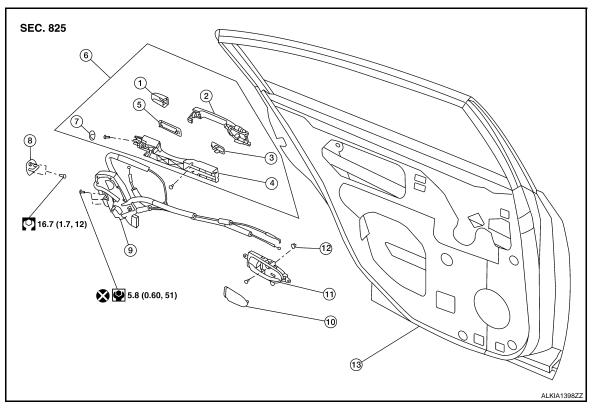


INSTALLATION Installation is in the reverse order of removal. CAUTION:

When installing the key cylinder rod be sure to rotate the rod holder until a click is felt.
Do not reuse the door lock assembly Torx bolts (T30).
BACK DOOR LOCK

BACK DOOR LOCK : Component Parts Location

INFOID:000000003248843



- 1. Outside handle escutcheon
- 4. Outside handle bracket
- 7. Hole plug
- 10. Cap
- 13. Rear door assembly

#### 2. Outside handle

- 5. Rear gasket
- 8. Rear door striker
- 11. Inside handle assembly
- 3. Front gasket
- 6. Outside handle assembly
- 9. Rear door lock assembly
- 12. Grommet

# BACK DOOR LOCK : Removal and Installation

#### INFOID:000000003248844

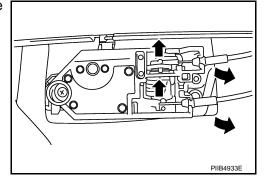
#### REMOVAL

1. Remove the rear door finisher. Refer to INT-11, "Removal and Installation".

# DOOR LOCK

# < ON-VEHICLE REPAIR >

2. Disconnect the inside handle knob cable and lock knob cable from the back side of the inside door handle.



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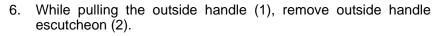
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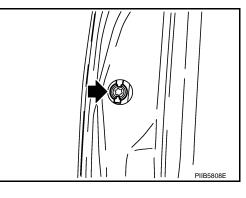
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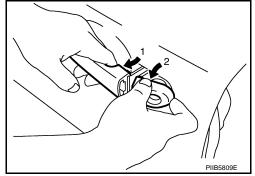
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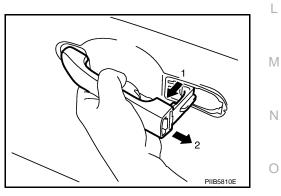
- 3. Remove the rear door sash. Refer to EXT-21, "Removal and Installation".
- 4. Remove the rear door window and rear door screen assembly.
- 5. Remove door side grommet, and remove outside handle escutcheon bolt (TORX T30) from grommet hole.



7. While pulling outside handle (1), slide toward rear of vehicle to remove outside handle (2).

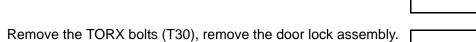






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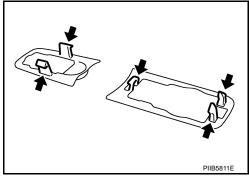
8. Remove the front gasket and rear gasket.



10. Remove the TORX bolt (T30), and remove the outside handle bracket.

11. While pulling outside handle, slide toward rear of vehicle to remove outside handle.

12. Disconnect the door lock actuator connector and remove the door lock assembly.

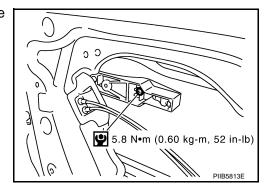


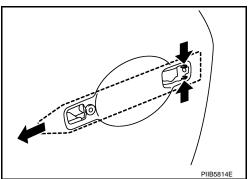
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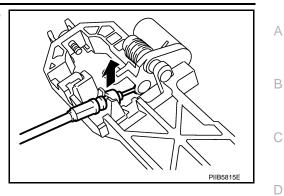




# DOOR LOCK

#### < ON-VEHICLE REPAIR >

13. Disconnect the outside handle cable from the outside handle bracket.



INSTALLATION Installation is in the reverse order of removal. CAUTION:

• Do not reuse the door lock assembly Torx bolts (T30).



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# TRUNK LID

< ON-VEHICLE REPAIR >

# TRUNK LID TRUNK LID ASSEMBLY

TRUNK LID ASSEMBLY : Removal and Installation

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# REMOVAL

- 1. Remove trunk lid finisher. Refer to INT-22, "Removal and Installation".
- 2. Disconnect the connectors in the trunk lid, and remove the harness clips to pull the harness out of the trunk lid.
- 3. Remove the bolts, and remove the trunk lid assembly.

#### INSTALLATION

Installation is in the reverse order of removal.

- CAUTION:
- After installing, apply touch-up paint (the body color) onto the head of the hinge bolts.
- After installing, check operation.
- After installing, perform fitting adjustment. Refer to <u>DLK-231, "TRUNK LID ASSEMBLY : Adjust-ment"</u>.

# **TRUNK LID**

#### < ON-VEHICLE REPAIR >

# TRUNK LID ASSEMBLY : Adjustment





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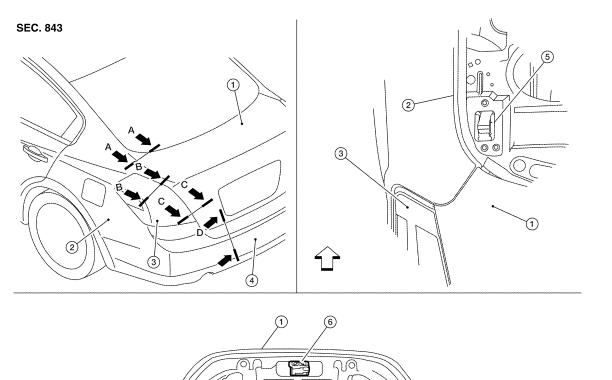
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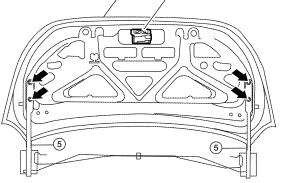
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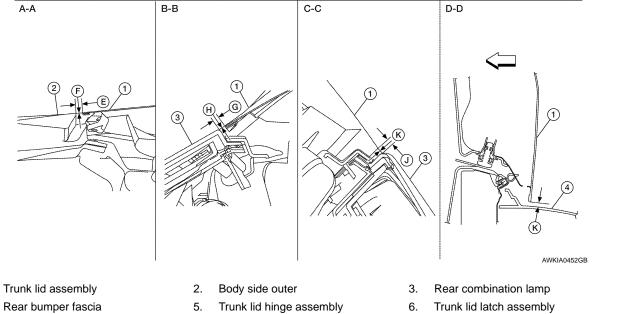
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			Unit: mm (in
Parts		Standard	Right/left clearance (MAX)
A – A	E	4.0 $\pm$ 1.0 (0.16 $\pm$ 0.04)	2.0 (0.08)
	F	-0.5 $\pm$ 1.0 (-0.02 $\pm$ 0.04)	2.0 (0.08)
B – B	G	4.0 $\pm$ 1.5 (0.16 $\pm$ 0.06)	2.0 (0.08)
	Н	-0.5 $\pm$ 1.5 (-0.02 $\pm$ 0.06)	2.0 (0.08)
<b>C</b> – <b>C</b>	J	4.0 $\pm$ 2.0 (0.16 $\pm$ 0.08)	_
D – D	K	5.9 $\pm$ 2.0 (0.23 $\pm$ 0.08)	_

## LONGITUDINAL CLEARANCE

Trunk Lid Removed From Hinge

- 1. Check the clearance and the evenness between the trunk lid and each part by visual and tactile feeling.
- 2. Loosen the trunk lid to hinge bolts.
- 3. Move the trunk lid so that the clearance measurements are within specifications.
- 4. Tighten the trunk lid to hinge bolts.

Trunk Lid Hinge Removed From Vehicle

- 1. Remove the parcel shelf trim. Refer to INT-15. "Removal and Installation".
- 2. Loosen the hinge to parcel shelf bolts.
- 3. Move the trunk lid so that the clearance measurements are within specifications.
- 4. Tighten the hinge to parcel shelf bolts.
- 5. Install the parcel shelf trim. Refer to INT-15, "Removal and Installation".

#### SURFACE HEIGHT ADJUSTMENT

- 1. Loosen the bumper rubber.
- 2. Loosen the striker bolts.
- Lift up the trunk lid approx. 100 150 mm (3.94 5.91 in) height then close it lightly. Make sure it engages firmly with the trunk lid closed.
- 4. Finally tighten the trunk lid striker.

# TRUNK LID LOCK

# TRUNK LID LOCK : Removal and Installation

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# LOCK

Removal

- 1. Remove the trunk lid inner trim panel. Refer to INT-22, "Removal and Installation".
- 2. Remove the bolts, disconnect the electrical connector, separate the emergency release handle, and remove the trunk lid lock

#### Installation

Installation is in the reverse order of removal

#### Striker

Removal

- 1. Remove the trunk end finisher. Refer to INT-22, "Removal and Installation".
- 2. Remove the bolts and the striker.

#### Installation

Installation is in the reverse order of removal.

# NOTE:

Align the trunk lid lock. Refer to DLK-231, "TRUNK LID ASSEMBLY : Adjustment".

# **REMOTE KEYLESS ENTRY RECEIVER**

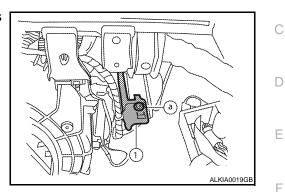
< ON-VEHICLE REPAIR >

# REMOTE KEYLESS ENTRY RECEIVER

# Removal

#### REMOVAL

- 1. Remove glove compartment. Refer to IP-10, "Exploded View".
- 2. Remove the screw (a), lower the bracket and remote keyless entry receiver (1) disconnect the harness and remove.



# Installation

Installation is in the reverse order of removal.

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