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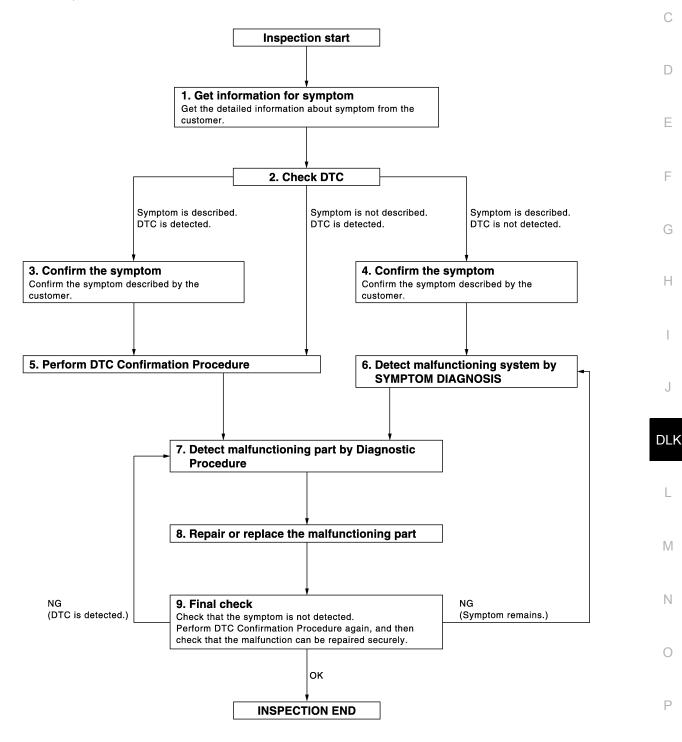
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

**OVERALL SEQUENCE** 



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### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

# 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-143, "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 7

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

### 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 7

# 7. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

### **DIAGNOSIS AND REPAIR WORKFLOW**

#### < BASIC INSPECTION >

#### [WITH INTELLIGENT KEY SYSTEM]

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

Is malfunctioning part detected?

YES >> GO TO 8

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

8.repair or replace the malfunctioning part

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

>> GO TO 9

# 9. FINAL CHECK

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

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

#### Is the inspection result normal?

NO (DTC is detected) >> GO TO 7

NO (Symptom remains) >> GO TO 6

YES >> Inspection End.

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### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

# INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000005259833

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

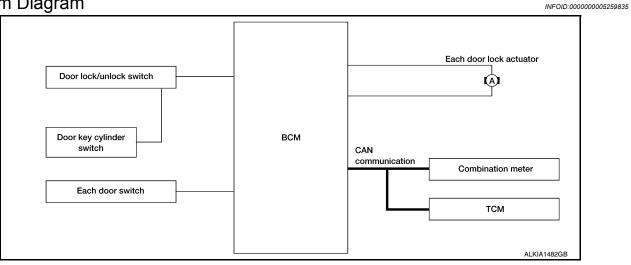
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

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

# **FUNCTION DIAGNOSIS**

# **AUTOMATIC DOOR LOCKS**

### System Diagram



# System Description

INFOID:0000000005259836

Input	Single	Function	Actuator
Door lock/unlock switch	Door lock/unlock signal	/unlock signal Door lock function	
Door key cylinder switch	Door lock/difflock signal	Door lock fullclion	
Each door switch	Door open/close signal	Vay reminder function	Each door lock actuator
Combination meter	Warning buzzer signal	Key reminder function	
Combination meter	Vehicle speed signal	Automatic door lock/unlock function	
TCM	Shift position signal		

#### DOOR LOCK FUNCTION

- The door lock and unlock switch (driver side) is built into power window main switch.
- The door lock and unlock switch (passenger side) is on door trim.
- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all doors are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors are unlocked.

#### Door Key Cylinder

- With the door key inserted in the door key cylinder on driver side, turning it to "LOCK", will lock door lock actuator of all doors.
- With the door key inserted in the door key cylinder on driver side, turning it to "UNLOCK" once unlocks the driver side door lock actuator; turning it to "UNLOCK" again within 5 seconds after the first unlock operation unlocks all of the other doors. - (SELECTIVE UNLOCK OPERATION)

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

### AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

#### Vehicle Speed Sensing Auto Door Lock\*1

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

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

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**DLK-11** Revision: July 2009

#### **AUTOMATIC DOOR LOCKS**

### < FUNCTION DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

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

Setting change of Automatic Door Locks (LOCK) Function

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

#### (P)With CONSULT-III

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to <u>DLK-41</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### Without CONSULT- III

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

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

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

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

### AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

#### IGN OFF Interlock Door Unlock\*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

#### (P)With CONSULT-III

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to <a href="https://docs.pubm.ncbi.nlm.ncbi

### Without CONSULT- III

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

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

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

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

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

# Component Parts Location

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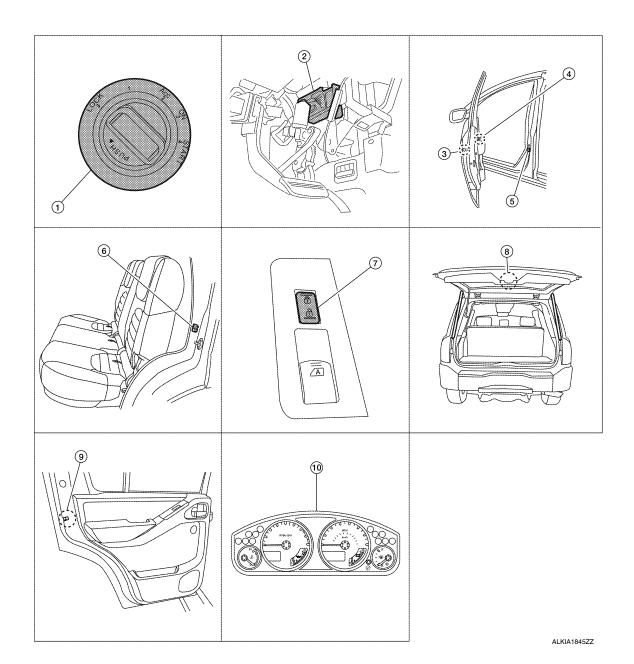
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- 1. Key switch and ignition knob switch M66 2.
- 4. Main power window and door lock/un-
- Power window and door lock/unlock switch RH D105
- 10. Combination meter M24

lock switch D7, D8

- BCM M18, M19, M20
- . Front door switch LH B8 RH B108
- 8. Back door latch (door ajar switch) D502 9.
- Front door lock assembly LH (key cylinder switch) D14
   Front door lock actuator RH D114
- 6. Rear door switch LH B18 RH B116
- Rear door lock actuator LH D205 RH D305

# Component Description

INFOID:0000000005259838

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

# **AUTOMATIC DOOR LOCKS**

### < FUNCTION DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

Item	Function	
Door lock actuator	Output lock/unlock signal from BCM and locks/unlocks each door.	
Door switch	Input door open/close condition to BCM.	
Door key cylinder switch	Input lock or unlock signal to main power window and door lock/unlock switch.     Main power window and door lock/unlock switch transmits door lock/unlock signal to BCN	
Combination meter	<ul> <li>Receive buzzer signal from BCM via CAN communication line, and sounds the buzzer.</li> <li>Transmits vehicle speed signal to CAN communication line.</li> </ul>	

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# DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

# DOOR LOCK AND UNLOCK SWITCH: System Diagram

INFOID:0000000005259839 Main power window and door lock/unlock switch Each door lock actuator Power window and door **BCM** lock/unlock switch RH (A) Front door lock assembly LH (key cylinder switch)

# DOOR LOCK AND UNLOCK SWITCH: System Description

Switch	Input/output signal to BCM	BCM function	Actuator	Н
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 actuators	
Door key cylinder switch				

### DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

 Interlocked with the locking operation of door key cylinder, door lock actuators of all doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.

#### Selective Unlock Operation

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

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

#### Key Reminder System

Refer to DLK-32, "System Description".

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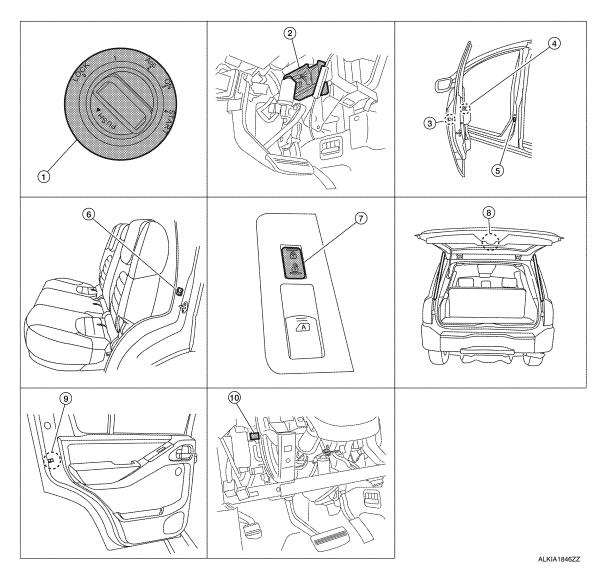
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# DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

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- 1. Key switch and ignition knob switch M66 2.
- BCM M18, M19, M20 (view with instrument panel removed)
- Main power window and door lock/unlock switch D7, D8
- 5. Front door switch LH B8 RH B108
- Power window and door lock/unlock switch RH D105
- 8. Back door latch (door ajar switch)
  D502
- Front door lock assembly LH (key cylinder switch) D14
   Front door lock actuator RH D114
- 6. Rear door switch LH B18 RH B116
- Rear door lock actuator LH D205 RH D305

 Passenger select unlock relay M11 (view with instrument panel LH removed)

# DOOR LOCK AND UNLOCK SWITCH: Component Description

INFOID:0000000005259842

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

### DOOR LOCK FUNCTION

#### < FUNCTION DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Item	Function	
Door switch	Transmits door open/close condition to BCM.	
Passenger select unlock relay	Enables or disables the unlocking of rear doors when this Intelligent Key option is selected.	

### DOOR REQUEST SWITCH

DOOR REQUEST SWITCH: System Diagram

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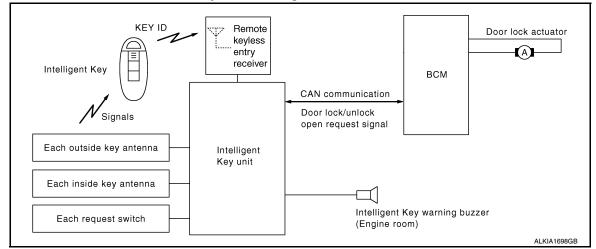
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# DOOR REQUEST SWITCH: System Description

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 or unlocked with request switch or remote controller button operation, the hazard lamps flash and the Intelligent Key warning buzzer or horn sounds (Hazard and buzzer/horn reminder function).
- The settings for each function can be changed with the CONSULT-III.
- If an Intelligent Key is lost, a new Intelligent Key can be registered. A maximum of 4 Intelligent Keys can be registered.
- It is possible to perform a diagnosis on the system and register an Intelligent Key with the CONSULT-III.

#### OPERATION DESCRIPTION/DOOR LOCK/UNLOCK

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

#### **OPERATION CONDITION**

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

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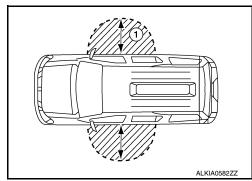
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Each request switch operation	Operation condition
Lock operation	<ul> <li>All doors are closed</li> <li>Ignition switch is in OFF position</li> <li>Intelligent Key is outside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area</li> </ul>
Unlock Operation	Intelligent Key is outside the vehicle     Intelligent Key is within outside key antenna detection area *

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

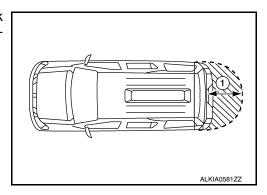
#### OUTSIDE KEY ANTENNA DETECTION AREA

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



#### **OUTSIDE KEY ANTENNA DETECTION AREA**

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



#### SELECTIVE UNLOCK FUNCTION

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

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

#### HAZARD AND BUZZER REMINDER FUNCTION

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

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

Operating function of hazard warning lamps and huzzer reminder

Operation	Hazard warning lamps flash	Intelligent Key warning buzzer sounds
Unlock	Once	Once
Lock	Twice	Twice
Trunk open	<del></del>	Four times

#### How to change hazard and buzzer reminder mode

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

### AUTO RELOCK FUNCTION

### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

When all doors are locked, ignition switch is in OFF position and key switch is OFF, doors are unlocked with door request switch

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

- Door switch is ON (door is opened)
- · Door is locked
- Ignition switch is ON (ignition switch is pressed)
- Key switch is ON

Auto door lock mode can be changed by "AUTO LOCK SET" mode in "WORK SUPPORT". Refer to <u>DLK-41</u>, <u>"DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

#### 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 <a href="DLK-15">DLK-15</a>, "DOOR LOCK AND UNLOCK SWITCH: System Description".

#### LIST OF OPERATION RELATED PARTS

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

Door lock function	Intelligent Key	Ignition key switch	Remote keyless entry receiver	Door switch	Door request switch (Driver, Passenger)	Door lock actuator	Inside key antenna	Outside key antenna (Driver, Passenger)	Intelligent Key warning buzzer	CAN communication system	всм	Hazard warning lamp
Door lock/unlock function by request switch	×	×	×	×	×	×	×	×		×	×	
Hazard and buzzer reminder function for door lock/unlock operation									×	×	×	×
Key reminder function	×	×	×	×	×	×	×	×	×	×	×	×
Selective unlock function by request switch (Driver side)	×				×	×	×	×		×	×	
Selective unlock function by request switch (Passenger side)	×				×	×	×	×		×	×	
Auto door lock function	×	×		×	×	×				×	×	

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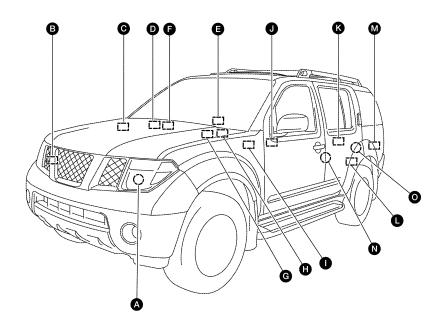
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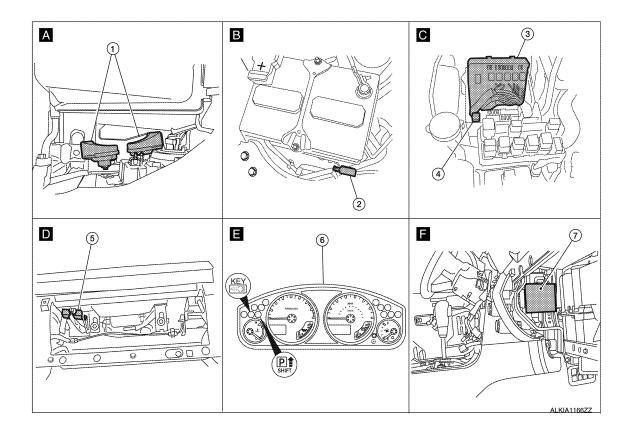
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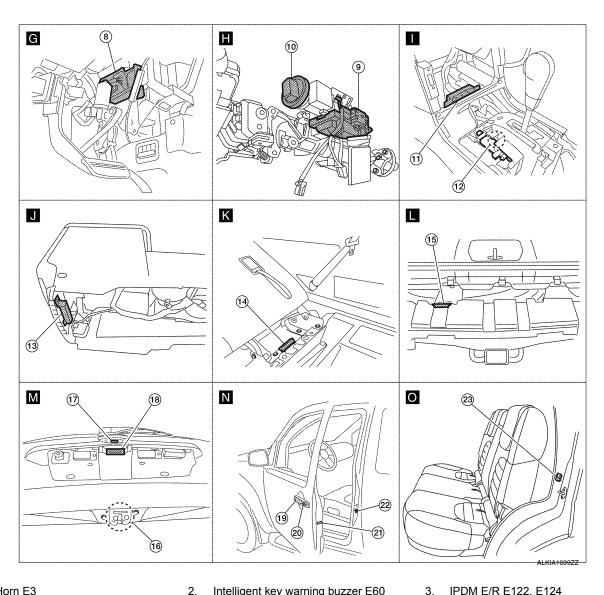
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DOOR REQUEST SWITCH: Component Parts Location

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- Horn E3 (Behind front combination lamp LH)
- Horn relay H-1
- Intelligent Key unit M164 (view with glove box removed)
- 10. Key switch and ignition knob switch
- 13. Center console area antenna M212 (view with center console removed)
- 16. Back door latch (door ajar switch) D502
- 19. Front outside antenna LH D15 Front outside antenna RH D115
- 22. Front door switch LH B8 **RH B108**

- Intelligent key warning buzzer E60
- Remote keyless entry receiver M67 (view with glove box removed)
- BCM M18, M19, M20 (view with instrument panel LH removed)
- Instrument panel area antenna M68 (view with center console cover removed)
- 14. Luggage area antenna B129 (behind right side of 3rd row seat)
- Back door request switch D552
- 20. Front door request switch LH D16 Front door request switch RH D116
- Rear door switch LH B18 **RH B116**

- (view with cover removed)
- Combination meter M24
- Steering lock solenoid M65 (view with steering column removed)
- 12. A/T shift selector [park position switch (Intelligent Key system)] M158
- 15. Rear bumper antenna C127 (view with rear bumper removed)
- 18. Back door opener switch D511
- 21. Front door lock assembly LH (door unlock sensor) D14

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# DOOR REQUEST SWITCH: Component Description

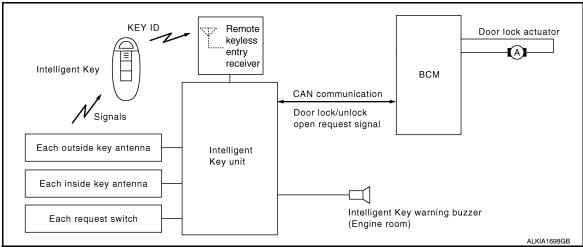
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Item	Function
Intelligent Key unit	Receives lock/unlock signal from remote keyless entry receiver, and then transmits to BCM.
BCM	Controls the door lock function and room lamp function.
Door lock and unlock switch	Transmits lock or unlock signal to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

# INTELLIGENT KEY

# INTELLIGENT KEY: System Diagram

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# **INTELLIGENT KEY: System Description**

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The Intelligent Key has the same functions as the remote control entry system. In addition to other safety features, it can be used to lock and unlock all doors including the back door.

#### OPERATION DESCRIPTION/DOOR LOCK/UNLOCK FUNCTION

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

#### **OPERATION CONDITION**

Remote controller operation	Remote controller operation Operation Operation						
Lock	All doors closed	All doors lock					
Unlock	Intelligent Key is out of the ignition key cylinder	All doors unlock					

#### OPERATION AREA

Operating Range

#### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

• To ensure the Intelligent Key works effectively, use within 80 cm (31.50 in) range of each doors, however the operable range may differ according to surroundings.

#### SELECTIVE UNLOCK FUNCTION

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

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

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

#### HAZARD AND HORN REMINDER FUNCTION

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

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

Operating function of hazard and horn reminder

		C mode				
Intelligent Key operation	Lock	Unlock	Back door open	Lock	Unlock	Back door open
Hazard warning lamp flash	Twice	Once	_	Twice	_	_
Horns sound	Once	_	_	_	_	_

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

### How to change hazard and horn reminder mode

(II) With CONSULT-III

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

### **Without CONSULT-III**

Refer to Owner's Manual for instructions.

#### AUTO RELOCK FUNCTION

#### Auto Door Lock Function

When all doors are locked, ignition switch is OFF (ignition switch is not pressed) and key switch is OFF, doors are unlocked with Intelligent Key button. When BCM does not receive the following signals within 60 seconds, all doors are locked.

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

Auto door lock mode can be changed by DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to DLK-41, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

#### PANIC ALARM FUNCTION

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

The headlamp flashes and the horn sounds intermittently.

The alarm automatically turns off:

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

Panic alarm function mode can be changed by PANIC ALARM SET mode in "WORK SUPPORT". Refer to DLK-41, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

### KEYLESS POWER WINDOW DOWN (OPEN) FUNCTION

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

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

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

While retained power operation activate, Keyless power window down (open) function cannot be operated.

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Revision: July 2009 DLK-23 2010 Pathfinder

### DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Keyless power window down operation mode can be changed by PW DOWN SET mode in "WORK SUP-PORT". Refer to <u>DLK-41</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 30 seconds) by receiving UNLOCK signal from Intelligent Key. For detailed description, refer to <u>DLK-22</u>, "INTELLIGENT KEY: System <u>Description"</u>.

#### LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

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

INTELLIGENT KEY: Component Parts Location

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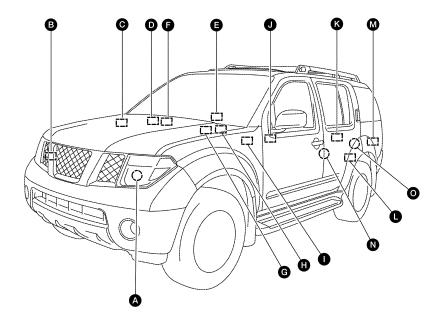
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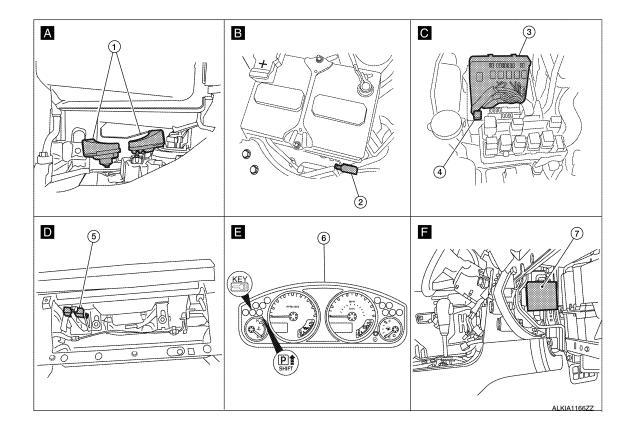
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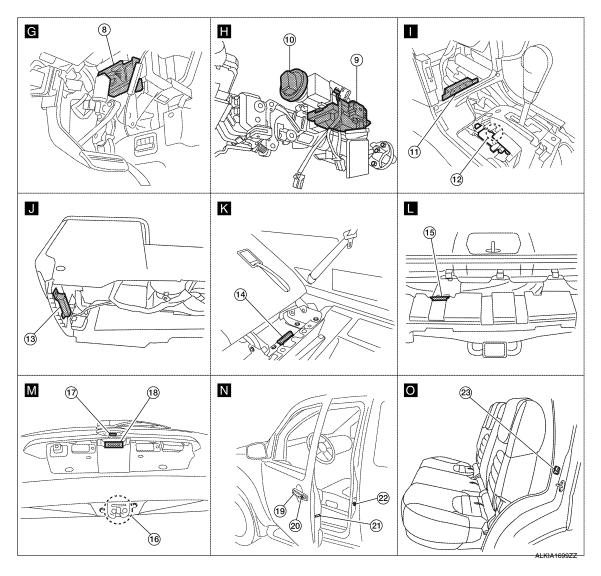
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- Horn E3
   (Behind front combination lamp LH)
- Horn relay H-1
- Intelligent Key unit M164 (view with glove box removed)
- 10. Key switch and ignition knob switch
- 13. Center console area antenna M212 (view with center console removed)
- Back door latch (door ajar switch)
   D502
- Front outside antenna LH D15
   Front outside antenna RH D115
- 22. Front door switch LH B8 RH B108

- 2. Intelligent key warning buzzer E60
- Remote keyless entry receiver M67 (view with glove box removed)
- 8. BCM M18, M19, M20 (view with instrument panel LH removed)
- Instrument panel area antenna M68 (view with center console cover removed)
- Luggage area antenna B129 (behind right side of 3rd row seat)
- 17. Back door request switch D552
- Front door request switch LH D16
   Front door request switch RH D116
- 23. Rear door switch LH B18 RH B116

- 3. IPDM E/R E122, E124 (view with cover removed)
- 6. Combination meter M24
- Steering lock solenoid M65 (view with steering column removed)
- A/T shift selector [park position switch (Intelligent Key system)] M158
- 15. Rear bumper antenna C127 (view with rear bumper removed)
- 18. Back door opener switch D511
- Front door lock assembly LH (door unlock sensor) D14

# INTELLIGENT KEY: Component Description

INFOID:0000000005259850

### **DOOR LOCK FUNCTION**

### < FUNCTION DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

Item	Function
BCM	Controls the door lock function and room lamp function.
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Remote keyless entry receiver	Receives lock/unlock signal from the Intelligent Key, and then transmits to Intelligent Key unit.
Intelligent Key	Transmits button operation to remote keyless entry receiver.
Intelligent Key unit	Receives button operation from remote keyless entry receiver and transmits to BCM.
Intelligent key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with the buzzer sound.

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### WARNING FUNCTION

# System Description

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#### WARNING CHIME/BUZZER/LAMPS FUNCTION

### Operation Description

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

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

#### **OPERATION CONDITION**

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

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

#### KEY WARNING LAMP & P-SHIFT WARNING LAMP

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

**Operation Condition** 

### **WARNING FUNCTION**

# [WITH INTELLIGENT KEY SYSTEM]

E	Behavior of I	amps	Operation condition					
	GREEN	Lighting	All the following conditions are satisfied					
		Blinking	while Intelligent Key low battery warning is operating					
KEY	RED	Lighting	All the following conditions are satisfied  Ignition knob is pressed (Ignition knob switch is ON)  Ignition key is removed from ignition key cylinder (Key switch is OFF)  Intelligent Key is not detected inside of the vehicle					
		Blinking	All the following conditions are satisfied  Take away warning is operating  KEY RED lighting condition is not satisfied					
P-SHIF	Γ	Blinking	When selector lever is not in P position and ignition switch is turned from ON to OFF					
KEY(RE	ED) and P-SI	HIFT lighting	All the following conditions are satisfied					

List of Operation Related Parts

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

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

Revision: July 2009 DLK-29 2010 Pathfinder

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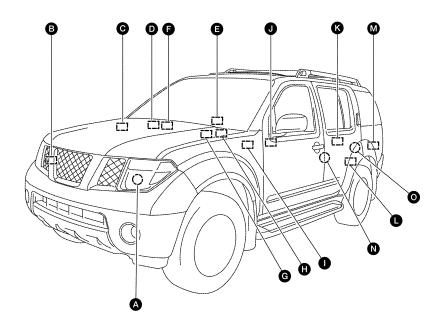
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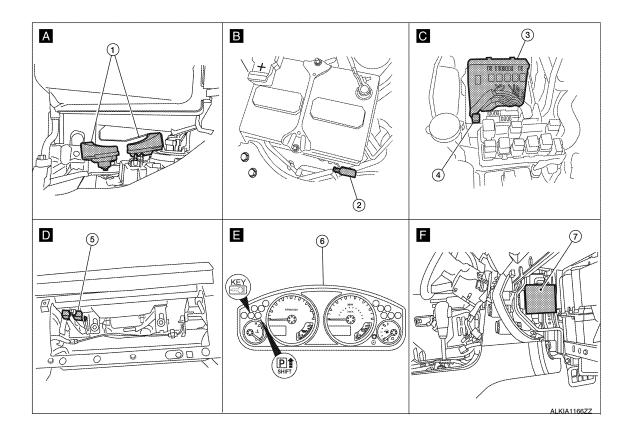
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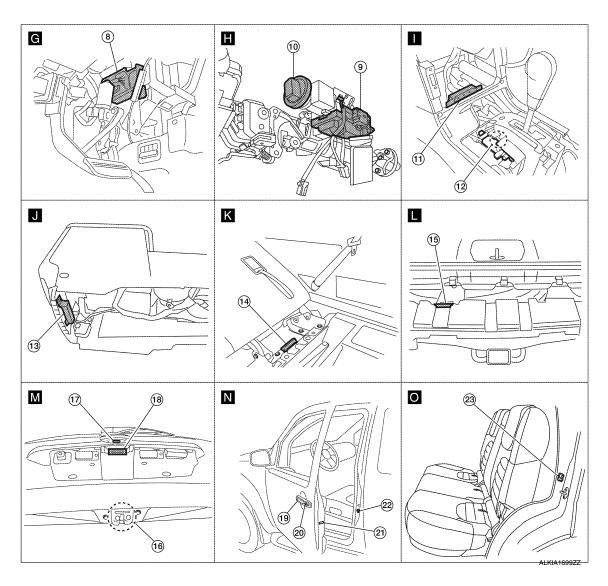
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Component Parts Location

INFOID:0000000005484873







- Horn E3
   (Behind front combination lamp LH)
- 4. Horn relay H-1
- 7. Intelligent Key unit M164 (view with glove box removed)
- Key switch and ignition knob switch M66
- Center console area antenna M212 (view with center console removed)
- Back door latch (door ajar switch)
   D502
- 19. Front outside antenna LH D15
  Front outside antenna RH D115
- 22. Front door switch LH B8 RH B108

- 2. Intelligent key warning buzzer E60
- Remote keyless entry receiver M67 (view with glove box removed)
- BCM M18, M19, M20
   (view with instrument panel LH removed)
- Instrument panel area antenna M68 (view with center console cover removed)
- Luggage area antenna B129 (behind right side of 3rd row seat)
- 17. Back door request switch D552
- Front door request switch LH D16
   Front door request switch RH D116
- 23. Rear door switch LH B18 RH B116

- 3. IPDM E/R E122, E124 (view with cover removed)
- Combination meter M24
- Steering lock solenoid M65 (view with steering column removed)
- A/T shift selector [park position switch (Intelligent Key system)] M158
- 15. Rear bumper antenna C127 (view with rear bumper removed)
- 18. Back door opener switch D511
- Front door lock assembly LH (door unlock sensor) D14

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#### **KEY REMINDER FUNCTION**

### KEY REMINDER FUNCTION

# System Description

INFOID:000000005259853

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

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

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

#### **CAUTION:**

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

Component Parts Location

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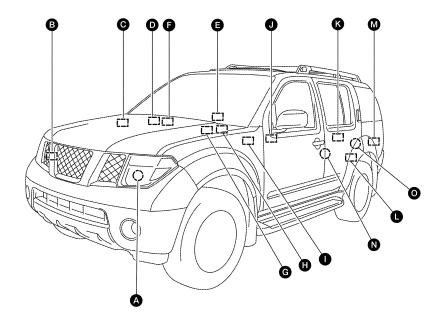
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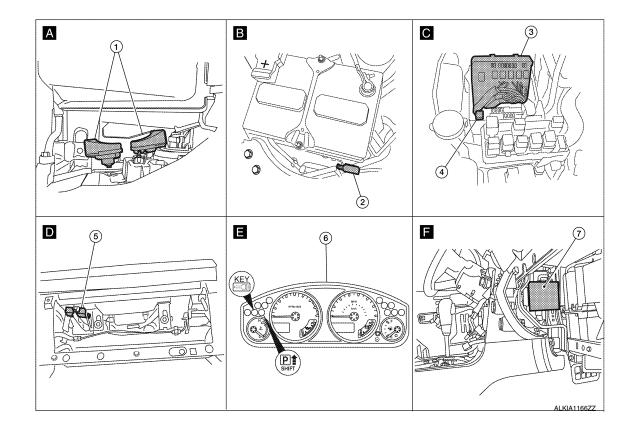
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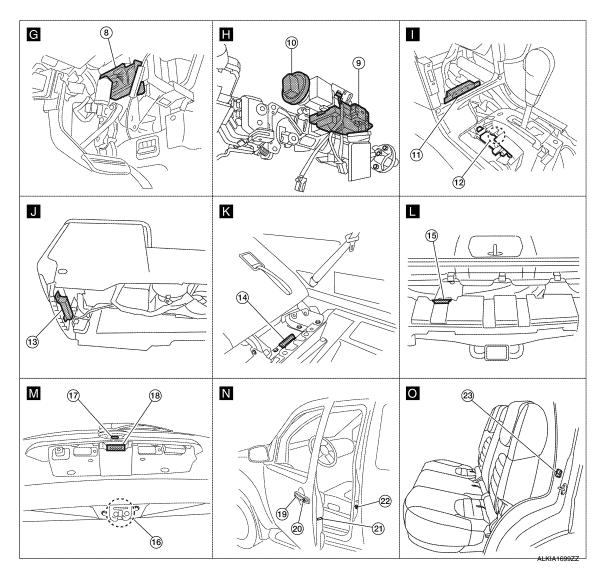
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- Horn E3
   (Behind front combination lamp LH)
- Horn relay H-1
- Intelligent Key unit M164 (view with glove box removed)
- 10. Key switch and ignition knob switch
- 13. Center console area antenna M212 (view with center console removed)
- Back door latch (door ajar switch)
   D502
- Front outside antenna LH D15
   Front outside antenna RH D115
- 22. Front door switch LH B8 RH B108

- 2. Intelligent key warning buzzer E60
- Remote keyless entry receiver M67 (view with glove box removed)
- BCM M18, M19, M20 (view with instrument panel LH removed)
- Instrument panel area antenna M68 (view with center console cover removed)
- 14. Luggage area antenna B129 (behind right side of 3rd row seat)
- 17. Back door request switch D552
- Front door request switch LH D16
   Front door request switch RH D116
- 23. Rear door switch LH B18 RH B116

- 3. IPDM E/R E122, E124 (view with cover removed)
- 6. Combination meter M24
- Steering lock solenoid M65 (view with steering column removed)
- A/T shift selector [park position switch (Intelligent Key system)] M158
- Rear bumper antenna C127 (view with rear bumper removed)
- 18. Back door opener switch D511
- 21. Front door lock assembly LH (door unlock sensor) D14

### HAZARD AND BUZZER REMINDER FUNCTION

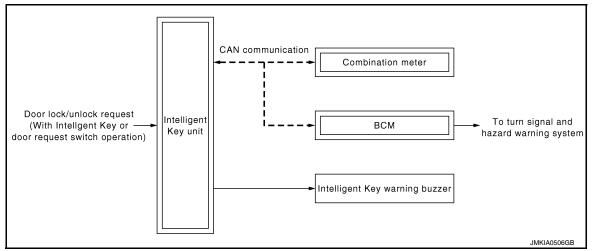
< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# HAZARD AND BUZZER REMINDER FUNCTION

System Diagram

#### HAZARD & BUZZER REMINDER FUNCTION



# **System Description**

### HAZARD AND BUZZER REMINDER FUNCTION

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

#### NOTE:

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

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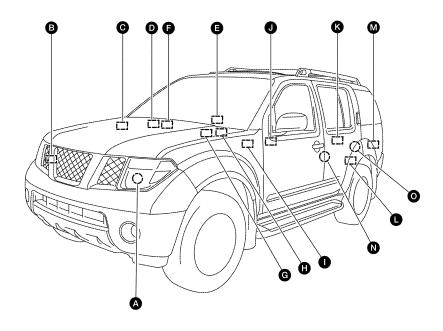
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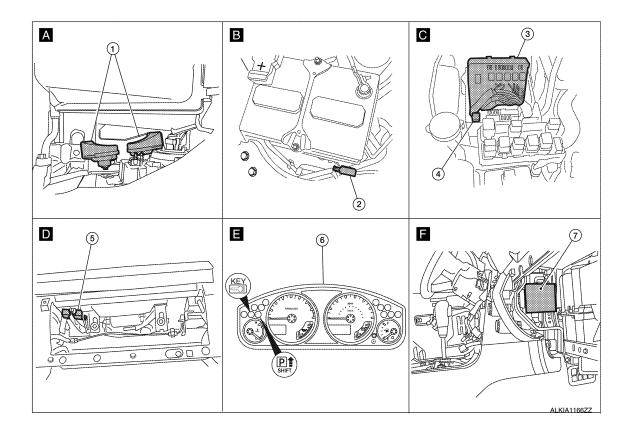
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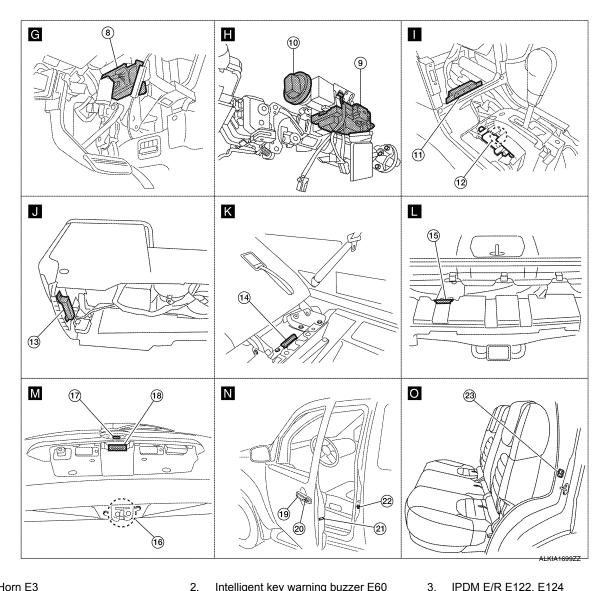
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Component Parts Location

INFOID:0000000005484875







- Horn E3 (Behind front combination lamp LH)
- Horn relay H-1
- Intelligent Key unit M164 (view with glove box removed)
- 10. Key switch and ignition knob switch
- 13. Center console area antenna M212 (view with center console removed)
- 16. Back door latch (door ajar switch) D502
- 19. Front outside antenna LH D15 Front outside antenna RH D115
- 22. Front door switch LH B8 **RH B108**

- Intelligent key warning buzzer E60
- Remote keyless entry receiver M67 (view with glove box removed)
- BCM M18, M19, M20 (view with instrument panel LH removed)
- Instrument panel area antenna M68 (view with center console cover removed)
- 14. Luggage area antenna B129 (behind right side of 3rd row seat)
- Back door request switch D552
- 20. Front door request switch LH D16 Front door request switch RH D116
- Rear door switch LH B18 **RH B116**

- IPDM E/R E122, E124 (view with cover removed)
- Combination meter M24
- Steering lock solenoid M65 (view with steering column removed)
- 12. A/T shift selector [park position switch (Intelligent Key system)] M158
- 15. Rear bumper antenna C127 (view with rear bumper removed)
- 18. Back door opener switch D511
- 21. Front door lock assembly LH (door unlock sensor) D14

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## HAZARD AND BUZZER REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

# **Component Description**

INFOID:0000000005259858

Item	Function
BCM	Controls the hazard and buzzer reminder function (without Intelligent Key).
Intelligent Key unit	Controls the hazard and buzzer reminder function (with Intelligent Key).
Combination meter	Turns ON the LOCK indicator, KEY indicator, turn signal indicator and buzzer (built in combination meter) by the request from Intelligent Key unit via CAN communication.
Intelligent Key warning buzzer	Sounds by the request signal from Intelligent Key unit via CAN communication.

## **HOMELINK UNIVERSAL TRANSCEIVER**

< FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

# HOMELINK UNIVERSAL TRANSCEIVER

# **Component Description**

INFOID:0000000005259859

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

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# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

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

INFOID:0000000005483714

#### APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-54, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	<ul> <li>Enables to read and save the vehicle specification.</li> <li>Enables to write the vehicle specification when replacing BCM.</li> </ul>

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system <sup>1</sup>	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system <sup>2</sup>	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	×
RAP (retained accessory power)	RETAINED PWR	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
TPMS (tire pressure monitoring system)	AIR PRESSURE MONITOR	×	×	×
Vehicle security system	THEFT ALM	×	×	×
Panic alarm	PANIC ALARM			×

<sup>1:</sup> With remote keyless entry system

#### DOOR LOCK

<sup>2:</sup> With Intelligent Key

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

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#### **WORK SUPPORT**

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

#### **DATA MONITOR**

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Indicates condition of ignition switch in ON position
KEY ON SW [ON/OFF]	Indicates condition of key switch
CDL LOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH
DOOR SW-RL [ON/OFF]	Indicates condition of rear door switch LH
BACK DOOR SW [ON/OFF]	Indicates condition of back door switch
KEY CYL LK-SW [ON/OFF]	Indicates condition of lock signal from door key cylinder switch
KEY CYL UN-SW [ON/OFF]	Indicates condition of unlock signal from door key cylinder switch
KEYLESS LOCK <sup>1</sup> [ON/OFF]	Indicates condition of lock signal from keyfob
KEYLESS UNLOCK <sup>1</sup> [ON/OFF]	Indicates condition of unlock signal from keyfob
I-KEY LOCK <sup>2</sup> [ON/OFF]	Indicates condition of lock signal from Intelligent Key
I-KEY UNLOCK <sup>2</sup> [ON/OFF]	Indicates condition of unlock signal from Intelligent Key

<sup>1:</sup> With remote keyless entry system

#### **ACTIVE TEST**

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].

# INTELLIGENT KEY

INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID.000000005483717

#### **DATA MONITOR**

<sup>2:</sup> With Intelligent Key

# **DIAGNOSIS SYSTEM (BCM)**

< FUNCTION DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

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

# TRUNK

# TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005483718

#### **DATA MONITOR**

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

#### **ACTIVE TEST**

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

# **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

# CONSULT-III Function (INTELLIGENT KEY)

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#### APPLICATION ITEM

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

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

#### SELF-DIAG RESULT

Refer to <u>DLK-143</u>, "DTC Index".

#### **DATA MONITOR**

Monitor Item	Condition
PUSH SW	Indicates [ON (pushed)/OFF (released)] condition of ignition knob switch.
KEY SW	Indicates [ON (inserted)/OFF (removed)] condition of key switch.
DR REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (driver side).
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side).
BD/TR REQ SW	This item is shown but not monitored.
IGN SW	Indicates [ON (ON or START position)/OFF (other than ON and START position)] condition of ignition switch ON position.
ACC SW	Indicates [ON/OFF] condition of ignition switch ACC position.
STOP LAMP SW	Indicates [ON/OFF] condition of stop lamp switch.
P RANGE SW	Indicates [ON/OFF] position of shift lever park position switch.
BD OPEN SW	This item is shown but not monitored.
TR CANCEL SW	This item is shown but not monitored.
DOOR LOCK SIG	Indicates [ON/OFF] condition of LOCK signal from Intelligent Key.
DOOR UNLOCK SIG	Indicates [ON/OFF] condition of UNLOCK signal from Intelligent Key.
KEYLESS TRUNK	This item is shown but not monitored.
KEYLESS PANIC	Indicates [ON (pressed)/OFF (released)] condition of Intelligent Key panic button.
KEYLS PSD LH	This item is shown but not monitored.
KEYLS PSD RH	This item is shown but not monitored.
KEYLS PBD SIG	Indicates [ON (pressed)/OFF (released)] condition of Intelligent Key back door button.
DOOR SW DR	Indicates [OPEN/CLOSE] condition of front door switch (driver side) from BCM via CAN communication.
DOOR SW AS	Indicates [OPEN/CLOSE] condition of front door switch (passenger side) from BCM via CAN communication.
DOOR SW RR	Indicates [OPEN/CLOSE] condition of rear door switch (RH) from BCM via CAN communication.
DOOR SW RL	Indicates [OPEN/CLOSE] condition of rear door switch (LH) from BCM via CAN communication.
DOOR BK SW	Indicates [OPEN/CLOSE] condition of back door switch from BCM via CAN communication.

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# **DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)**

# < FUNCTION DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

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

#### **ACTIVE TEST**

Test item	Description
DOOR LOCK/UNLOCK	This test is able to check door lock/unlock operation.  • ALL UNLK: All door lock actuators are unlocked.  • DR UNLK: Door lock actuator (driver side) is unlocked.  • AS UNLK: Door lock actuator (passenger side) is unlocked.  • BK UNLK: This item is indicated, but inactive.  • LOCK: All door lock actuator is locked.
ANTENNA	This test is able to check Intelligent Key antenna operation.  When the following condition are met, hazard warning lamps flash.  ROOM ANT1: Instrument panel area antenna detects Intelligent Key when "ROOM ANT1" is selected.  ROOM ANT2: Center console and luggage area antennas detect Intelligent Key when "ROOM ANT2"is selected.  LUG ANT:This selection is not used.  DRIVER ANT: Outside key antenna (driver side) detects Intelligent Key when "DR ANT" is selected.  ASSIST ANT: Outside key antenna (passenger side) detects Intelligent Key when "AS ANT" is selected.  BK DOOR ANT: Outside key antenna (rear bumper) detects Intelligent Key when "BK DR ANT" is selected.
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation.  ON  OFF
INSIDE BUZZER	This test is able to check warning chime in combination meter operation.  TAKE OUT: Take away warning chime sounds.  KNOB: Ignition knob switch warning chime sounds.  KEY: Key warning chime sounds.
INDICATOR	This test is able to check Intelligent Key warning lamps operation.  Green "KEY" warning lamp illuminates when "BLUE ON" on CONSULT-III screen is touched.  Red "KEY" warning lamp illuminates when "RED ON" on CONSULT-III screen is touched.  Shift to park warning lamp illuminates when "KNOB ON" on CONSULT-III screen is touched.  Green "KEY" warning lamp flashes when "BLUE IND" on CONSULT-III screen is touched.  Red "KEY" warning lamp flashes when "RED IND" on CONSULT-III screen is touched.  Shift to park warning lamp (P-SHIFT) flashes when "KNOB IND" on CONSULT-III screen is touched.  OFF

#### **U1000 CAN COMM CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# **COMPONENT DIAGNOSIS**

#### U1000 CAN COMM CIRCUIT

Description

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to LAN-53, "CAN Communication Signal Chart".

DTC Logic

#### DTC DETECTION LOGIC

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

## Diagnosis Procedure

1.PERFORM SELF DIAGNOSTIC

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

#### Is "CAN COMM CIRCUIT" displayed?

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

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

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## **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# U1010 CONTROL UNIT (CAN)

DTC Logic

#### DTC DETECTION LOGIC

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

## Diagnosis Procedure

INFOID:0000000005259870

# 1.REPLACE BCM

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

>> Replace BCM.

# Special Repair Requirement

INFOID:0000000005259871

# 1. REQUIRED WORK WHEN REPLACING BCM

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

>> Work End.

#### **INSTRUMENT PANEL AREA ANTENNA**

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### **INSTRUMENT PANEL AREA ANTENNA**

Description INFOID:0000000005259872

Detects whether Intelligent Key is inside the vehicle.

## Component Function Check

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# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Instrument panel area antenna is OK.

NO >> Refer to <u>DLK-47</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

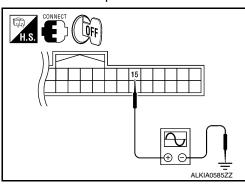
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Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>. "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit connector and ground with an oscilloscope.

Connector	Item	Terminals (+) (-)		Condition	Signal (V) (Reference value)
M164	Intelligent Key unit	15	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0µs PIIB7441E



#### Is the inspection result normal?

YES >> Instrument panel area antenna is OK.

NO >> GO TO 2

#### 2. CHECK INSIDE KEY ANTENNA

Disconnect Intelligent Key unit connector and instrument panel area antenna connectors.

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

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#### **INSTRUMENT PANEL AREA ANTENNA**

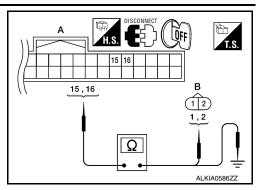
#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Intelligent Key unit connector	I lerminais I area antenna con-		Terminals	Continuity
A: M164	15	B: M68	1	Yes
A. W104	16	D. MOO	2	165

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

Item	Connector	Terminals		Continuity
Intelligent Key	A: M164	15	Ground	No
unit	A. W1104	16	Ground	INO



#### Is the inspection result normal?

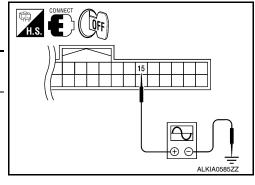
YES >> GO TO 3

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

# 3.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- 1. Replace instrument panel area antenna. (New antenna or other antenna)
- 2. Connect Intelligent Key unit connector.
- 3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminals		Condition	Signal (V)	
Connector	пеш	(+)	(-)	Condition	(Reference value)	
M164	Intelligent Key unit	15	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0μs PIIB7441E	



#### Is the inspection result normal?

YES >> Replace instrument panel area antenna.

NO >> Replace Intelligent Key unit. Refer to <u>SEC-118</u>, "Removal and Installation".

#### **CENTER CONSOLE AREA ANTENNA**

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### CENTER CONSOLE AREA ANTENNA

**Description** 

Detects whether Intelligent Key is inside the vehicle.

## Component Function Check

## INFOID:0000000005259876

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# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Center console area antenna is OK.

NO >> Refer to <u>DLK-49</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

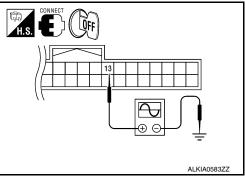
INFOID:0000000005259877

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

# 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit connector and ground with an oscilloscope.

Connector	Item	Terminals (+) (-)		Condition	Signal (V) (Reference value)
M164	Intelligent Key unit	13	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0μs PIIB7441E



#### Is the inspection result normal?

YES >> Center console area antenna is OK.

NO >> GO TO 2

### 2.CHECK INSIDE KEY ANTENNA

Disconnect Intelligent Key unit connector and center console area antenna connectors.

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

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#### **CENTER CONSOLE AREA ANTENNA**

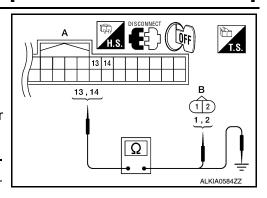
#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Intelligent Key unit connector	Terminals	Center console area antenna connector	Terminals	Continuity
A: M164	13	B: M212	1	Yes
A. W104	14	D. IVIZ 12	2	163

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

Item	Connector	Terminals		Continuity
Intelligent Key	A: M164	13	Ground	No
unit	A. W104	14	Giodila	



#### Is the inspection result normal?

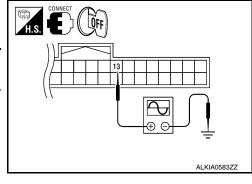
YES >> GO TO 3

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

# 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- 1. Replace center console area antenna (New antenna or other antenna).
- 2. Connect Intelligent Key unit connector.
- 3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	ctor Item		rminals	Condition	Signal (V)	
Connector	пеш	(+)	(-)	Condition	(Reference value)	
M164	Intelligent Key unit	13	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0μs PIIB7441E	



#### Is the inspection result normal?

YES >> Replace center console area antenna.

NO >> Replace Intelligent Key unit. Refer to <u>SEC-118</u>, "Removal and Installation".

#### **LUGGAGE AREA ANTENNA**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### LUGGAGE AREA ANTENNA

**Description** 

Detects whether Intelligent Key is inside the vehicle.

## Component Function Check

# INFOID:000000005259879

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# 1. CHECK INSIDE KEY ANTENNA INPUT SIGNAL

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> luggage area antenna is OK.

NO >> Refer to <u>DLK-51, "Diagnosis Procedure"</u>.

## Diagnosis Procedure

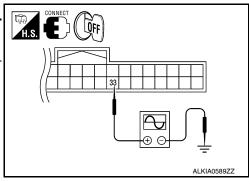
INFOID:0000000005259880

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

# 1. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between Intelligent Key unit connector and ground with an oscilloscope.

Connector	onnector Item		rminals	Condition	Signal (V)	
	Itom	(+)	(-)	Ooridition	(Reference value)	
M164	Intelligent Key unit	33	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0μs PIIB7441E	



#### Is the inspection result normal?

YES >> Luggage area antenna is OK.

NO >> GO TO 2

#### 2. CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and luggage area antenna connectors.

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

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Revision: July 2009 DLK-51 2010 Pathfinder

#### **LUGGAGE AREA ANTENNA**

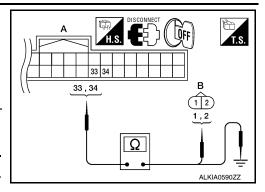
#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Intelligent Key unit connector	Terminals	Luggage area an- tenna connector	Terminals	Continuity
A: M164	33	B: B129	1	Yes
A. W104	34		2	165

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

Item	Connector	Terminals		Continuity
Intelligent Key	A: M164	33	Ground	No
unit	A. W104	34	Oround	NO



#### Is the inspection result normal?

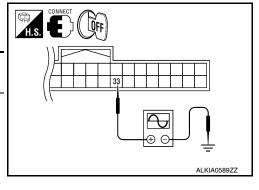
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and luggage area antenna.

# 3. CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

- 1. Replace luggage area antenna (New antenna or other antenna).
- 2. Connect Intelligent Key unit connector.
- 3. Check signal between Intelligent Key unit connector and ground with oscilloscope.

Connector	Item	Terminals		Condition	Signal (V)
	itom	(+)	(-)	Ooridition	(Reference value)
M164	Intelligent Key unit	33	Ground	Ignition switch is pushed.	(V) 10 5 0 10.0μs



#### Is the inspection result normal?

YES >> Replace luggage area antenna.

NO >> Replace Intelligent Key unit. Refer to <u>SEC-118, "Removal and Installation"</u>.

#### POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# POWER SUPPLY AND GROUND CIRCUIT INTELLIGENT KEY UNIT

INTELLIGENT KEY UNIT : Diagnosis Procedure

INFOID:0000000005259881

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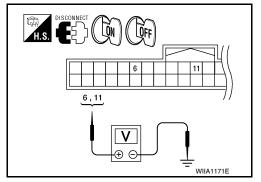
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Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>. "Wiring Diagram — INTELLIGENT KEY SYSTEM — "

# 1. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminals		Ignition swi	tch position
	(+)	(-)	OFF	ON
M70	6	Ground	0V	Battery voltage
	11	Giodila	Battery voltage	Battery voltage



#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace Intelligent Key power supply circuit.

# 2.CHECK GROUND CIRCUIT

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

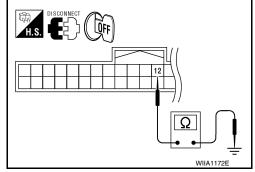
# 12 - Ground

: Continuity should exist.

#### Is the inspection result normal?

YES >> Power supply and ground circuits are OK.

NO >> Repair or replace the Intelligent Key unit ground circuit.



# **BCM (BODY CONTROL MODULE)**

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:000000005484557

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

# 1. CHECK FUSES AND FUSIBLE LINK

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

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

Is the fuse blown?

Revision: July 2009 DLK-53 2010 Pathfinder

#### POWER SUPPLY AND GROUND CIRCUIT

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

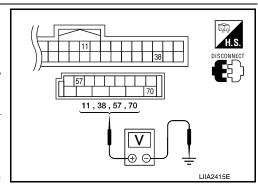
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

				ı	
Connector	Term	Terminals		Condition	Voltage (V) (Ap-
Commoder	(+)	(-)	source	Condition	prox.)
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
IVIZU	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage



#### Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

# 3. CHECK GROUND CIRCUIT

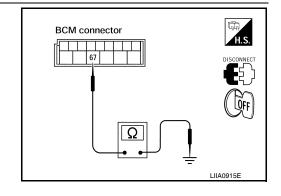
Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M20	67		Yes

#### Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



DOOR	SWITCH
< COMPONENT DIAGNOSIS >	[WITH INTELLIGENT KEY SYSTEM]
DOOR SWITCH	
Description	INFOID:000000005259883
Detects door open/close condition.	
Component Function Check	INFOID:000000005259884
1.check function	
With CONSULT-III Check door switches in data monitor mode with CON	
Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	01.005 00511.055 011
DOOR SW-RL	$CLOSE \to OPEN \colon OFF \to ON$
DOOR SW-RR BACK DOOR SW	
Is the inspection result normal?  YES >> Door switch is OK.  NO >> Refer to DLK-55, "Diagnosis Procedure"	
Diagnosis Procedure	INFOID:000000005259885
Regarding Wiring Diagram information, refer to $\underline{\text{DL}}$ $\underline{\text{TEM}}$ .	K-131, "Wiring Diagram — POWER DOOR LOCK SYS-
1.CHECK DOOR SWITCHES INPUT SIGNAL	

( With CONSULT-III

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

When doors are open:

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

· When doors are closed:

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

Without CONSULT-III

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

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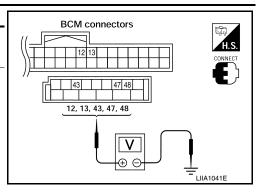
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#### [WITH INTELLIGENT KEY SYSTEM]

Connec-	Item	Terminals		Condition	Voltage (V)
tor	item	(+)	(-)	Condition	(Approx.)
	Back door switch/latch 43				
M19	Front door switch LH	47	Ground	Open ↓ Closed	0 ↓ Battery voltage
	Rear door switch LH	48			
M18	Front door switch RH	12			
IVIT8	Rear door switch RH	13			



#### Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2

# 2. CHECK DOOR SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch and BCM.
- Check continuity between BCM connector (A) M18, M19 terminals 12, 13, 43, 47, 48 and door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D502 terminal 3.

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

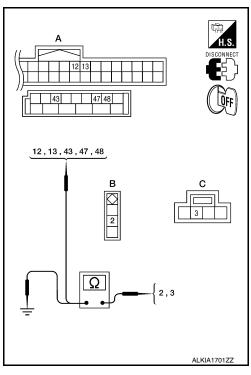
4. Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D502 terminal 7 and ground.

2 - Ground :Continuity should not exist3 - Ground :Continuity should not exist

#### Is the inspection result normal?

YES >> (Front and rear doors) GO TO 3.

YES >> (Back door) GO TO 4. NO >> Repair or replace harness.



# 3. CHECK DOOR SWITCH

· Check continuity between door switch terminals.

#### **DOOR SWITCH**

#### < COMPONENT DIAGNOSIS >

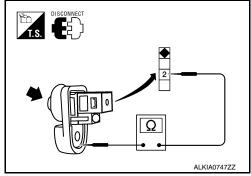
#### [WITH INTELLIGENT KEY SYSTEM]

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

#### Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> Replace door switch.



# 4. CHECK BACK DOOR LATCH CIRCUIT

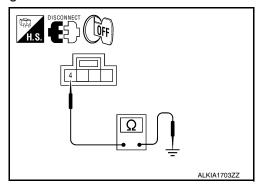
• Check continuity between back door latch connector terminal 4 and ground.

0	Tourisale	0 - 1 - 1
Connector	Terminals	Continuity
Back door latch	4 – Ground	Yes

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.



# 5.CHECK BACK DOOR LATCH SWITCH

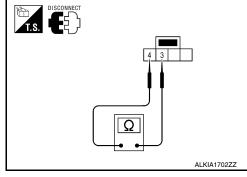
Check continuity between back door latch switch terminals.

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

#### Is the inspection result normal?

YES >> Back door latch switch circuit is OK.

NO >> Replace back door latch.



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#### **GLASS HATCH AJAR SWITCH**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### **GLASS HATCH AJAR SWITCH**

Description INFOID:000000005259886

Detects glass hatch open/close condition.

## Component Function Check

INFOID:0000000005259887

# 1. CHECK FUNCTION

#### (III) With CONSULT-III

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

Monitor item	Condition
GLASS HATCH SW	$CLOSE \to OPEN \colon OFF \to ON$

#### Is the inspection result normal?

YES >> Glass hatch switch is OK.

NO >> Refer to <u>DLK-58</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

INFOID:0000000005259888

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

## With CONSULT-III

Check glass hatch ajar switch "GLASS HATCH SW" in DATA MONITOR mode with CONSULT-III.

· When glass hatch is open:

#### GLASS HATCH SW :ON

· When glass hatch is closed:

#### GLASS HATCH SW: OFF

# Without CONSULT-III

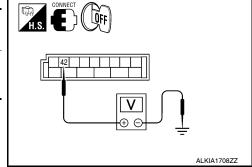
Check voltage between BCM connector M19 terminals 42 and ground.

Connector	Item	Term	inals	Condition	Voltage (V)
Connector	item	(+)	(-)	Condition	(Approx.)
M19	ВСМ	42	Ground	Open ↓ Closed	0 ↓ Battery voltage

#### Is the inspection result normal?

YES >> Glass hatch ajar switch circuit is OK.

NO >> GO TO 2



# 2.CHECK GLASS HATCH AJAR SWITCH CIRCUIT

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

#### **GLASS HATCH AJAR SWITCH**

#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

#### 42 - 1 :Continuity should exist

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

#### 42 - Ground :Continuity should not exist

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

# 3.check glass hatch ajar switch

Check continuity between glass hatch ajar switch connector terminal 1 and ground.

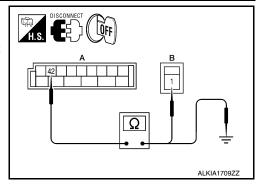
	Terminals	Condition	Continuity
Glass hatch ajar switch	1 – Ground	Open Yes	
	i – Ground	Closed	No

#### Is the inspection result normal?

NO

YES >> Refer to GI-37, "Intermittent Incident".

>> Replace glass hatch ajar switch.



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< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### DOOR LOCK AND UNLOCK SWITCH

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000005259889

Transmits door lock/unlock operation to BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000005259890

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to <u>DLK-60</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000005259891

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

#### With CONSULT-III

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

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

#### CDL LOCK SW :ON

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

#### CDL UNLOCK SW :ON

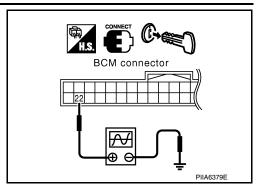
# Without CONSULT-III

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

#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

Connector	Terr	minal	Voltage (V)
	(+)	(-)	Voltage (V)
M18	22	Ground	(V) 15 10 5 0



#### Is the inspection result normal?

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

NO >> GO TO 2

# 2.CHECK BCM OUTPUT SIGNAL

1. Turn ignition switch OFF.

Using the vehicle operational Intelligent Key, press and hold the UNLOCK button for more than 3 seconds.

#### The front windows should be lowered.

#### Is the inspection result normal?

YES >> GO TO 3

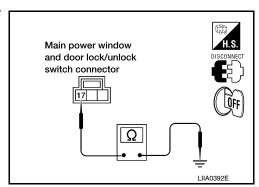
NO >> Replace BCM. Refer to BCS-59, "Removal and Installation".

# 3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector D8 terminal 17 and ground.

17 - Ground

: Continuity should exist.



#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

## 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

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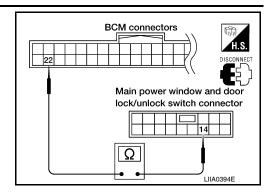
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#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

22 - 14

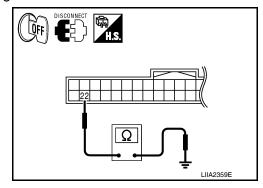
: Continuity should exist.



Check continuity between BCM connector M18 terminal 22 and ground.

22 - Ground

: Continuity should not exist.



#### Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000005259892

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005259893

# 1. CHECK FUNCTION

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to DLK-62, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

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INFOID:0000000005259894

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# 1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

With CONSULT-III

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

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

CDL LOCK SW :ON

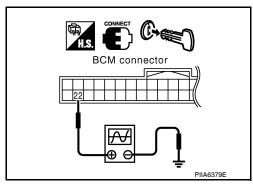
When power window and door lock/unlock switch RH is turned to UNLOCK:

CDL UNLOCK SW :ON

#### Without CONSULT-III

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

0	Terr	minal	Valle = - (V)
Connector	(+)	(+) (-)	Voltage (V)
M18	22	Ground	(V) 15 10 5 0 10 ms



#### Is the inspection normal?

YES >> Power window and door lock/unlock switch RH circuit is OK.

NO >> GO TO 2

## 2. CHECK BCM OUTPUT SIGNAL

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

The front windows should be lowered.

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-59, "Removal and Installation".

# 3.check door lock/unlock switch ground harness

1. Disconnect power window and door lock/unlock switch RH.

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#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

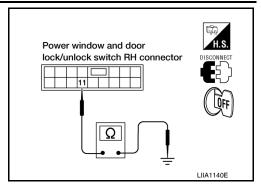
Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground

11 - Ground : Continuity should exist.

#### Is the inspection normal?

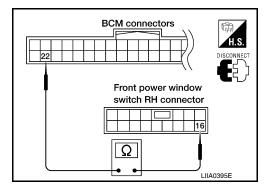
YES >> GO TO 4

NO >> Repair or replace harness.



# 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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



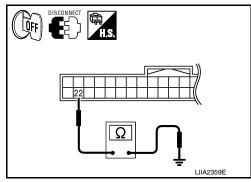
3. Check continuity between BCM connector M18 terminal 22 and ground.

22 - Ground : Continuity should not exist.

#### Is the inspection normal?

YES >> Replace power window and door lock/unlock switch RH.

NO >> Repair or replace harness.



#### **BACK DOOR OPENER SWITCH**

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### **BACK DOOR OPENER SWITCH**

## Diagnosis Procedure

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

# 1. CHECK BACK DOOR OPENER SWITCH

#### (P)With CONSULT-III

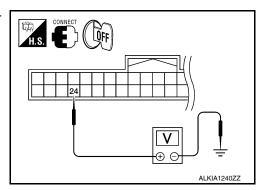
Check back door opener switch ("BD/TR REQ SW") in "DATA MONITOR" mode.

Monitor item	Condition
BD/TR REQ SW	Back door opener switch is pressed: ON
BD/TR REQ 5W	Back door opener switch is released: OFF

#### Without CONSULT-III

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

Connector	Term	inals	Condition	Voltage (V)
Connector	(+)		Condition	(Approx.)
M164	24	Ground	Back door opener switch is pressed	0
- W1104	24	Ground	Back door opener switch is released	5



#### Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> GO TO 2

# 2.CHECK BACK DOOR OPENER SWITCH OPERATION

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

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

# DISCONNECT OFF

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Replace back door opener switch.

## 3.CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

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

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Revision: July 2009 DLK-65 2010 Pathfinder

#### **BACK DOOR OPENER SWITCH**

#### < COMPONENT DIAGNOSIS >

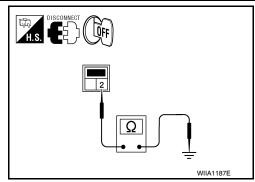
#### [WITH INTELLIGENT KEY SYSTEM]

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

#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace back door opener switch ground circuit.



# 4. CHECK BACK DOOR OPENER SWITCH CIRCUIT

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

#### 24 - 1 : Continuity should exist.

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

#### 24 - Ground : Continuity should not exist.

#### Is the inspection result normal?

YES >> GO TO 5

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

# 5. CHECK BACK DOOR OPENER SWITCH SIGNAL

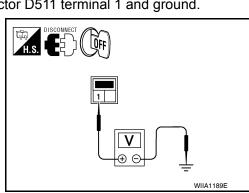
- 1. Connect Intelligent Key Unit connector.
- 2. Check voltage between back door opener switch harness connector D511 terminal 1 and ground.

#### 1 - Ground : Approx. 5v

#### Is the inspection result normal?

YES >> Check condition of harness and connector.

NO >> Replace Intelligent Key Unit. Refer to <u>SEC-118</u>, "Removal and Installation".



#### **KEY CYLINDER SWITCH**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

#### KEY CYLINDER SWITCH

Description

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

## Component Function Check

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# 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Monitor item	Con	dition
KEY CYL LK-SW	Lock	: ON
RET CTL IN-SW	Neutral / Unlock	: OFF
KEY CYLLIN CW	Unlock	: ON
KEY CYL UN-SW	Neutral / Lock	: OFF

#### Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to <u>DLK-67</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-131</u>. "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —</u>".

# 1. CHECK DOOR KEY CYLINDER SWITCH LH

#### (P)With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode with CONSULT-III.

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

#### KEY CYL LK-SW : ON

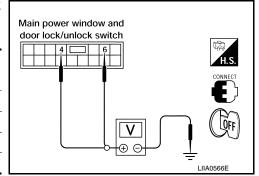
When key inserted in left front key cylinder is turned to UNLOCK:

#### KEY CYL UN-SW : ON

#### 

Check voltage between main power window and door lock/unlock switch connector D7 terminals 4, 6 and ground.

Connector	Connector		Condition of left front key cylinder	Voltage (V)
	(+)	(-)		(Approx.)
	4		Neutral/Unlock	5
D.7	Ground 6	Lock	0	
D7		6	Ground	Neutral/Lock
	0		Unlock	0



#### Is the inspection result normal?

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#### < COMPONENT DIAGNOSIS >

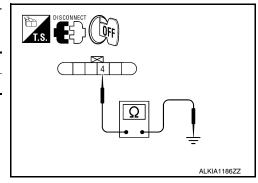
YES >> Key cylinder switch signal is OK.

NO >> GO TO 2

# $2.\mathsf{CHECK}$ door key cylinder switch LH ground harness

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly LH (key cylinder switch).
- 3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 4 and body ground.

Connector	Terminals	Continuity
D14	4 – Ground	Yes



#### Is the inspection result normal?

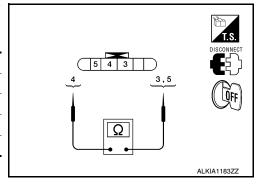
YES >> GO TO 3

NO >> Repair or replace harness.

# 3. CHECK DOOR KEY CYLINDER SWITCH LH

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

Terminals	Condition	Continuity
3 – 4	Key is turned to LOCK or neutral.	No
3 – 4	Key is turned to UNLOCK.	Yes
4 – 5	Key is turned to UNLOCK or neutral.	No
4-5	Key is turned to LOCK.	Yes



#### Is the inspection result normal?

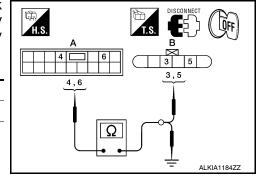
YES >> GO TO 4

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-199</u>, "Removal and Installation".

#### 4. CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 3, 5 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main	4	B: Front	5	Yes
power win- dow and door lock/ unlock switch	6	door lock assembly LH (key cylinder switch)	3	Yes
SWITCH	4, 6	Gi	round	No



#### Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.

# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

Description INFOID:0000000005259899

Detects door lock condition of driver door.

# Component Function Check

# CHECK FUNCTION

#### (P)With CONSULT-III

Check door unlock sensor in DATA MONITOR mode.

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

#### Is the inspection result normal?

YES >> Door unlock sensor is OK.

NO >> Refer to DLK-69, "Diagnosis Procedure".

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-149</u>, "Wiring <u>Diagram — INTELLIGENT KEY SYSTEM —</u>

# 1.check unlock sensor power supply

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

Connector	Terminals		Condition	Voltage (V) (Approx.)
Connector	(+) (-)			
			Driver side door lock is locked	5
M164	28	Ground	Driver side door lock is unlocked	0

#### Is the inspection result normal?

YES >> Front door lock assembly LH (door unlock sensor) is OK.

NO >> GO TO 2

# 2.CHECK UNLOCK SENSOR CIRCUIT

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit and front door lock assembly LH (door unlock sensor) connector.
- Check continuity between Intelligent Key unit harness connector (A) M164 terminal 28 and front door lock assembly LH (door unlock sensor) harness connector (B) D14 terminal 6.

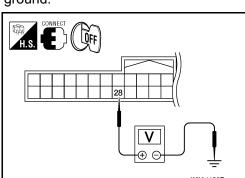
#### 28 - 6: Continuity should exist.

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

#### 28 **– Ground** : Continuity should not exist.

Is the inspection result normal?

YES >> GO TO 3



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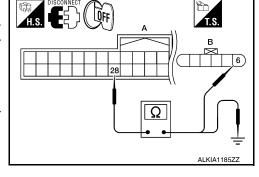
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# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

#### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness between Intelligent Key unit and front door lock assembly LH (door unlock sensor).

# 3. CHECK UNLOCK SENSOR GROUND CIRCUIT

Check continuity between front door lock assembly LH (door unlock sensor) harness connector D14 terminal 4 and ground.

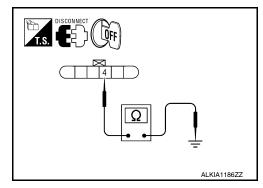
#### 4 - Ground

: Continuity should exist.

#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.



# 4. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

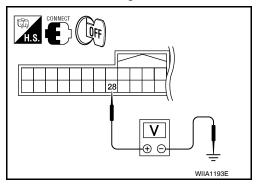
- 1. Connect Intelligent Key unit harness connector.
- 2. Check voltage between Intelligent Key unit harness connector M164 terminal 28 and ground.

#### 28 - Ground : Approx. 5V

#### Is the inspection result normal?

YES >> Refer to DLK-70, "Component Inspection".

NO >> Replace Intelligent Key unit. Refer to <u>SEC-118</u>, "Removal and Installation".

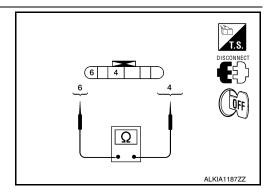


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# Component Inspection

# 1. CHECK DOOR UNLOCK SENSOR

Check door unlock sensor.



Terminal		Front door lock assembly LH condition	Continuity
Front door lock assembly LH			
4	6	Unlock	Yes
4	0	Lock	No

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front lock assembly LH (door unlock sensor). Refer to <u>DLK-199, "Removal and Installation"</u>.

# DOOR REQUEST SWITCH

FRONT DOOR REQUEST SWITCH

FRONT DOOR REQUEST SWITCH: Description

·

Transmits lock/unlock operation to Intelligent Key unit.

FRONT DOOR REQUEST SWITCH: Component Function Check

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## 1. CHECK FUNCTION

#### (P)With CONSULT-III

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

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

#### Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to <u>DLK-71</u>, "FRONT DOOR REQUEST SWITCH: Diagnosis Procedure".

## FRONT DOOR REQUEST SWITCH: Diagnosis Procedure

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

# 1. CHECK FRONT DOOR REQUEST SWITCH

#### (P)With CONSULT-III

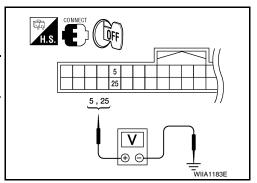
Check front door request switch ("DR REQ SW" or "AS REQ SW") in "DATA MONITOR" mode.

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

#### Without CONSULT-III

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

Connector	Item	Terminals		Condition	Voltage (V)
		(+)	(-)	Condition	(Approx.)
M70	Front door request switch	5	Ground	Door request switch is pressed	0
	Front door request switch	25		↓ Door request switch is re- leased	↓ Battery voltage



#### Is the inspection result normal?

YES >> Front door request switch is OK.

NO >> GO TO 2

## 2.CHECK FRONT DOOR REQUEST SWITCH CIRCUIT

Turn ignition switch OFF.

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#### DOOR REQUEST SWITCH

#### < COMPONENT DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

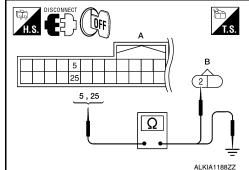
- 2. Disconnect Intelligent Key unit and front door request switch connectors.
- 3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 5 (driver door), 25 (passenger door) and front door request switch harness connector (B) D16 (LH), D116 (RH) terminal 2.

Driver side 5 - 2 : Continuity should exist.

Passenger side 25 - 2 : Continuity should exist.

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

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



#### Is the inspection result normal?

YES >> GO TO 3

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

## 3. CHECK FRONT DOOR REQUEST SWITCH GROUND CIRCUIT

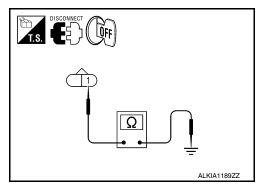
Check continuity between front door request switch harness connector D16 (driver door), D116 (passenger door) terminal 1 and ground.

#### 1 - Ground : Continuity should exist.

#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace door request switch ground circuit.



# 4. CHECK FRONT DOOR REQUEST SWITCH OPERATION

Refer to DLK-73, "FRONT DOOR REQUEST SWITCH: Component Inspection".

#### Is the inspection result normal?

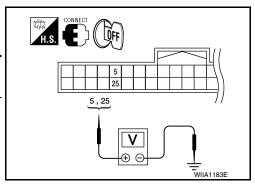
YES >> GO TO 5

NO >> Replace front door request switch.

## 5. CHECK FRONT DOOR REQUEST SWITCH SIGNAL

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

Connector	Item	Terminals		Condition	Voltage (V)
		(+)	(-)	Condition	(Approx.)
M70	Front door request switch	5	Ground	Door request switch is pressed	0
	Front door request switch	25		↓ Door request switch is re- leased	↓ Battery voltage



#### Is the inspection result normal?

YES >> Refer to GI-37, "Intermittent Incident".

NO >> Replace Intelligent Key unit. Refer to <u>SEC-118</u>, "Removal and Installation".

# **DOOR REQUEST SWITCH**

# < COMPONENT DIAGNOSIS >

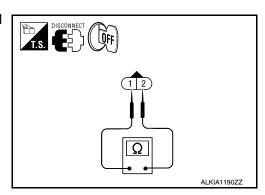
### [WITH INTELLIGENT KEY SYSTEM]

# FRONT DOOR REQUEST SWITCH: Component Inspection

# 1. CHECK FRONT DOOR REQUEST SWITCH OPERATION

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

Component	Terminals		Condition	Continuity
Front door request	1 2	Front door request switch is pressed	Yes	
switch (LH or RH)	ı	2	Front door request switch is released	No



### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front door request switch.

# BACK DOOR REQUEST SWITCH

BACK DOOR REQUEST SWITCH: Description

Transmits lock/unlock operation to Intelligent Key unit.

BACK DOOR REQUEST SWITCH: Component Function Check

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# 1. CHECK FUNCTION

# (P)With CONSULT-III

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

Monitor item	Condition	
BD/TR REQ SW	Back door request switch is pressed : ON	
BB/TICKEQ 3W	Back door request switch is released : OFF	

### Is the inspection result normal?

YES >> Back door request switch is OK.

NO >> Refer to <u>DLK-73</u>, "BACK DOOR REQUEST SWITCH: Diagnosis Procedure".

# BACK DOOR REQUEST SWITCH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK BACK DOOR REQUEST SWITCH

### (P)With CONSULT-III

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

Monitor item	Condition
BD/TR REQ SW	Back door request switch is pressed: ON
BD/TR REQ 5W	Back door request switch is released: OFF

### Without CONSULT-III

Turn ignition switch OFF.

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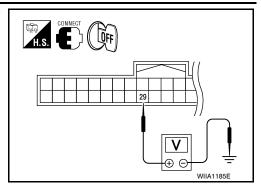
## DOOR REQUEST SWITCH

## < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

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

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



### Is the inspection result normal?

YES >> Back door request switch is OK.

NO >> GO TO 2

# 2.CHECK BACK DOOR REQUEST SWITCH CIRCUIT

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

# 29 - 1 : Continuity should exist.

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

## 29 - Ground : Continuity should not exist.

### Is the inspection result normal?

YES >> GO TO 3

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

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

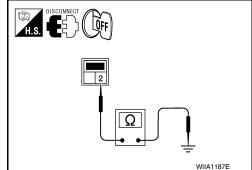
Check continuity between back door request switch harness connector D552 terminal 2 and ground.

## 2 - Ground : Continuity should exist.

## Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace back door request switch ground cir-



# 4. CHECK BACK DOOR REQUEST SWITCH OPERATION

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

### Is the inspection result normal?

YES >> GO TO 5

NO >> Replace back door request switch.

# 5. CHECK BACK DOOR REQUEST SWITCH SIGNAL

1. Connect Intelligent Key unit connector.

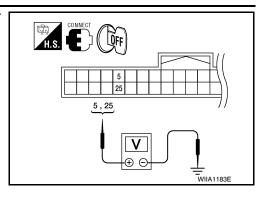
# DOOR REQUEST SWITCH

# < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

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

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



### Is the inspection result normal?

YES >> Refer to GI-37, "Intermittent Incident".

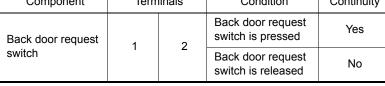
NO >> Replace Intelligent Key unit. Refer to SEC-118, "Removal and Installation".

# BACK DOOR REQUEST SWITCH: Component Inspection

# 1. CHECK BACK DOOR REQUEST SWITCH OPERATION

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

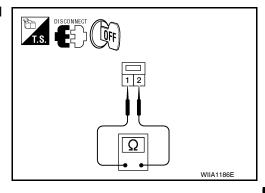
Component	Terminals		Condition	Continuity
Back door request	1	2	Back door request switch is pressed	Yes
switch	'	2	Back door request switch is released	No



## Is the inspection result normal?

YES >> Inspection End.

NO >> Replace back door request switch.



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### < COMPONENT DIAGNOSIS >

**DRIVER SIDE** 

DRIVER SIDE : Description

DOOR LOCK ACTUATOR

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INFOID:0000000005259912

INFOID:0000000005259913

Locks/unlocks the door with the signal from BCM.

DRIVER 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-76</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

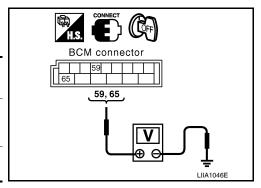
DRIVER SIDE: Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



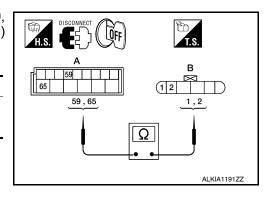
## Is the inspection result normal?

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

# 2.CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
IVIZU	65	D14	1	165



### Is the inspection result normal?

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

## DOOR LOCK ACTUATOR

### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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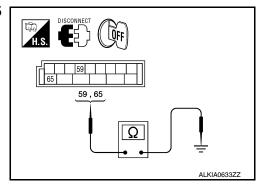
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NO >> Repair or replace harness.

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Terminals		Continuity
M20	59	Ground	No
IVIZO	65	Glound	INO



### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

Locks/unlocks the door with the signal from BCM.

PASSENGER SIDE: Component Function Check

ASSENGEN SIDE : Component i unction chec

# 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-77</u>, "PASSENGER SIDE : <u>Diagnosis Procedure"</u>.

PASSENGER SIDE: Diagnosis Procedure

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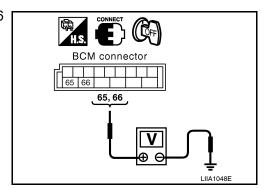
Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

1. Turn ignition switch OFF.

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

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



### Is the inspection result normal?

YES >> GO TO 2

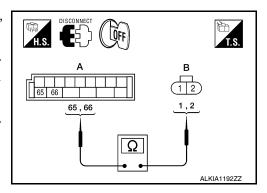
# < COMPONENT DIAGNOSIS >

NO >> GO TO 3

# 2.CHECK DOOR LOCK ACTUATOR HARNESS

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

Te	rminal	Continuity
65	2	Yes
66	1	165



### Is the inspection result normal?

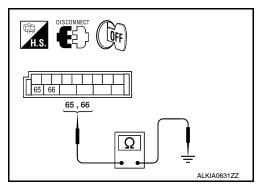
YES >> Replace front door lock actuator RH. Refer to DLK-199, "Removal and Installation".

NO >> Repair or replace harness.

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity	
65	Ground	No	
66	Sibulia	NO	



### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-59</u>, "Removal and Installation".

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

INFOID:0000000005259917

Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check

INFOID:0000000005259918

# 1. CHECK FUNCTION

- 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-78</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

REAR LH: Diagnosis Procedure

INFOID:0000000005259919

Regarding Wiring Diagram information, refer to <u>DLK-131</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

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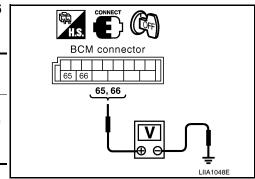
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## < COMPONENT DIAGNOSIS >

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



## Is the inspection result normal?

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

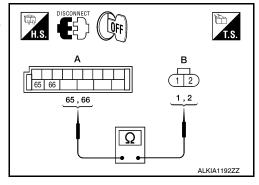
# 2.CHECK DOOR LOCK ACTUATOR HARNESS

### NOTE:

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

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

Ter	minals	Continuity
65	2	Yes
66	1	165



### Is the inspection result normal?

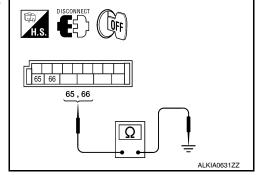
YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness or passenger select unlock relay.

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity
65	Ground	No
66	Ground	No



### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness or passenger select unlock relay.

REAR RH

### [WITH INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS >

REAR RH : Description

INFOID:000000005259920

Locks/unlocks the door with the signal from BCM.

REAR RH: Component Function Check

INFOID:0000000005259921

# 1. CHECK FUNCTION

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

## Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-80</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

# REAR RH: Diagnosis Procedure

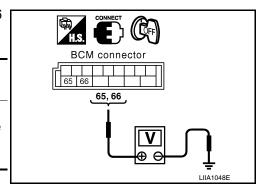
INFOID:0000000005259922

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



### Is the inspection result normal?

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

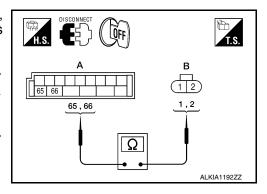
# 2.check door lock actuator harness

### NOTE:

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

- 1. Disconnect BCM and rear door lock actuator RH.
- 2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 1, 2.

Ter	minals	Continuity
65	2	Yes
66	1	i les



### Is the inspection result normal?

YES >> Replace rear door lock actuator RH.

NO >> Repair or replace harness or passenger select unlock relay.

# DOOR LOCK ACTUATOR

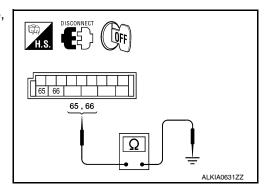
### < COMPONENT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

- 1. Disconnect BCM and rear door lock actuator RH.
- Check continuity between BCM connector (A) M20 terminals 65, 66 and ground.

Ter	minals	Continuity
65	Ground	No
66	Glouliu	NO



### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-59</u>, "Removal and Installation".

NO >> Repair or replace harness or passenger select unlock relay.

**BACK DOOR LATCH** 

**BACK DOOR LATCH: Description** 

Locks/unlocks the door with the signal from BCM.

BACK DOOR LATCH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

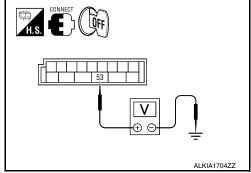
# 1. CHECK BACK DOOR LATCH SIGNAL

### NOTE:

Ensure back door opener switch is operating properly before proceeding.

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

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



### Is the inspection result normal?

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

# 2.CHECK BACK DOOR LATCH HARNESS FOR OPEN

1. Disconnect BCM and back door latch.

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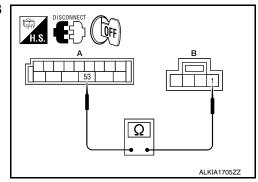
## DOOR LOCK ACTUATOR

# < COMPONENT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

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

Ter	minals	Continuity
53	1	Yes



### Is the inspection result normal?

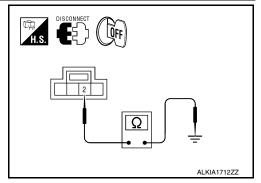
YES >> GO TO 3

NO >> Repair or replace harness.

# 3.CHECK BACK DOOR LATCH GROUND

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

Terr	minals	Continuity
2	Ground	Yes



# Is the inspection result normal?

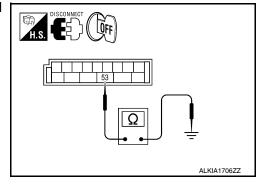
YES >> Replace back door latch.

NO >> Repair or replace harness.

# 4. CHECK BACK DOOR LATCH HARNESS FOR SHORT

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

Ter	minals	Continuity	
53	Ground	No	



### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness.

# **GLASS HATCH LOCK ACTUATOR**

Description

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

# Component Function Check

# 1. CHECK FUNCTION

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

### Is the inspection result normal?

YES >> Glass hatch lock actuator is OK.

NO >> Ensure glass hatch mechanical linkage is OK. Refer to <a href="DLK-83">DLK-83</a>, "Diagnosis Procedure".

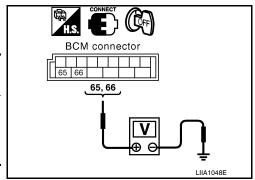
# Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK GLASS HATCH LOCK ACTUATOR SIGNAL

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

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



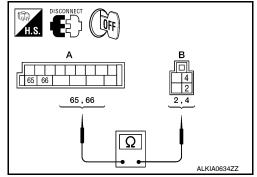
### Is the inspection result normal?

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

# 2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity
65	4	Yes
66	2	163



### Is the inspection result normal?

YES >> Replace glass hatch lock actuator.

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# **GLASS HATCH LOCK ACTUATOR**

# < COMPONENT DIAGNOSIS >

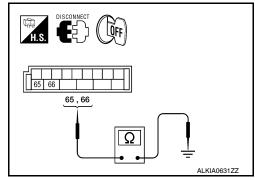
[WITH INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness.

# $3. \mathsf{CHECK}$ GLASS HATCH LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity
65	Ground	No
66	Glound	NO



# Is the inspection result normal?

>> Replace BCM. Refer to BCS-59, "Removal and Installation". YES

NO >> Repair or replace harness.

# PASSENGER SELECT UNLOCK RELAY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# PASSENGER SELECT UNLOCK RELAY

**Description** 

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

# Component Function Check

# 1. CHECK FUNCTION

- 1. Ensure "SELECTIVE UNLOCK FUNCTION" in WORK SUPPORT is enabled.
- 2. Use CONSULT-III to perform Active Test "DOOR LOCK".
- 3. Touch "ALL LOCK" or "ALL UNLOCK" to check that both rear doors, back door latch and glass hatch lock actuators work normally.

### Is the inspection result normal?

YES >> Passenger select unlock relay is OK.

NO >> Refer to <u>DLK-85</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-131, "Wiring Diagram — POWER DOOR LOCK SYS-</u>TEM —".

# 1. CHECK PASSENGER SELECT UNLOCK RELAY CIRCUIT

### NOTE:

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

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

65 - 2 : Continuity should exist.

65 - 4 : Continuity should exist.

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

65 - Ground : Continuity should not exist.

# Is the inspection result normal?

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

# 2.CHECK PASSENGER SELECT UNLOCK RELAY INPUT

- Disconnect passenger select unlock relay.
- Check continuity between BCM connector (A) M20 terminal 65 and passenger select unlock relay connector (B) M11 terminal 3.

65 - 3 : Continuity should exist.

- 3. Check continuity between BCM connector (A) M20 terminal 65 and body ground.
  - 65 Ground : Continuity should not exist.

### Is the inspection result normal?

YES >> GO TO 3

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# PASSENGER SELECT UNLOCK RELAY

# < COMPONENT DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

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

# 3. CHECK PASSENGER SELECT UNLOCK RELAY OUTPUT

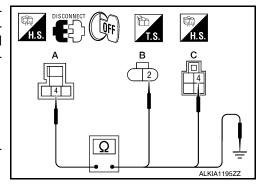
1. Disconnect inoperative rear door or glass hatch lock actuator.

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

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

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

4 - Ground : Continuity should not exist.



### Is the inspection result normal?

YES >> Replace passenger select unlock relay.

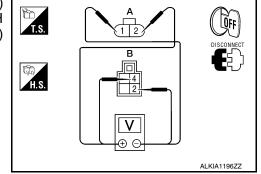
NO >> Repair or replace harness between relay and actuator.

# 4. CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

1. Reconnect BCM.

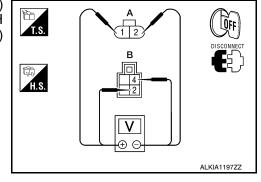
Check voltage between rear door lock actuator connector LH (A) D205 terminals 1 and 2 or rear door lock actuator connector RH (A) D305 terminals 1 and 2 or glass hatch lock actuator (B) D508 terminals 2 and 4.

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



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

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



### Is the inspection result normal?

YES >> Replace rear or glass hatch lock actuator.

NO >> Repair or replace harness between actuator and splice.

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INFOID:0000000005259933

# INTELLIGENT KEY WARNING BUZZER

Description INFOID:0000000005259931

Answers back and warns for an inappropriate operation.

# Component Function Check

# CHECK FUNCTION

### (P)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.

>> Refer to DLK-87, "Diagnosis Procedure". NO

# Diagnosis Procedure

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

# ${f 1}$ .CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) POWER SUPPLY CIRCUIT

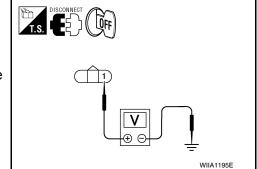
- Turn ignition switch OFF.
- Disconnect Intelligent Key warning buzzer (engine room) connector.
- Check voltage between Intelligent Key warning buzzer (engine room) harness connector E60 terminal 1 and ground.

#### 1 - Ground : Battery voltage

### Is the inspection normal?

YES >> GO TO 2

NO >> Repair or replace Intelligent Key warning buzzer (engine room) power supply circuit.



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

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

#### 4 - 3 : Continuity should exist.

Check continuity between Intelligent Key warning buzzer (engine room) harness connector E60 terminal 3 and ground.

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

### Is the inspection normal?

YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key warning buzzer (engine room) and Intelligent Key unit.

3.CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) OPERATION

Check DLK-88, "Component Inspection".

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**DLK-87** Revision: July 2009 2010 Pathfinder

# INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

>> Inspection end.

# Component Inspection

INFOID:0000000005259934

# 1. CHECK INTELLIGENT KEY WARNING BUZZER

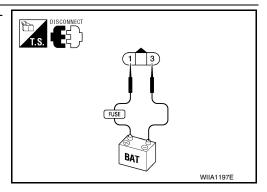
Connect battery power supply to Intelligent Key warning buzzer terminals 1 and 3, and check the operation.

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

## Is the inspection result normal?

YES >> Inspection End.

NO >> Replace Intelligent Key warning buzzer.



# INTELLIGENT KEY WARNING CHIME (COMBINATION METER)

INTELLIGENT RET WARMING C	
< COMPONENT DIAGNOSIS >	[WITH INTELLIGENT KEY SYSTEM]
INTELLIGENT KEY WARNING CHIME	(COMBINATION METER)

Description INFOID:0000000005259935

Answers back and warns for an inappropriate operation.

 $1. {\sf CHECK\ INTELLIGENT\ KEY\ WARNING\ CHIME\ (COMBINATION\ METER)\ OPERATION}$ 

(P)With CONSULT-III

Diagnosis Procedure

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

Is the inspection result normal?

YES >> Intelligent Key warning chime (combination meter) is OK.

>> Refer to MWI-3, "Work Flow". NO

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**DLK-89** Revision: July 2009 2010 Pathfinder

### [WITH INTELLIGENT KEY SYSTEM]

# WARNING LAMP

KEY (GREEN)

KEY (GREEN): Description

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

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

INFOID:0000000005259938

# 1. CHECK WARNING LAMP OPERATION

# (P) With CONSULT-III

- Check "INDICATOR" in "ACTIVE TEST" mode with CONSULT-III.
- · Select "BLUE ON".
- "KEY" warning lamp (green) should illuminate.

### **Without CONSULT-III**

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

### Is the inspection result normal?

YES >> Inspection End.

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

# KEY (RED)

# KEY (RED): Description

INFOID:0000000005259939

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

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

INFOID:0000000005259940

# 1. CHECK WARNING LAMP OPERATION

# (II) With CONSULT-III

- Check "INDICATOR" in "ACTIVE TEST" mode with CONSULT-III.
- · Select "RED ON".

### **⋈** Without CONSULT-III

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

### Is the inspection result normal?

YES >> Inspection End.

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

# WARNING LAMP

# WARNING LAMP: Description P-SHIFT

INFOID:000000005259941

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

<sup>&</sup>quot;KEY" warning lamp (red) should illuminate.

## WARNING LAMP

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# [WITH INTELLIGENT KEY SYSTEM] < COMPONENT DIAGNOSIS > WARNING LAMP: "P-SHIFT" Warning Lamp Check INFOID:0000000005259942 Α 1. CHECK WARNING LAMP OPERATION (P) With CONSULT-III В Check "INDICATOR" in "ACTIVE TEST" mode with CONSULT-III. Select "KNOB ON". "P-SHIFT" warning lamp should illuminate. C **⋈** Without CONSULT-III Turn ignition switch OFF. While monitoring the combination meter warning lamps, turn ignition switch ON. "P-SHIFT" warning lamp D should illuminate for 1 second to perform a bulb check. Е Is the inspection result normal? YES >> Inspection End. NO >> Check combination meter. Refer to MWI-3, "Work Flow". F Н J DLK M Ν

**DLK-91** Revision: July 2009 2010 Pathfinder

# **OUTSIDE KEY ANTENNA**

Description INFOID:000000005259943

Detects whether the Intelligent Key is in the operating range of the outside antennas.

Front outside antennas are integrated in front outside door handles (driver side, passenger side) to allow locking and unlocking of door locks when the Intelligent Key is present.

Rear bumper antenna is mounted on the rear bumper and is used to allow locking and unlocking of door locks when the Intelligent Key is present.

# Component Function Check

INFOID:0000000005259944

# CHECK DOOR REQUEST SWITCH

Check that door request switches operate normally.

### Is the inspection result normal?

YES >> GO TO 2

NO >> Inspect door request switches. Refer to <u>DLK-71, "FRONT DOOR REQUEST SWITCH : Component Function Check"</u>.

# 2.CHECK FRONT ANTENNAS FUNCTION

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

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

YES >> Outside key antenna is OK.

NO >> Refer to <u>DLK-92</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

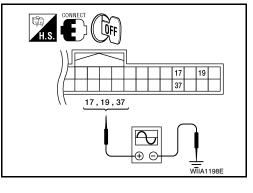
INFOID:0000000005259945

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

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

Connector	Item	Terminals		Condition	Signal		
Connector	item	(+)	(-)	Condition	(Reference value)		
	Rear bumper antenna	17	Ground	Ground		(V)	
M164	Front out- side an- tenna LH	19			Ground	Request switch is pushed	10 5 0
	Front out- side an- tenna RH	37			10 μs SIIA1910J		



## Is the inspection result normal?

YES >> Outside key antenna is OK.

NO >> GO TO 2

# 2.CHECK OUTSIDE KEY ANTENNA CIRCUIT

1. Disconnect Intelligent Key unit connector and outside key antenna connector.

# **OUTSIDE KEY ANTENNA**

# < COMPONENT DIAGNOSIS >

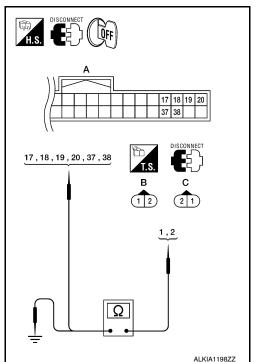
### [WITH INTELLIGENT KEY SYSTEM]

2. Check continuity between each outside key antenna harness connector (B) D15 (driver side) or D115 (passenger side), rear bumper antenna connector (C) C127 terminals 1, 2 and Intelligent Key unit harness connector (A) M164 terminals 17, 18, 19, 20, 37, and 38.

Item	Connector	Terminal	Connector	Terminal	Continuity	
Rear bumper	C: C127	1		17		
antenna	0.0127	2		18		
Front outside	B: D15			19	Yes	
antenna LH	B. D13	1	A. W 104	20	165	
Front outside	B: D115	2		37		
antenna RH	B. D113	1		38	1	

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

Item	Conr	nector	Terminal	Continuity	
Rear bumper antenna	C: C127	1			
Real bumper amerina	O. 0121	2	Ground	No	
Front outside antenna	B: D15	1			
LH	D. D 10	2	Oround	140	
Front outside antenna	B: D115	1			
RH	<i>B. D</i> 110	2			



# Is the inspection result normal?

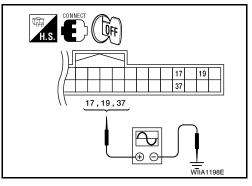
YES >> GO TO 3

NO >> Repair or replace harness between outside key antenna and Intelligent Key unit.

# 3. CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

- 1. Replace outside key antenna. (New antenna or other antenna)
- Connect Intelligent Key unit connector and outside key antenna connector.
- 3. Check signal between Intelligent Key unit connector M164 terminals 17, 19, 37 and ground with an oscilloscope.

Connector	Item	Terminals		Condition	Signal	
Connector	item	(+)	(-)	Condition	(Reference value)	
	Rear bumper	17				
M164	Front outside antenna LH	19	Ground	Ground	Request switch is pushed	(V) 15 10 5 0
	Front outside antenna RH	37		,	10 µs SIIA1910J	



## Is the inspection result normal?

YES >> Replace outside key antenna.

NO >> Replace Intelligent Key unit. Refer to <a href="SEC-118">SEC-118</a>, "Removal and Installation".

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# STEERING LOCK SOLENOID

# Diagnosis Procedure

INFOID:0000000005259946

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK STEERING LOCK SOLENOID POWER SUPPLY

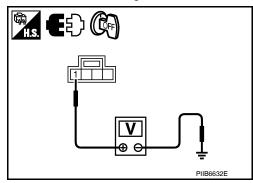
- 1. Turn ignition switch OFF.
- Disconnect steering lock solenoid connector.
- 3. Check voltage between steering lock solenoid harness connector M65 terminal 1 and ground.

# 1 - Ground : Battery voltage

### Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace steering lock solenoid power supply circuit.



# 2. CHECK STEERING LOCK SOLENOID GROUND CIRCUIT

Check continuity between steering lock solenoid harness connector M65 terminal 4 and ground.

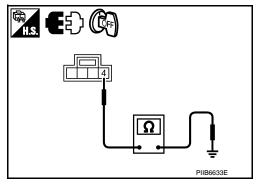
# 4 - Ground : Continuity should exist.

## Is the inspection result normal?

YES >> GO TO 3

NO

>> Repair or replace the steering lock solenoid ground circuit.



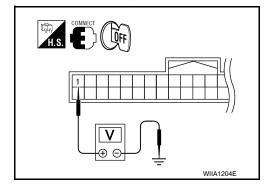
# 3. CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

- Connect steering lock solenoid connector.
- 2. Check voltage between Intelligent Key unit harness connector M164 terminal 1 and ground.

### 1 - Ground : Approx. 5V

### Is the inspection result normal?

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



# 4. CHECK STEERING LOCK COMMUNICATION SIGNAL

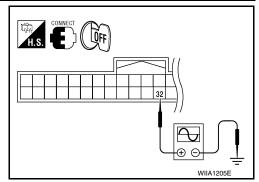
Check signal between Intelligent Key unit connector M164 terminal 32 and ground with oscilloscope.

# STEERING LOCK SOLENOID

### < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

Connector	Terminals		Condition	Signal (V)
Connector	(+)	(-)	Condition	(Reference value)
M164	32	Ground	Ignition switch is pushed	(V) 6 4 2 0 2 ms SIIA1911J



Is the inspection result normal?

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

# 5. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR OPEN

1. Disconnect Intelligent Key unit and steering lock solenoid connectors.

2. Check continuity between Intelligent Key unit harness connector (B) M164 terminals 1, 32 and steering lock solenoid connector (A) M65 terminals 2, 3.

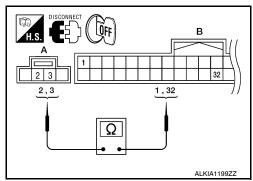
1 - 2 : Continuity should exist.32 - 3 : Continuity should exist.

### Is the inspection result normal?

YES >> Replace steering lock solenoid.

After replacing steering lock solenoid, perform registration procedure. Refer to CONSULT-III Operation Manual.

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



# 6. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR SHORT

1. Disconnect Intelligent Key unit and steering lock solenoid connectors.

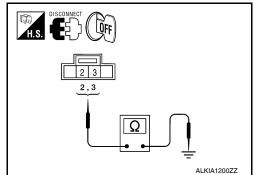
2. Check continuity between steering lock solenoid connector M65 terminals 2, 3 and ground.

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

## Is the inspection result normal?

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

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



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# A/T SHIFT SELECTOR (PARK POSITION SWITCH)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# A/T SHIFT SELECTOR (PARK POSITION SWITCH)

# Diagnosis Procedure

INFOID:0000000005259947

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
"\_.

# 1. CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) INPUT SIGNAL

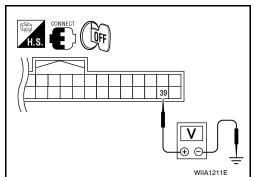
- 1. Turn ignition switch OFF.
- 2. While pressing the ignition knob switch, check voltage between Intelligent Key unit harness connector M164 terminal 39 and ground.

Connector	Term	ninals	Condition	Voltage (V)	
Connector	(+)	(-)	Condition	(Approx.)	
M164	39 Ground		Selector lever is in "P" position	Battery voltage	
IVI IO-	W104 39 GIOUIIC	Orouna	Other than above	0	

### Is the inspection result normal?

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

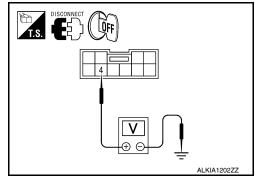
NO >> GO TO 2



# 2.CHECK A/T SHIFT SELECTOR (PARK POSITION SWITCH) POWER SUPPLY CIRCUIT

- 1. Disconnect A/T shift selector (park position switch) connector.
- 2. While pressing the ignition knob switch, check voltage between A/T shift selector (park position switch) harness connector M158 terminal 4 and ground.

4 – Ground : Battery voltage.



### Is the inspection result normal?

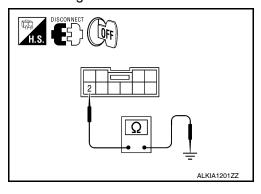
YES >> GO TO 3

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

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

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

2 - Ground : Continuity should exist.



### Is the inspection result normal?

# A/T SHIFT SELECTOR (PARK POSITION SWITCH)

# < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

YES >> GO TO 4

NO >> Repair or replace harness.

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

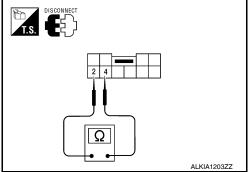
Check continuity between A/T shift selector (park position switch) terminals 2 and 4.

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

### Is the inspection result normal?

YES >> GO TO 5

NO >> Replace A/T shift selector (park position switch).



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

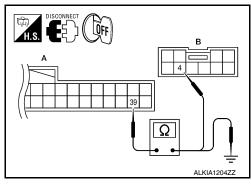
- 1. Disconnect Intelligent Key unit connector.
- Check continuity between Intelligent Key unit harness connector

   (A) M164 terminal 39 and A/T shift selector (park position switch) harness connector (B) M158 terminal 4.

39 – 4 : Continuity should exist.

Check continuity between Intelligent Key unit harness connector
 (A) M164 terminal 39 and ground.

39 – Ground : Continuity should not exist.



### Is the inspection result normal?

YES >> A/T shift selector (park position switch) circuit is OK.

NO >> Repair or replace harness.

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# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# REMOTE KEYLESS ENTRY RECEIVER

Description INFOID:0000000005259948

Receives Intelligent Key operation and transmits to Intelligent Key unit.

# Component Function Check

INFOID:0000000005259949

# 1. CHECK FUNCTION

# (P)With CONSULT-III

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

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

### Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

NO >> Refer to <u>DLK-98</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

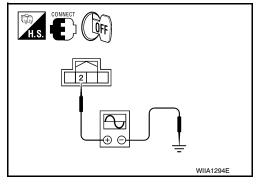
INFOID:0000000005259950

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

# 1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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

Terminals					
(+	)				
Remote keyless entry re- ceiver connector	Terminal	(-)	Keyfob condition	Signal (Reference value)	
M67	2 Ground	Ground	No function	(V) 6 4 2 0 ••• 0.2s OCC3879D	
WO		Any button is pressed	(V) 6 4 2 0 ••• 0.2s		



Is the inspection result normal?

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

2.remote keyless entry receiver voltage circuit inspection

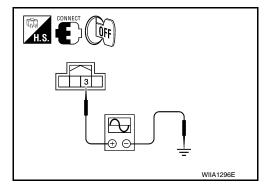
# REMOTE KEYLESS ENTRY RECEIVER

# < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

Check voltage between remote keyless entry receiver connector M67 terminal 3 and ground using an oscilloscope.

Terminals				
(+)			Signal	
Remote keyless entry receiver connector	Terminal	(–)	(Reference value)	
M67	3	Ground	(V) 15 10 5 0 200 ms	



Is the inspection result normal?

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

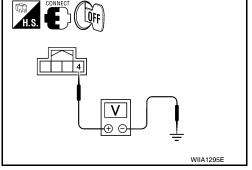
# 3. REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

Check voltage between remote keyless entry receiver connector M67 terminal 4 and ground.

## 4 - Ground : Approx. 5 volt.

### Is the inspection result normal?

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



# 4. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

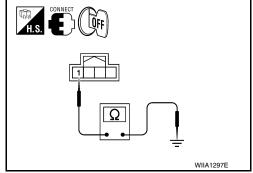
Check continuity between remote keyless entry receiver connector M67 terminal 1 and ground.

### 1 - Ground : Continuity should exist.

### Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to <u>SEC-119</u>, "Removal and Installation".

NO >> GO TO 5



# 5. HARNESS INSPECTION BETWEEN INTELLIGENT KEY UNIT AND RKE RECEIVER

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

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# REMOTE KEYLESS ENTRY RECEIVER

## < COMPONENT DIAGNOSIS >

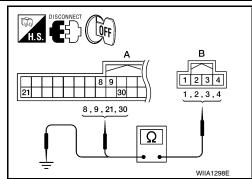
### [WITH INTELLIGENT KEY SYSTEM]

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

1 - 8 : Continuity should exist.
2 - 9 : Continuity should exist.
3 - 21 : Continuity should exist.
4 - 30 : Continuity should exist.

Check continuity between remote keyless entry receiver connector (B) M67 terminals 1, 2, 3, 4 and ground.

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



# Is the inspection result normal?

YES >> Remote keyless entry receiver circuits are OK.

NO >> Repair or replace the harness between the remote keyless entry receiver and Intelligent Key unit.

# INTELLIGENT KEY BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# INTELLIGENT KEY BATTERY AND FUNCTION

Description

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

- Door lock/unlock
- · Back door open

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

# Component Function Check

# 1.CHECK FUNCTION

# ®With CONSULT-III

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

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

### Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Refer to <u>DLK-101</u>, "<u>Diagnosis Procedure</u>".

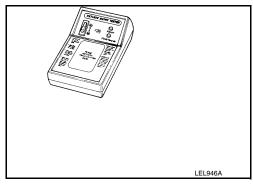
# Diagnosis Procedure

# 1. CHECK INTELLIGENT KEY FUNCTION

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

YES >> Intelligent Key is OK.

NO >> GO TO 2



# 2. CHECK INTELLIGENT KEY COMPONENTS

- 1. Release the lock knob at the back of the Intelligent Key and remove the mechanical key.
- Insert a flat-blade screwdriver (A) wrapped with a cloth into the slit of the corner and twist it to separate the upper part from the lower part.

### **CAUTION:**

- Do not touch the circuit board or battery terminal.
- The keyfob is water-resistant. However, if it does get wet, immediately wipe it dry.
- 3. Remove the Intelligent Key battery.

### **CAUTION:**

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

### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace malfunctioning parts.

 ${f 3}.$ check intelligent key battery

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## INTELLIGENT KEY BATTERY AND FUNCTION

### < COMPONENT DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

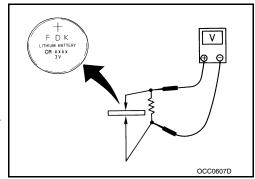
Check by connecting a resistance (approximately  $300\Omega$ ) so that the current value becomes about 10 mA.

# Standard : Approx. 2.5 - 3.0V

Is the measurement value within specification?

YES >> Intelligent Key battery is OK. Check remote keyless entry receiver. Refer to <u>DLK-98</u>. "Component Function Check".

NO >> GO TO 4



# 4. REPLACE INTELLIGENT KEY BATTERY

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

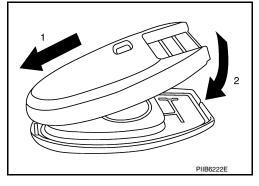
### **CAUTION:**

- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.
- 3. After replacing the battery, check that all Intelligent Key functions work properly.

# Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Check remote keyless entry receiver. Refer to <u>DLK-98</u>. "Component Function Check".



## HORN FUNCTION

## < COMPONENT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

# HORN FUNCTION

Description

Perform answer-back for each operation with horn.

# Component Function Check

# 1. CHECK FUNCTION

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

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

### Is the operation normal?

YES >> Inspection End.

NO >> Refer to <u>DLK-103</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

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

# 1. CHECK HORN FUNCTION

Check horn function with horn switch.

### Does the horn sound?

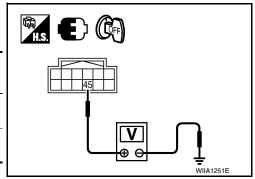
YES >> GO TO 2.

NO >> Refer to <u>HRN-4, "Wiring Diagram"</u>.

# 2.CHECK HORN RELAY POWER SUPPLY

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

IPDM	I E/R	(Fround lest Item	Test item		Voltage (V)
Connector	Terminal				(Approx.)
F122	45 Grou	Cround	Ground HORN	$\begin{array}{c} OFF \to ON \\ \to OFF \end{array}$	Battery voltage → 0 → Battery voltage
L 122		Oround		Other than above	Battery voltage



# Is the inspection result normal?

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

NO >> GO TO 3

# 3.CHECK HORN RELAY CIRCUIT

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

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# HORN FUNCTION

## < COMPONENT DIAGNOSIS >

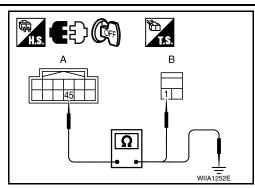
## [WITH INTELLIGENT KEY SYSTEM]

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

IPDI	M E/R	Horn	Continuity	
Connector Terminal		Connector	Terminal	Continuity
A: E122	45	B: H-1	1	Yes

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

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



## Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

### Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-33, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

# **COMBINATION METER DISPLAY FUNCTION**

[WITH INTELLIGENT KEY SYSTEM]
INFOID:000000005259957
unction.
INFOID:000000005259958
indicators in "ACTIVE TEST" mode.
INFOID:0000000005259959
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# **WARNING CHIME FUNCTION**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# WARNING CHIME FUNCTION

**Description** 

Performs operation method guide and warning with buzzer.

# Component Function Check

INFOID:0000000005259961

# 1. CHECK FUNCTION

# (A) 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-106</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

INFOID:000000005259962

# 1. CHECK METER BUZZER CIRCUIT

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

>> Inspection End.

## **NCTION**

HAZARD FUNCT
< COMPONENT DIAGNOSIS >
HAZARD FUNCTION
Description
Perform answer-back for each operation with number of blinks.
Component Function Check
1.CHECK FUNCTION
Check hazard warning lamp "FLASHER" in ACTIVE TEST mode
Is the inspection result normal?
YES >> Hazard warning lamp circuit is OK.
NO >> Refer to <u>DLK-107, "Diagnosis Procedure"</u> .

# [WITH INTELLIGENT KEY SYSTEM]

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mode.

**Diagnosis Procedure** Е INFOID:000000005259965

1. CHECK HAZARD SWITCH CIRCUIT

Operate the hazard lights by turning ON the hazard warning switch.

Do the lights operate normally?

YES >> Replace the BCM. Refer to BCS-59, "Removal and Installation".

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

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# **KEY SWITCH (INTELLIGENT KEY UNIT INPUT)**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# **KEY SWITCH (INTELLIGENT KEY UNIT INPUT)**

# Diagnosis Procedure

INFOID:0000000005259966

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK KEY SWITCH

### (P)With CONSULT-III

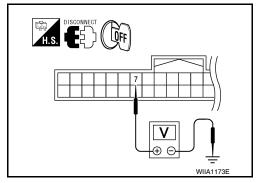
Check key switch ("KEY SW") in "DATA MONITOR" mode with CONSULT-III.

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

### Without CONSULT-III

- Turn ignition switch OFF.
- Disconnect Intelligent Key unit harness connector.
- 3. Check voltage between Intelligent Key unit harness connector M164 terminal 7 and ground.

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



### Is the inspection result normal?

YES >> Key switch is OK.

NO >> GO TO 2

# 2.check key switch power supply circuit

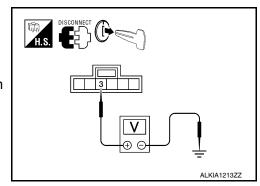
- 1. Remove mechanical key from ignition switch.
- 2. Disconnect key switch and ignition knob switch connector.
- Check voltage between key switch and ignition knob switch harness connector M66 terminal 3 and ground.

## 3 - Ground : Battery voltage

### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace key switch and ignition knob switch power supply circuit.



# 3. CHECK KEY SWITCH OPERATION

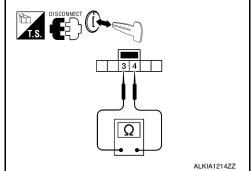
### **KEY SWITCH (INTELLIGENT KEY UNIT INPUT)**

### < COMPONENT DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

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

Component	Terminals		Condition	Continuity
Key switch	9	4	Insert mechanical key into ignition switch.	Yes
	3	4	Remove mechanical key from ignition switch.	No



### Is the inspection result normal?

YES >> GO TO 4

NO >> Replace key cylinder assembly (built-in key switch).

### 4. CHECK KEY SWITCH CIRCUIT

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

### 7 - 4 : Continuity should exist.

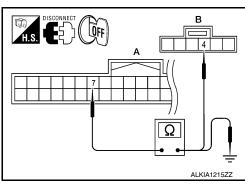
 Check continuity between Intelligent Key unit harness connector (A) M164 terminal 7 and ground.

### 7 - Ground : Continuity should not exist.

### Is the inspection result normal?

YES >> Check the condition of harness and harness connector.

NO >> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.



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Revision: July 2009 DLK-109 2010 Pathfinder

# **KEY SWITCH (BCM INPUT)**

### Diagnosis Procedure

INFOID:0000000005259967

Regarding Wiring Diagram information, refer to <a href="DLK-149">DLK-149</a>, "Wiring Diagram — INTELLIGENT KEY SYSTEM —
".

# 1. CHECK KEY SWITCH POWER SUPPLY CIRCUIT

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

# 3 – Ground : Battery voltage.

### Is the inspection result normal?

YES >> GO TO 2

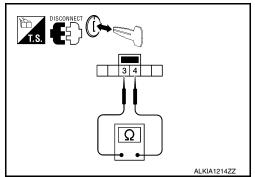
NO >> Check harness between key switch and ignition knob switch and fuse.

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## 2. CHECK KEY SWITCH

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

Component	Terminals		Condition	Continuity
Ignition	2	4	Insert mechanical key into ignition switch.	Yes
switch	3	4	Remove mechanical key from ignition switch.	No



### Is the inspection result normal?

YES >> GO TO 3

NO >> Replace key cylinder assembly (built-in key switch).

# 3. CHECK KEY SWITCH SIGNAL CIRCUIT

- Disconnect BCM connector.
- Check continuity between BCM harness connector M18 terminal 37 and key switch and ignition knob switch harness connector M66 terminal 4.

### 37 – 4 : Continuity should exist.

 Check continuity between BCM harness connector M18 terminal 37 and ground.

# 37 – Ground : Continuity should not exist.

# ALKIA1216ZZ

### Is the inspection result normal?

YES >> Key switch (BCM input) circuit is OK.

NO >> Repair or replace harness between key switch and ignition knob switch and BCM.

# **IGNITION KNOB SWITCH**

# Diagnosis Procedure

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Regarding Wiring Diagram information, refer to <u>DLK-149</u>, "Wiring <u>Diagram — INTELLIGENT KEY SYSTEM —</u>

# 1. CHECK IGNITION KNOB SWITCH

### (P)With CONSULT-III

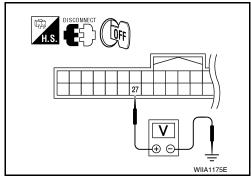
Display "PUSH SW" on DATA MONITOR screen, and check if ON/OFF display is linked to ignition switch operation.

Monitor item	Condition	
PUSH SW	Ignition switch is pushed: ON	
1 0011 000	Ignition switch is released: OFF	

### Without CONSULT-III

- Turn ignition switch OFF.
- 2. Disconnect Intelligent Key unit connector.
- Check voltage between Intelligent Key unit harness connector M164 terminal 27 and ground.

Connector	Terminals		Condition	Voltage (V)
Connector	(+)	(-)	Condition	(Approx.)
M164	27	Ground	Ignition switch is pushed Battery	Battery voltage
	21	Glound	Ignition switch is re- leased	0



### Is the inspection result normal?

YES >> Ignition knob switch is OK.

NO >> GO TO 2

# 2.CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect key switch and ignition knob switch connector. 2.
- Check voltage between key switch and ignition knob switch harness connector M66 terminal 1 and ground.

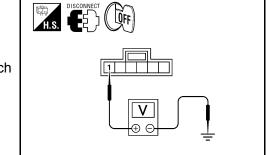
### 1 - Ground

### : Battery voltage

### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace key switch and ignition knob switch power supply circuit.



# 3.CHECK IGNITION KNOB SWITCH OPERATION

Check continuity between key switch and ignition knob switch terminals 1 and 2.

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### **IGNITION KNOB SWITCH**

### < COMPONENT DIAGNOSIS >

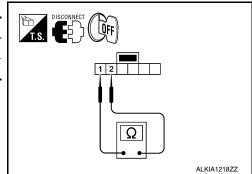
### [WITH INTELLIGENT KEY SYSTEM]

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

### Is the inspection result normal?

YES >> GO TO 4

NO >> Replace key switch and ignition knob switch.



# 4. CHECK IGNITION KNOB SWITCH CIRCUIT

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

### 27 - 2 : Continuity should exist.

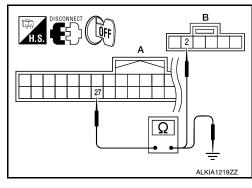
2. Check continuity between Intelligent Key unit harness connector M164 terminal 27 and ground.

### 27 - Ground : Continuity should not exist.

### Is the inspection result normal?

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

>> Repair or replace harness between Intelligent Key unit and key switch and ignition knob switch.



### **HEADLAMP FUNCTION**

# [WITH INTELLIGENT KEY SYSTEM] < COMPONENT DIAGNOSIS > **HEADLAMP FUNCTION** Α Diagnosis Procedure INFOID:0000000005259969 1. CHECK HEADLAMP OPERATION В Do headlamps operate with headlamp switch? YES or NO C YES >> Headlamp circuit is OK. NO >> Check headlamp circuit. Refer to EXL-4, "Work Flow". $\mathsf{D}$ Е F G Н J DLK L M Ν 0

Revision: July 2009 DLK-113 2010 Pathfinder

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# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

### < COMPONENT DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

# Diagnosis Procedure

INFOID:0000000005259970

# 1. CHECK MAP LAMP OPERATION

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

### Is the inspection result normal?

YES >> Map lamp circuit is OK.

NO >> Check map lamp circuit. Refer to <a href="INL-3">INL-3</a>, "Work Flow".

### **KEYFOB ID SET UP WITH CONSULT-III**

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITH CONSULT-III

# **ID Code Entry Procedure**

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### KEYFOB ID SET UP WITH CONSULT-III

### NOTE:

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

### NOTE:

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

- "REMO CONT ID ERASUR"
  - Use this mode to erase a keyfob ID code.
- "REMO CONT ID CONFIR"

Use this mode to confirm if a keyfob ID code is registered or not.

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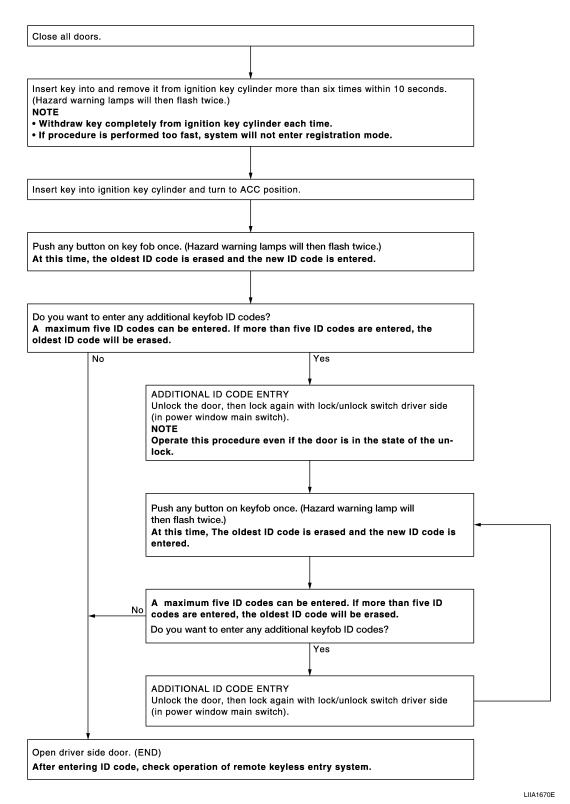
Revision: July 2009 DLK-115 2010 Pathfinder

INFOID:0000000005259972

### KEYFOB ID SET UP WITHOUT CONSULT-III

# **ID Code Entry Procedure**

### KEYFOB ID SET UP WITHOUT CONSULT-III



### NOTE:

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

### **KEYFOB ID SET UP WITHOUT CONSULT-III**

### < COMPONENT DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

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

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

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

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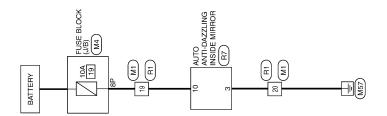
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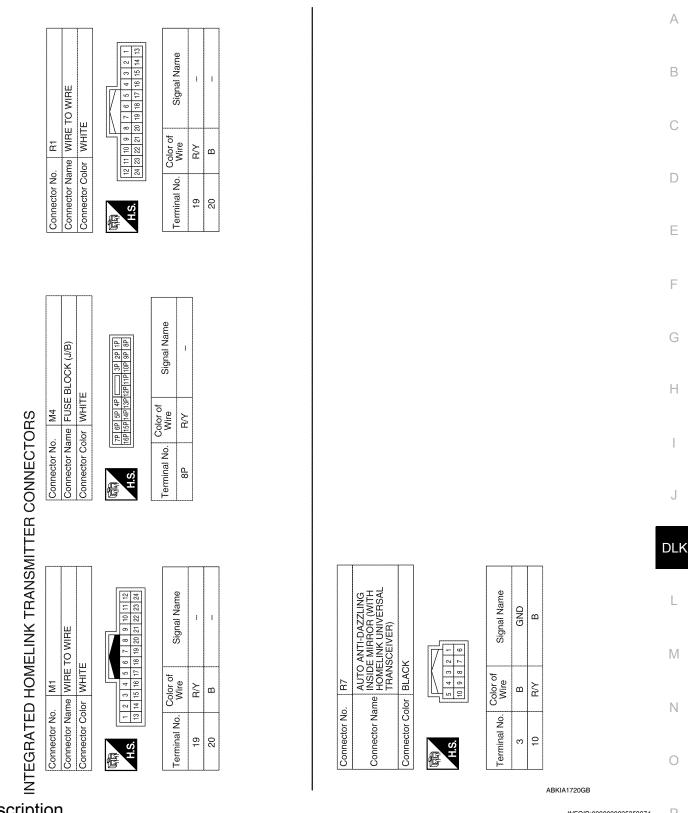
Wiring Diagram



INTEGRATED HOMELINK TRANSMITTER

AWKWA0054GB

[WITH INTELLIGENT KEY SYSTEM]



Description Р INFOID:0000000005259974

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

### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# Component Function Check

INFOID:0000000005259975

# 1. CHECK FUNCTION

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

### Is the inspection result normal?

YES >> GO TO 2

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

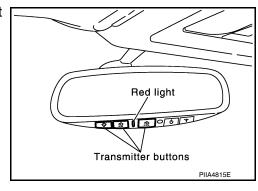
# 2. CHECK ILLUMINATION

- 1. Turn ignition switch "OFF".
- 2. Press each of the transmitter buttons and watch for the red light to illuminate with each button.

### Is the inspection result normal?

YES >> GO TO 3

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



# 3. CHECK TRANSMITTER

Check transmitter with Tool\*.

\*: For details, refer to Technical Service Bulletin.

### Is the inspection result normal?

YES >> Receiver or hand-held transmitter malfunction, not vehicle related.

NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

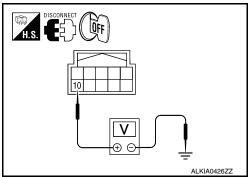
# Diagnosis Procedure

INFOID:0000000005259976

Regarding Wiring Diagram information, refer to <u>DLK-118</u>, "Wiring <u>Diagram"</u>.

# 1. CHECK POWER SUPPLY

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



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

### Is the inspection result normal?

YES >> GO TO 2

### < COMPONENT DIAGNOSIS >

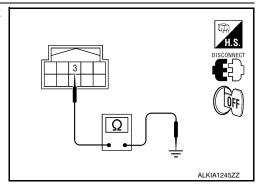
[WITH INTELLIGENT KEY SYSTEM]

NO

- >> Check the following.
  - 10A fuse [No. 19 located in the fuse block (J/B)]
  - Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

# 2. CHECK GROUND CIRCUIT

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



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal	Ground	Continuity
R7	3		Yes

### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

# 3. CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

>> Inspection End.

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# **ECU DIAGNOSIS**

# **BCM (BODY CONTROL MODULE)**

Reference Value

### VALUES ON THE DIAGNOSIS TOOL

AIR COND SW         AIC switch OFF         OFF           AIC switch ON         ON           AUT LIGHT SYS         Outside of the room is dark         OFF           Outside of the room is bright         ON           AUTO LIGHT SW         Lighting switch OFF         OFF           Lighting switch OFF         OFF           Lighting switch AUTO         ON           BACK DOOR SW         Back door opened         OFF           CDL LOCK SW         Door lock/unlock switch does not operate         OFF           CDL UNLOCK SW         Door lock/unlock switch does not operate         OFF           Press door lock/unlock switch does not operate         OFF           DOOR SW-AS         Front door RH closed         OFF           DOOR SW-AS         Front door RH closed         OFF           DOOR SW-DR         Rear door LH closed         OFF           Rear door LH closed         OFF           Rear door	Monitor Item	Condition	Value/Status
AC switch ON Outside of the room is dark OFF Outside of the room is bright ON  AUTO LIGHT SW Lighting switch OFF Lighting switch AUTO ON  BACK DOOR SW Back door closed OFF Back door opened ON  Door lockfunlock switch does not operate OFF Press door lockfunlock switch to the LOCK side ON  Door lockfunlock switch does not operate OFF Press door lockfunlock switch to the LOCK side ON  DOOR SW-AS Front door RH obsed OFF Front door RH opened ON  DOOR SW-RL Rear door LH closed OFF Rear door RH opened ON  DOOR SW-RR Rear door RH opened ON  Rear door RH opened ON  DOOR SW-RR Rear door RH opened ON  Front flosed OFF Front door RH opened ON  DOOR SW-RR Rear door RH opened ON  Press door fockfunlock switch of the UNLOCK side OFF Front door LH opened ON  ON  ON  PRESS OFF Front door RH opened ON  ON  ON  Rear door RH opened ON  ON  OFF Rear door RH opened ON  ON  PRESS OFF Rear door RH opened ON  ON  OFF Rear door RH opened ON  ON  ON  PRESS OFF Rear door RH opened ON  ON  ON  OFF Rear door RH opened ON  ON  ON  PRESS OFF Rear door RH opened ON  ON  ON  OFF Front flosed OFF Front flosed OFF Front opened ON  ON  ON  PRESS OFF Front flosed OFF Front opened OFF Front opened ON  ON  ON  PRESS OFF Front flosed OFF Front opened OFF Front opened ON  ON  ON  ON  PRESS OFF Front flosed OFF Front opened OFF Front opened ON  ON  ON  OFF Front opened	AID COND CW	A/C switch OFF	OFF
AUT LIGHT SYS         Outside of the room is bright         ON           AUTO LIGHT SW         Lighting switch OFF         OFF           Lighting switch AUTO         ON           BACK DOOR SW         Back door closed         OFF           CDL LOCK SW         Door lock/unlock switch does not operate         OFF           CDL LOCK SW         Door lock/unlock switch does not operate         OFF           CDL UNLOCK SW         Press door lock/unlock switch to the LOCK side         ON           CDL UNLOCK SW         Door lock/unlock switch to the UNLOCK side         ON           DOOR SW-AS         Front door LH closed         OFF           Front door LH closed         OFF           DOOR SW-BR         Front door LH closed         OFF           Rear door LH opened         ON           DOOR SW-RL         Rear door LH closed         OFF           Rear door LH opened         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON         ON           Engine stapped         OFF         OFF           Engine stopped         OFF         OFF           Engine running         ON         ON           FR WASHER SW         Front washer switch OFF         OFF	AIR COND SW	A/C switch ON	ON
Outside of the room is bright	AUT LICHT SVS	Outside of the room is dark	OFF
Lighting switch AUTO	AUT LIGHT 515	Outside of the room is bright	ON
Lighting switch AUTO	ALITO LICUT CW	Lighting switch OFF	OFF
Back door opened	AUTO LIGHT SW	Lighting switch AUTO	ON
Back door opened		Back door closed	OFF
CDL LOCK SW         Press door lock/unlock switch to the LOCK side         ON           CDL UNLOCK SW         Door lock/unlock switch does not operate         OFF           Press door lock/unlock switch to the UNLOCK side         ON           DOOR SW-AS         Front door RH closed         OFF           Front door LH closed         OFF           DOOR SW-DR         Front door LH opened         ON           DOOR SW-RL         Rear door LH closed         OFF           Rear door LH opened         ON         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON         ON           Engine stopped         OFF         OFF           Engine stopped         OFF         OFF           Engine running         ON         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch OFF         OFF           Front washer switch OFF         OFF           Front washer switch OFF         OFF           Front wiper sw	BACK DOOR SW	Back door opened	ON
CDL UNLOCK SW         Press door lock/unlock switch to the LOCK side         ON           DOD or lock/unlock switch does not operate         OFF           Press door lock/unlock switch to the UNLOCK side         ON           DOOR SW-AS         Front door RH closed         OFF           Front door RH opened         ON           DOOR SW-DR         Front door LH closed         OFF           DOOR SW-RL         Rear door LH closed         OFF           Rear door LH opened         ON         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON         ON           ENGINE RUN         Engine stopped         OFF           Engine stopped         OFF         OFF           Engine running         ON         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch OFF         OFF           Front washer switch OFF         OFF           Front washer switch OFF         OFF           Front wiper switch OFF	ODL LOOK OW	Door lock/unlock switch does not operate	OFF
CDL UNLOCK SW         Press door lock/unlock switch to the UNLOCK side         ON           DOOR SW-AS         Front door RH closed         OFF           Front door RH opened         ON           DOOR SW-DR         Front door LH closed         OFF           DOOR SW-RL         Rear door LH closed         OFF           DOOR SW-RL         Rear door LH opened         ON           DOOR SW-RR         Rear door RH opened         ON           Engine or RH opened         OFF           Engine stopped         OFF           Engine stopped         OFF           Engine stopped         OFF           Engine stopped         OFF           Front fog lamp switch OFF         OFF           Front of glamp switch OFF         OFF           Front of glamp switch OFF         OFF           Front washer switch OFF         OFF           Front washer switch OFF         OFF           Front wiper switch OFF	CDL LOCK SW	Press door lock/unlock switch to the LOCK side	ON
Press door lock/unlock switch to the UNLOCK side         ON           DOOR SW-AS         Front door RH closed         OFF           Front door LH closed         OFF           Front door LH closed         OFF           DOOR SW-RL         Rear door LH closed         OFF           Book SW-RR         Rear door LH closed         OFF           Book SW-RR         Rear door RH closed         OFF           Book SW-RR         Engine stopped         OFF           ENGINE RUN         Engine stopped         OFF           Engine running         ON         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch ON         ON         ON           FR WASHER SW         Front washer switch OFF         OFF           Front wiper switch OFF         OFF         OFF           Front wiper switch O		Door lock/unlock switch does not operate	OFF
DOOR SW-AS         Front door RH opened         ON           DOOR SW-DR         Front door LH closed         OFF           Front door LH opened         ON         OFF           DOOR SW-RL         Rear door LH closed         OFF           Rear door LH opened         ON         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON         ON           ENGINE RUN         Engine stopped         OFF           Engine running         ON         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch ON         ON         ON           FR WSHER SW         Front washer switch OFF         OFF           Front washer switch OFF         OFF         OFF           Front wiper switch OFF         OFF         OFF	CDL UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	ON
Front door RH opened		Front door RH closed	OFF
DOOR SW-DR         Front door LH opened         ON           DOOR SW-RL         Rear door LH closed         OFF           Rear door LH opened         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON           ENGINE RUN         Engine stopped         OFF           Engine running         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch ON         ON           FR WASHER SW         Front washer switch OFF         OFF           Front washer switch OFF         OFF           Front wiper switch OFF         OFF           Front wiper switch LO         ON           FR WIPER HI         Front wiper switch OFF         OFF           Front wiper sto	DOOR SW-AS	Front door RH opened	ON
Front door LH opened	D00D0WDD	Front door LH closed	OFF
DOOR SW-RL         Rear door LH opened         ON           DOOR SW-RR         Rear door RH closed         OFF           Rear door RH opened         ON           ENGINE RUN         Engine stopped         OFF           Engine running         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch ON         ON           FR WASHER SW         Front washer switch OFF         OFF           Front washer switch OFF         OFF           Front wiper switch INT         ON           FR WIPER STOP         Any position other than front wiper stop position         OFF           Front wiper stop position         ON           HAZARD SW         When hazard switch is not pressed         OFF           Lighting switch OFF         OFF	DOOR SW-DR	Front door LH opened	ON
Rear door LH opened		Rear door LH closed	OFF
DOOR SW-RR         Rear door RH opened         ON           ENGINE RUN         Engine stopped         OFF           Engine running         ON           FR FOG SW         Front fog lamp switch OFF         OFF           Front fog lamp switch ON         ON           FR WASHER SW         Front washer switch OFF         OFF           Front washer switch ON         ON         ON           FR WIPER LOW         Front wiper switch OFF         OFF           Front wiper switch OFF         OFF         OFF           Front wiper switch OFF         OFF         OFF           FR WIPER INT         Front wiper switch OFF         OFF           Front wiper switch INT         ON         ON           FR WIPER STOP         Any position other than front wiper stop position         OFF           Front wiper stop position         ON         OFF           HAZARD SW         When hazard switch is not pressed         OF           Lighting switch OFF         OFF	DOOR SW-RL	Rear door LH opened	ON
Rear door RH opened		Rear door RH closed	OFF
Engine running	DOOR SW-RR	Rear door RH opened	ON
Engine running	ENCINE DUN	Engine stopped	OFF
Front fog lamp switch ON	ENGINE RUN	Engine running	ON
Front fog lamp switch ON	ED EOO 0W	Front fog lamp switch OFF	OFF
FR WASHER SW Front washer switch ON  FR WIPER LOW Front wiper switch OFF Front wiper switch LO ON  FR WIPER HI Front wiper switch OFF Front wiper switch HI ON  FR WIPER INT Front wiper switch OFF Front wiper switch OFF Front wiper switch INT ON  FR WIPER STOP Any position other than front wiper stop position Front wiper stop position  HAZARD SW When hazard switch is not pressed When hazard switch is pressed ON  Lighting switch OFF OFF OFF OFF OFF OFF	FR FOG SW	Front fog lamp switch ON	ON
Front washer switch ON  Front wiper switch OFF Front wiper switch LO  Front wiper switch LO  Front wiper switch OFF Front wiper switch OFF Front wiper switch HI  Front wiper switch OFF Front wiper switch OFF Front wiper switch OFF Front wiper switch INT  ON  FR WIPER STOP Any position other than front wiper stop position Front wiper stop position  ON  HAZARD SW When hazard switch is not pressed When hazard switch is pressed OFF  Lighting switch OFF OFF		Front washer switch OFF	OFF
FR WIPER LOW Front wiper switch LO ON FR WIPER HI Front wiper switch OFF Front wiper switch HI ON FR WIPER INT Front wiper switch OFF Front wiper switch INT ON Any position other than front wiper stop position FR WIPER STOP HAZARD SW When hazard switch is not pressed When hazard switch is pressed ON Lighting switch OFF	FR WASHER SW	Front washer switch ON	ON
Front wiper switch LO  Front wiper switch OFF  Front wiper switch OFF  Front wiper switch HI  ON  Front wiper switch OFF  Front wiper switch OFF  Front wiper switch INT  ON  Any position other than front wiper stop position  FR WIPER STOP  Any position other than front wiper stop position  OFF  Front wiper stop position  ON  When hazard switch is not pressed  OFF  When hazard switch is pressed  ON  Lighting switch OFF  OFF	ED MIDED LOW	Front wiper switch OFF	OFF
FR WIPER HI Front wiper switch HI ON FR WIPER INT Front wiper switch OFF Front wiper switch INT ON Any position other than front wiper stop position FR WIPER STOP Any position other than front wiper stop position Front wiper stop position ON When hazard switch is not pressed OFF When hazard switch is pressed ON Lighting switch OFF OFF	FR WIPER LOW	Front wiper switch LO	ON
Front wiper switch HI  FR WIPER INT  Front wiper switch OFF Front wiper switch INT  Any position other than front wiper stop position  FR WIPER STOP  Any position other than front wiper stop position  ON  When hazard switch is not pressed  When hazard switch is pressed  ON  Lighting switch OFF  Front wiper switch OFF  OFF	ED WIDED III	Front wiper switch OFF	OFF
FR WIPER INT Front wiper switch INT ON Any position other than front wiper stop position Front wiper stop position ON When hazard switch is not pressed When hazard switch is pressed ON Lighting switch OFF OFF	FR WIPER HI	Front wiper switch HI	ON
Front wiper switch INT ON  Any position other than front wiper stop position OFF  Front wiper stop position ON  HAZARD SW  When hazard switch is not pressed OFF  When hazard switch is pressed ON  Lighting switch OFF  Front wiper stop position ON  OFF  When hazard switch is not pressed ON  Lighting switch OFF	ED WIDED INT	Front wiper switch OFF	OFF
FR WIPER STOP Front wiper stop position  When hazard switch is not pressed  When hazard switch is pressed  ON  Lighting switch OFF  OFF	FR WIPER IN I	Front wiper switch INT	ON
Front wiper stop position ON  When hazard switch is not pressed OFF  When hazard switch is pressed ON  Lighting switch OFF OFF	ED WIDED OTOD	Any position other than front wiper stop position	OFF
HAZARD SW  When hazard switch is pressed  ON  Lighting switch OFF  OFF	FR WIPER STUP	Front wiper stop position	ON
When hazard switch is pressed ON  Lighting switch OFF OFF	HAZADD CW	When hazard switch is not pressed	OFF
LIGHT SW 1ST	HAZAKU SW	When hazard switch is pressed	ON
Lighting switch 1st ON	LICHT OW 40T	Lighting switch OFF	OFF
	LIGHT SW 151	Lighting switch 1st	ON

### < ECU DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

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### < ECU DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

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

<sup>1:</sup> With Intelligent Key

<sup>2:</sup> With remote keyless entry system

Terminal Layout

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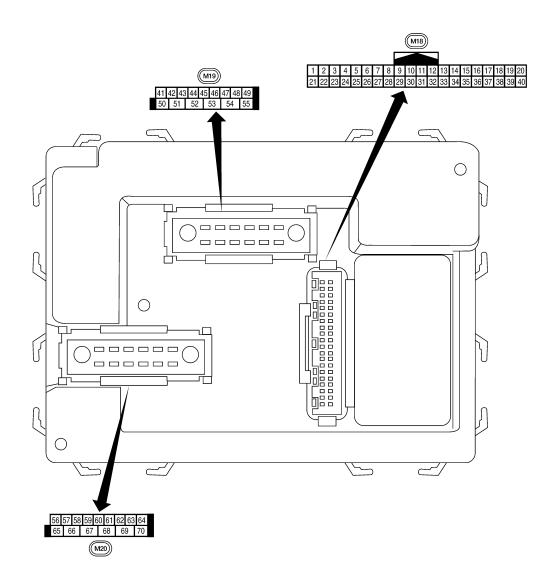
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Physical Values

# [WITH INTELLIGENT KEY SYSTEM]

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation or condition	(Approx.)
1	BR	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
	DIX	nation	Output	011	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 +-5ms SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5291E
5	L	Combination switch input 2				(V)
6	R	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	5 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
•		Rear window defogger	las I	ON	Rear window defogger switch ON	OV
9	Y	switch	Input	ON	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH	Input	OFF	ON (open)	0V
14	LG	TIOH GOOF SWILLIFKIT	mput	OI F	OFF (closed)	Battery voltage
13	L	Rear door switch RH	Input	OFF	ON (open) OFF (closed)	0V Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	_	5V
18	BR	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	_	0V

# [WITH INTELLIGENT KEY SYSTEM]

	Mira		Signal		Measuring condition	Poforonos valus er veneferre														
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)														
19	V	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0 •• 50 ms														
20	G	Remote keyless entry	Input	OFF	Stand-by (keyfob buttons released)	(V) 4 2 0 **50 ms LIIA1894E														
20	J	receiver (signal)	Input OFF																When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	(V) 6 4 2 -1
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF $\rightarrow$ ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.														
22	V	BUS	_	_	Ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms														
23	G	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V														
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.														
27	W	Compressor ON sig-	Input	ON	A/C switch OFF	5V														
		nal			A/C switch ON	0V														
28	LG	Front blower monitor	Input	ON	Front blower motor OFF Front blower motor ON	Battery voltage 0V														
					ON ON	0V														
29	G	Hazard switch	Input	OFF	OFF	5V														
30 <sup>1</sup>	G	Back door opener switch	Input	OFF	ON (open)	0V														
		SWILOIT			OFF (closed)	Battery voltage														
		Back door opener			ON (open)	0V														

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# [WITH INTELLIGENT KEY SYSTEM]

			Signal		Measuring condition	5 (
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 + 5ms SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ++5ms SKIA5291E
35	BR	Combination switch output 2				
36	LG	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 → +5ms SKIA5292E
37 <sup>1</sup>	В	Key switch and key	Input	OFF	Key inserted	Battery voltage
		lock solenoid		J	Key inserted	0V
37 <sup>2</sup>	В	Key switch and igni- tion knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
	\A//D		lanat	ON	Intelligent Key inserted	0V
38	W/R	Ignition switch (ON)	Input	ON	_	Battery voltage
39 40	L P	CAN-H CAN-L		_	_	_
40			_		Glass hatch open	
42	LG	Glass hatch ajar switch	Input	ON	Glass hatch closed	Battery voltage
					ON (open)	0V
43	Р	Back door latch switch	Input	OFF	OFF (closed)	Battery voltage
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### < ECU DIAGNOSIS >

# [WITH INTELLIGENT KEY SYSTEM]

			Signal		Measuring condition	
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
					Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
44	0	Rear wiper auto stop switch	Input	ON	Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	GR	Front door switch LH	Input	OFF	ON (open)	0V
-71	011	. TOTA GOOT SWILLITE	прис	511	OFF (closed)	Battery voltage
48	Р	Rear door switch LH	Input	OFF	ON (open)	0V
70	•	. Codi dooi Switton Eri	iiiput	011	OFF (closed)	Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open (ON)	0V
	_				All doors closed (OFF)	Battery voltage
51	0	Trailer turn signal (right)	Output	ON	Turn right ON	(V) 15 10 500 ms SKIA3009J
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	(V) 15 10 5 0 500 ms SKIA3009J
F2	_	Back door latch actua-	Output	OFF	OFF	0
53	L	tor	Output	OFF	ON	Battery voltage
55	W	Rear wiper output cir-	Output	ON	OFF	0
33	VV	cuit 1	Output	ON	ON	Battery voltage
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	_	Battery voltage
57	R/Y	Battery power supply	Input	OFF	_	Battery voltage
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
		·		3.,	When optical sensor is not illuminated	0.6V or less
59	GR	Front door lock as- sembly LH actuator	Output	OFF	OFF (neutral)	0V
J <del>J</del>	GK	(unlock)	Output	OFF	ON (unlock)	Battery voltage

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# [WITH INTELLIGENT KEY SYSTEM]

	Wire		Signal		Measuring con	dition	Deference value or waveform	
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	Reference value or waveform (Approx.)	
60	LG	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 5 0 500 ms	
61	G	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 5 0 500 ms SKIA3009J	
63	BR	Interior room/map	Output	OFF	Any door	ON (open)	0V	
	BIX	lamp	Odipat	011	switch	OFF (closed)	Battery voltage	
65	V	All door lock actuators	Output	OFF	OFF (neutral)		0V	
	•	(lock)		<b>.</b>	ON (lock)		Battery voltage	
		Front door lock actua-			OFF (neutral)		0V	
66	L	tor RH, rear door lock actuators LH/RH and glass hatch lock actu- ator (unlock)	Output	OFF	ON (unlock)		Battery voltage	
67	В	Ground	Input	ON	-		0V	
					Ignition switch	ON	Battery voltage	
					Within 45 seco		Battery voltage	
68	0	Power window power supply (RAP)	Output	_	More than 45 s	seconds after ig- FF	0V	
					When front door LH or RH is open or power window timer operates		0V	
69	L	Power window power supply	Output	_	-	_	Battery voltage	
70	W	Battery power supply	Input	OFF	-	_	Battery voltage	

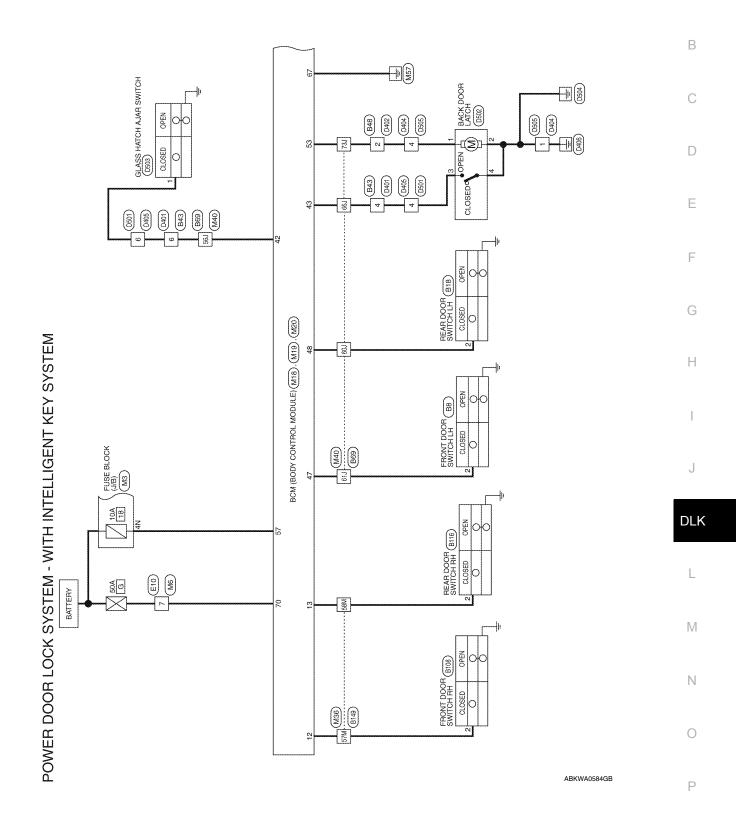
<sup>1:</sup> With remote keyless entry system

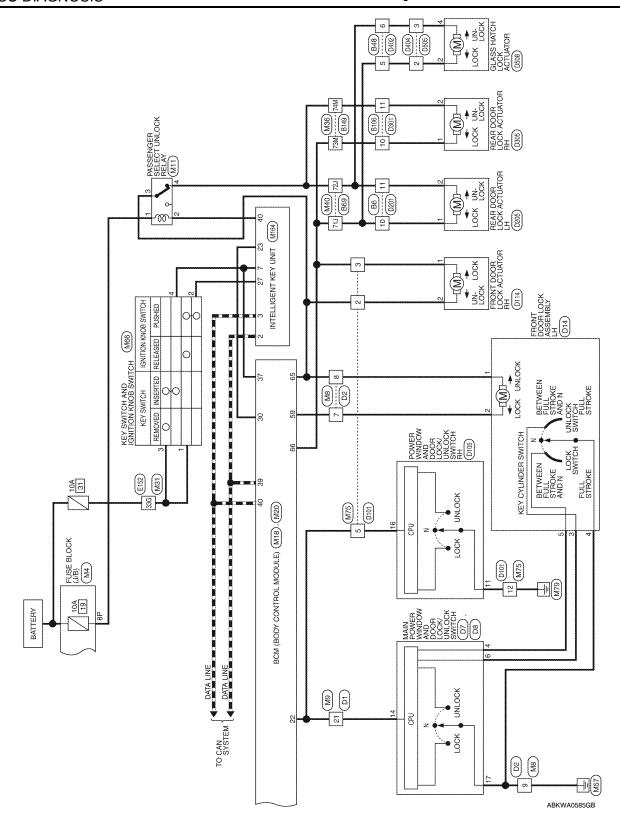
<sup>2:</sup> With Intelligent Key system

Wiring Diagram — POWER DOOR LOCK SYSTEM —

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	Connector No. M6	Connector Name WIRE TO WIRE	Connector Color WHITE	4 8 8 8 C C C C C C C C C C C C C C C C	Terminal No. Wire Signal Name	- M
EY SYSTEM	Connect	Connect	Connect	所 H.S.	Termina	7
VTELLIGENT KE		Connector Name FUSE BLOCK (J/B)	IITE	69   69   69   49   69   19   19   19   19   19   19   1	Signal Name	I
Ē	M4	ıme FU	lor WF	7P 6P 5P 4P [16P 13P 1	Color of Wire	β
ORS - W	Connector No. M4	Connector Na	Connector Color WHITE	赋利 H.S.	Terminal No. Wire	8P
ONNECT				1		
POWER DOOR LOCK SYSTEM CONNECTORS - WITH INTELLIGENT KEY SYSTEM		Connector Name FUSE BLOCK (J/B)	ІТЕ	2N 1N	Signal Name	1
JR L	. M3	me FU	lor WF	3N 8N	Color of Wire	R/Υ
VER DOC	Connector No.	Connector Na	Connector Color WHI	原 H.S.	Terminal No. Wire	4N
<u>Ю</u>						

1	PASSENGER SELECT UNLOCK RELAY	BLACK	© 0 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	I	_	ı	I
. M11		_		Color of Wire	B/B	æ	>	_
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	,-	2	က	4

Connector No.   M9	M9   WHTE	E TO WIRE  TE    TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE     TE   TE     T
21	>	I

	Connector No.   M8	
Connector Name WIRE TO WIRE	ne WIR	E TO WIRE
Connector Color BROWN	or BRC	NWO
高 H.S.	12 1 1 1 1 1	10 9 8 7 6
Terminal No.	Color of Wire	Signal Name
7	GR	ı
8	>	ı
6	В	ı

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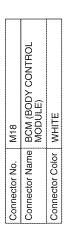
**DLK-133** Revision: July 2009 2010 Pathfinder 

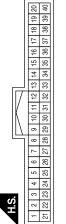
Connector No.	M19
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE



Signal Name	GLASS HATCH SW	BACK DOOR SW	DOOR SW (DR)	DOOR SW (RL)	LIFTGATE OPENER OUTPUT
Color of Wire	LG	۵	GR	Ь	
Terminal No. Wire	42	43	47	48	53

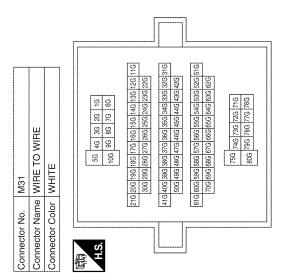
	,	,	,	,	
Signal Name	BACK DOOR AUTO CLOSURE	KEY SW	CAN-H	CAN-L	
Color of Wire	SB	Ω		a.	
Terminal No.	30	37	39	40	





Signal Name	DOOR SW (AS)	DOOR SW (RR)	ANTI-PINCH SERIAL LINK (RX,TX)
Color of Wire	LG	1	>
Terminal No.	12	13	22

Terminal No. Wire Signal Name	ł	
Color of Wire	R/B	
Terminal No.	33G	



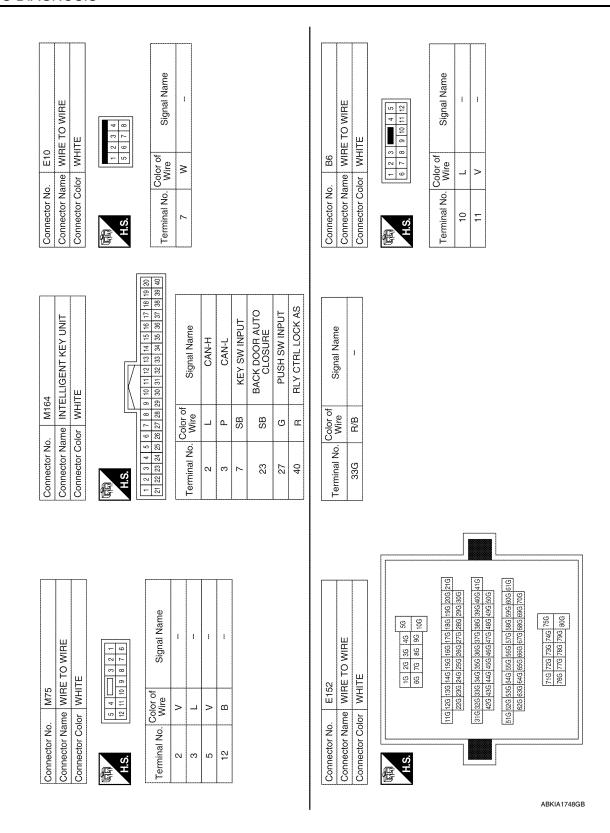
Connector No.	M20
Connector Name	Connector Name   BCM (BODY CONTROL   MODULE)
Connector Color BLACK	BLACK



Signal Name	BAT (FUSE)	DOOR UNLOCK OUTPUT (DR)	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	BAT (F/L)
Color of Wire	R/Y	GR	>	<b>ب</b> ــ	В	3
Terminal No.	57	59	65	99	29	0/

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													Connector No. M66	Connector Name   KEY SWITCH AND IGNITION	KINOB SWITCH	Collifector Color Ghan	_		H.S.		Terminal No. Wire Signal Name		2 G	3 R/B –	4 SB				A B C D
					]																								F
Signal Name	ı	a.	ı	ı									Signal Name	)	ŝ	***	1		and the state of t	ł	1								G H
Color of Wire	p <sub>1</sub>		SB	>									Color of	2 -	2 0	L (	r 5	а.		^	 								
Terminal No.	57M	58M	73M	74M									Terminal No.	- 0	200	000	613	99	71.0	72.1	73J								J
			<u></u>									7				Г												1	DL
ш				SM ZM 1M	10M 9M 8M 7M 6M	21M/20M/19M/18M/17M/16M/15M/14M/13M/11M 30M/29M/29M/27M/26M/25M/24M/23M/22M	A 250 M 240 M 230 M 230 M	M 45M 44M 43M 42M	W 55M 54M 53M 52M 51M W 65M 64M 63M 62M	75M 74M 73M 72M 71M	8M 77M 76M			Щ.				31 21 11	2		25.1 24.1 23.1 22.1	1 350 340 330 320 310	1 455 443 433 423	J 55J 54J 53J 52J 51J	J 65J 64J 63J 62J	75J 74J 73J 72J 71J 801 79J 78J 77J 76J			L
Connector No. M36 Connector Name WIRE TO WIRE	WHITE			5M 4M	10M 9M 8	M19M18M17M16	acharachaga hada	50M 49M 48M 47M 46M 45M 44M	61M 60M 59M 58M 57M 56M 55M 54M 70M 69M 69M 67M 66M 65M 64M	75M 74M7	90M 79M		M40	WIRE TO WIRE	WHITE			₹ 4	10u 9u 8u	]	30, 29, 28, 27, 26, 25, 24	41.7   40.1   39.1   38.1   37.1   36.1   35.1   34.1	503   493   482   473   463   453   443	61.1 60.1 59.1 58.1 57.1 56.1 55.1 54.1	s es se e7 se	75J 74J	38		M
or No. M36	Color W					21M 20h	J [MAKE)	100	61M 60N 70N				1	+						1 000	307	413 403	709	61.7 600	.gr				Ν
Connector No.	Connector Color		6	S II									Connector No.	Connector Name	Connector Color	4	臣	H.S.				L							0
																										ABKIA17	75GB		Р



# [WITH INTELLIGENT KEY SYSTEM]

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Terminal No. 560 600 600 600 733 733	Е
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B18	G
## REAR DOOR SWITT    1	Н
Name   REA   Name   REA   Name   REA   Name   REA   Name	
Connector No. H.S. H.S. F. F	J
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FRONT DOOR SWITCH LH WHITE  Tof Signal Name  WHRE TO WIRE  WHITE  Tof Signal Name	L
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Connector No Conne	0
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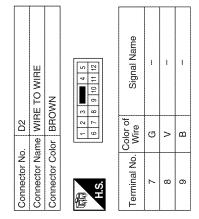
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Connector No. Connector Name Connector Color	or ne	B106 WIRE TO WIRE WHITE	Connector No. Connector Name Connector Color		B108 FRONT DOOR SWITCH RH WHITE	Connector No. B116 Connector Name REAR DOOR SWITCH RH Connector Color WHITE
H.S.	6 7 7 8	2 3 6 4 5 7 8 9 10 111 12	原 H.S.	<u></u>		H.S. 3
Terminal No.	Color of Wire	Signal Name				Description of the second of t
10	SB	***	Terminal No.	Wire	Signal Name	Terminal No. Wire Signal Name
=	>	aoa	2	re	ţ	2
Connector No.	No. B149	49	Terminal No	Color of	Signal Name	Connector No. D1
Connector	Name WII	Connector Name WIRE TO WIRE		D C		
Connector Color		WHITE	58M			Connector Color WHITE
	-		73M	SB	1	
T S		1M 2M 3M 4M 5M	74M	>	ŧ	1 2 3 4 5 6 7 8 9 10 11
		6M 7M 8M 9M 10M				13 14 15 16 17 18 19 20 21 22 23 24
	11M 12M 13	111M 12M 13M 14M 15M 16M 17M 18M 19M 20M 21M 22M 23M 24M 25M 26M 26M 27M 28M 39M 39M				Terminal No. Color of Signal Name
	31M 32M 33	STM SZM SZM SZM SSM SRM SRM SRM SRM SRM SZM ZZM ZZM ZZM ZZM ZZM ZZM ZZM ZZM ZZ				
	51M 52M 55 62M 63	51M SZW SZW SZW SZW SEW SZW SZW SZW SZW SZW SZW SZW SZW SZW SZ				
		77M   72M   73M   74M   75M   75M				

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Connector No.	). D8	
Connector Name		MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	olor WHIT	ш
H.S.	17 18	18 19
Terminal No.	Color of Wire	Signal Name
17	ω	GND

Connector No.	D7	
Connector Name	1	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	lor WHI	ΤE
H.S.	8 9 10 1	2 3 4 6 7 9 10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
4	SB	KEY CYL LOCK SW
9	R/W	KEY CYL UNLOCK SW
14	>	POWER WINDOW SERIAL LINK



Connector No.	. D105	S
Connector Name		POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	lor WHITE	TE
H.S.	1 2 3 8 9 10	3 4 C 5 6 7
Terminal No.	Color of Wire	Signal Name
=	В	GND
16	>	POWER WINDOW SERIAL LINK

Connector No.	D101	-
Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITE	olor WHI	11
唇	- 4	3 0 10 11 12 5
Ž.	-]	
Terminal No. Wire	Color of Wire	Signal Name
2	>	
3	G/Y	ł
5	^	
12	മ	1

	FRONT DOOR LOCK ASSEMBLY LH	ΑY	2 2 1	Signal Name	1	ŧ	ł	ł	
D14	L	lor GRAY	8 5 4	Color of Wire	>	9	M/W	В	SB
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	<b>,-</b> -	2	က	4	5

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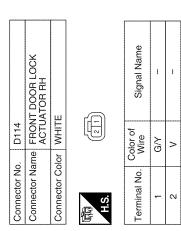
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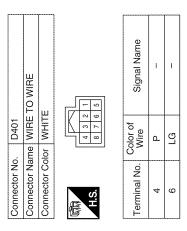
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Connector No.	D205	
Connector Name		REAR DOOR LOCK ACTUATOR LH
Connector Color WHITE	olor WHIT	ш
H.S.		
Terminal No.	Color of Wire	Signal Name
-	ഗ	
2	>	ı

Connector No.	. D201	<b></b>
Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITE	lor WHI	里
H.S.	12 11 10	10 9 8 7 6
Terminal No.	Color of Wire	Signal Name
10	g	1
	۸	ı





Connector No.	D305	5
Connector Name		REAR DOOR LOCK ACTUATOR RH
Connector Color WHITE	olor WH	TE
斯 H.S.		F)
Terminal No.	Color of Wire	Signal Name
	9	1
2	>	***

Connector Name Connector Color	WIF WH	WHITE WHITE 4
Connector Color WHITE	, WH	8 3
	4 2	8 7
H.S.	=]	
Terminal No. Wire	olor of Nire	Signal Name
10	G	1
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# [WITH INTELLIGENT KEY SYSTEM]

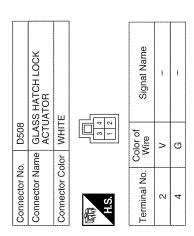
< ECU DIAGNOSIS >

				А
WIRE		Signal Name	ATCH ITCH Signal Name	В
D405 WIRE TO \	8 4 7 8 7 6 5 1 1		NA N	С
Connector No. D405 Connector Name WIRE TO WIRE Connector Color WHITE		Color of Wire P P LG	ctor No.	D
Conne	师 H.S.	Terminal No.	Conne	Е
				F
WIRE		Signal Name	D502 BACK DOOR LATCH WHITE  or of Signal Name ire	G
Connector No. D404 Connector Name WIRE TO WIRE Connector Color WHITE	1 2 2 1		D502   D502	Н
or No. or Color		No. Wire B B C C C C C C C C C C C C C C C C C		I
Connector No. Connector Name	H.S.	Terminal No.	Connector No. Connector Name Connector Color H.S. 1 1 2 2 2 3 3 4	J
				DLK
MRE		Signal Name	WIRE Signal Name	L
D402 WIRE TO V	6 3 2 2 4 1	<sup>1</sup> 0 θ	WIRE TO WIRE WHITE WHITE Or of Signa P P C G	M
		Color of Wire Wire Color of G	Cost Cost Cost Cost Cost Cost Cost Cost	N
Connector No. Connector Color	H.S.	Terminal No. 2 5 5	Connector No. Connector Color Connector Color H.S.  H.S.  6 Col	0

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Revision: July 2009 DLK-141 2010 Pathfinder

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





Signal Name	ı	ŀ	ļ	ļ
Color of Wire	В	>	ŋ	J
Terminal No. Wire	-	2	က	4

Fail Safe

Fail-safe index

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

< ECU DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

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

# DTC Inspection Priority Chart

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

Priority	DTC	
1	U1000: CAN COMM CIRCUIT	D
2	<ul> <li>B2190: NATS ANTENNA AMP</li> <li>B2191: DIFFERENCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2013: STRG COMM 1</li> <li>B2552: INTELLIGENT KEY</li> <li>B2590: NATS MALFUNCTION</li> </ul>	E
3	C1729: VHCL SPEED SIG ERR     C1735: IGNITION SIGNAL	
	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR	G
	<ul> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> </ul>	Н
	C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR	ı
4	<ul> <li>C1715: [CHECKSUM ERR] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> </ul>	J
	<ul> <li>C1719: [PRESSDATA ERR] RL</li> <li>C1720: [CODE ERR] FL</li> <li>C1721: [CODE ERR] FR</li> </ul>	DLI
	<ul> <li>C1722: [CODE ERR] RR</li> <li>C1723: [CODE ERR] RL</li> <li>C1724: [BATT VOLT LOW] FL</li> <li>C1725: [BATT VOLT LOW] FR</li> </ul>	L
	C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL	M

DTC Index INFOID:0000000005483728

### NOTE:

Details of time display

· CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF  $\rightarrow$  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.

**DLK-143** 2010 Pathfinder Revision: July 2009

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# [WITH INTELLIGENT KEY SYSTEM]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-33
B2013: STRG COMM 1	_	_	_	SEC-29
B2190: NATS ANTENNA AMP	_	_	_	SEC-32 (with I- Key), SEC-136 (without I-Key)
B2191: DIFFERENCE OF KEY	_	_	_	SEC-35 (with I- Key), SEC-139 (without I-Key)
B2192: ID DISCORD BCM-ECM	_	_	_	SEC-36 (with I- Key), SEC-140 (without I-Key)
B2193: CHAIN OF BCM-ECM	_	_	_	SEC-38 (with I- Key), SEC-142 (without I-Key)
B2552: INTELLIGENT KEY	_	_	_	SEC-40
B2590: NATS MALFUNCTION	_	_	_	<u>SEC-41</u>
C1708: [NO DATA] FL	_	_	_	<u>WT-14</u>
C1709: [NO DATA] FR	_	_	_	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	_	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	_	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	_	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	_	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	_	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	_	<u>WT-16</u>
C1716: [PRESSDATA ERR] FL	_	_	_	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	_	_	_	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	_	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	_	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	_	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	_	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	_	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	_	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	_	_	_	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	_	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	_	_	_	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	_	_	_	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	_	_	_	<u>WT-19</u>
C1735: IGNITION SWITCH	_	_	_	_

# Reference Value - Intelligent Key Unit

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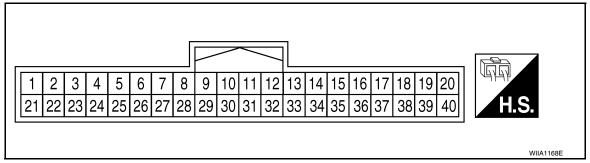
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### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

				Condition			
Terminal	Wire Color	Item	Ignition Switch Po- sition	Operation or Conditions		Voltage (V) Approx.	
1	0	Steering lock sole- noid power supply	LOCK	_		5	
2	L	CAN-H	_	_		_	
3	Р	CAN-L	_	_		_	
_		Intelligent Key warn-		Operate door request Buzzer OFF		Battery voltage	
4	GR	ing buzzer (front of vehicle)	LOCK	switch.	Buzzer ON	0	
5	LG	Front door request		Press front door request switch LH.  Other than above		0	
3	LG	switch LH	_	Other than above		Battery voltage	
6	W/G	Ignition switch (ON)	ON	_		Battery voltage	
7	CD.	Kou owitch	1 OCK	Insert mechanical key in cylinder.	to ignition key	Battery voltage	
7	SB	Key switch	LOCK	Remove mechanical key key cylinder.	from ignition	0	
8	0	Remote keyless en- try receiver ground	_	_		0	
0	n	Remote keyless en-		When remote keyless entry receiver receives signal from keyfob.  Stand-by		(V) 6 4 2 0	
9	R	try receiver signal	_			(V) 6 4 2 0 	
11	R/B	Power source (Fuse)	_	_		Battery voltage	
12	В	Ground	_	_		0	

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# [WITH INTELLIGENT KEY SYSTEM]

				Condition	
Terminal	Wire Color	Item	Ignition Switch Po- sition	Operation or Conditions	Voltage (V) Approx.
13	W	Luggage area anten- na (+) signal			(V)
14	BR	Luggage area anten- na (-) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	10 5 0 10.0µs
15	V	Instrument panel area antenna (+) sig- nal			(V) 10 N A A A A A A A A A A A A A A A A A A
16	LG	Instrument panel area antenna (-) sig- nal	LOCK	Any door open $ ightarrow$ all doors closed	5 0 10.0μs PIIB7441E
17	R	Rear bumper anten- na (+) signal			(V)
18	L	Rear bumper anten- na (-) signal	LOCK	Press back door request switch.	15 10 5 0 10 \(\mu\) \(\sigma\)
19	Y	Front outside anten- na LH (+) signal			( <u>V)</u>
20	W	Front outside anten- na LH (-) signal	LOCK	Press front door request switch LH.	15 10 5 0 10 μs SIIA1910J
21	BR	Remote keyless entry receiver RSSI signal	_		(V) 15 10 5 0 2000 ms
23	SB	Back door control	_	Back door release switch ON.	0
		unit signal		Back door release switch OFF.  Back door opener switch ON.	Battery voltage 0
24	W	Back door opener switch input	_	Back door opener switch OFF.	5
25	R	Front door request	_	Press front door request switch RH.	0
		switch RH		Other than above	Battery voltage
27	G	Ignition knob switch	_	Press ignition switch.  Return ignition switch to LOCK position.	Battery voltage 0
		Unlock sensor		Door (driver side) is locked.	5
28	Р	(driver side)	_	Door (driver side) is unlocked.	0

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# [WITH INTELLIGENT KEY SYSTEM]

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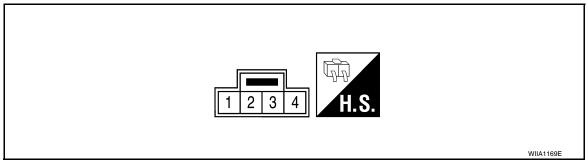
				Condition		
Terminal	Wire Color	Item	Ignition Switch Po- sition	Operation or Conditions	Voltage (V) Approx.	
29	GR	Back door request		Back door request switch ON.	0	
29	GIX	switch	_	Back door request switch OFF.	5	
30	W	Remote keyless entry receiver power supply	_	_	5	
32	V	Steering lock sole- noid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	(V) 4 2 0 2 ms	
				Other than above	5	
33	G	Center console area antenna (+) signal			(V) - : : : : : : : : : : : : : : : : : :	
34	R	Center console area antenna (-) signal	LOCK Any door open $\rightarrow$ all doors closed $\begin{bmatrix} 5 \\ 0 \end{bmatrix}$		10 5 0 10.0µs	
37	Р	Front outside anten- na (+) signal RH			(V) 15	
38	٧	Front outside antenna (-) signal RH	LOCK	Press front door request switch RH.	10 5 0 10 μs SIIA1910J	
20	QD.	P range switch		Selector lever is in "P" position.	0	
39	SB	P range switch	_	Other than above	Battery voltage	
40	R	AS select unlock out-	_	UNLOCK with rear door locks disabled.	0	
40	IX	put		Other than above	Battery voltage	

Reference Value - Steering Lock Solenoid

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# TERMINAL LAYOUT

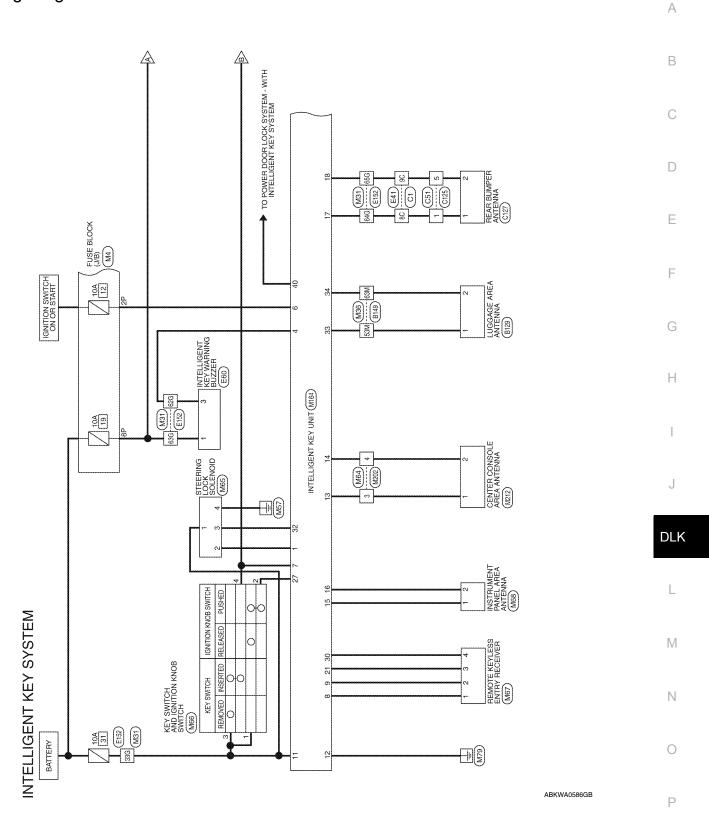


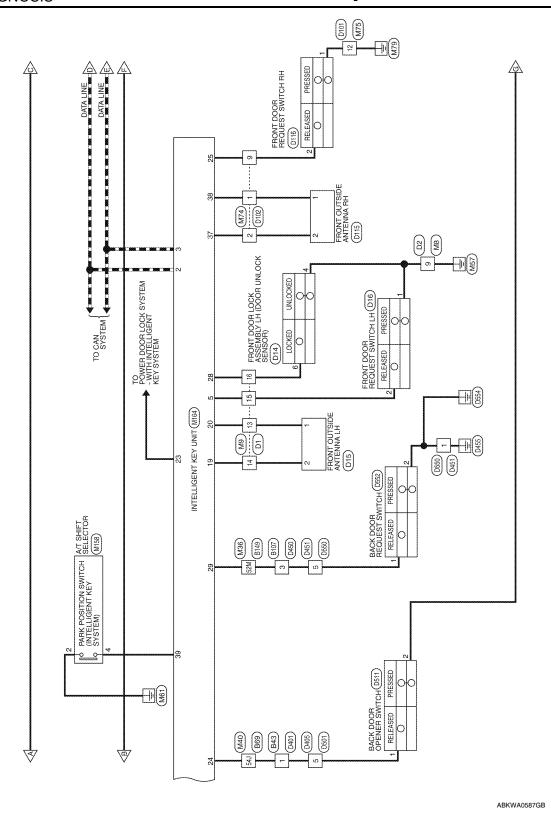
PHYSICAL VALUES

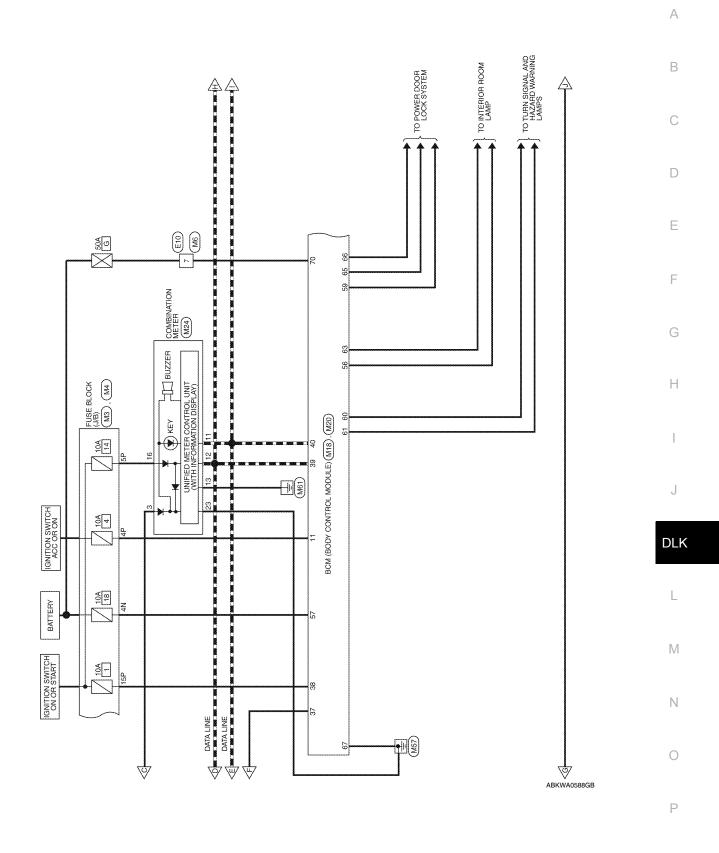
# [WITH INTELLIGENT KEY SYSTEM]

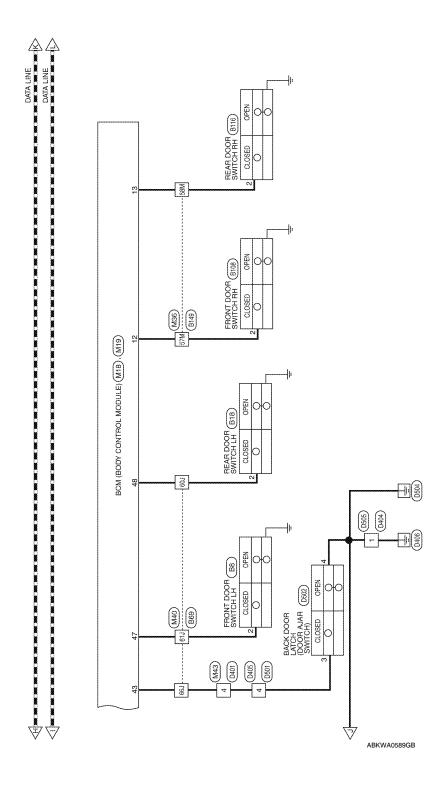
				Condition	
Terminal	Wire Color	Signal Designation	Ignition Switch Posi- tion	Operation or Conditions	Voltage (V) Approx.
1	R/B	Power source (fuse)	LOCK	_	Battery voltage
2	0	Steering lock solenoid power supply	LOCK	_	5
3	V	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	(V) 6 4 2 0 2 ms
				Other than the above	5
4	SB	Steering lock solenoid ground	_	_	0

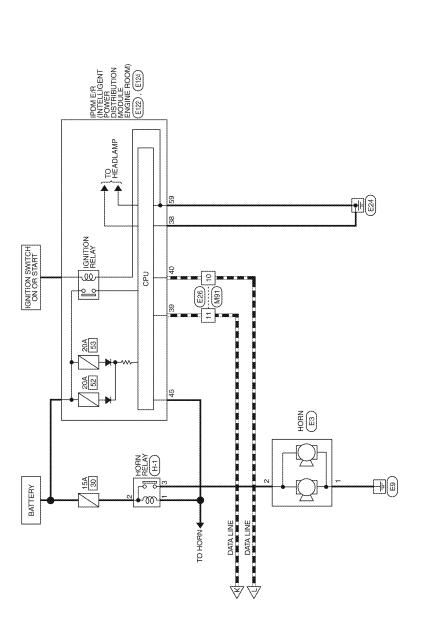
Wiring Diagram — INTELLIGENT KEY SYSTEM —











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# INTELLIGENT KEY SYSTEM CONNECTORS

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

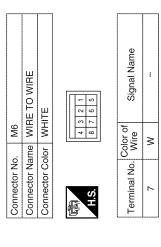
Connector No. M4
Connector Name FUSE BLOCK (J/B)

Connector Color WHITE



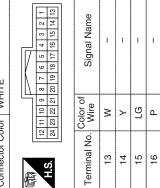


Signal Name	1
Color of Wire	R/Y
Terminal No.	N4



Signal Name	***		Ē	ŧ	ī
Color of Wire	M/G	G/B	9/M	Rγ	W/R
Ferminal No.	2P	4P	5P	8P	15P

COMMECTOR INC. WIS	
Connector Name WIRE TO WIRE	RE TO WIRE
Connector Color Wh	WHITE



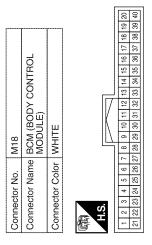
Connector No.	. M8	
Connector Name WIRE TO WIRE	me WIF	RE TO WIRE
Connector Color		BROWN
南 H.S.	12 11 10 9 8	8 3 2 1 1 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Terminal No. Wire	Color of Wire	Signal Name
6	В	1

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Connector No.		M19
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color WHITE	olor V	VHITE
H.S.	41 42	41   42   43   44   45   46   47   48   49     50   51   52   53   54   55
Terminal No.	Color of Wire	of Signal Name
43	α.	BACK DOOR SW
47	GR	DOOR SW (DR)
48	α.	DOOR SW (RL)
	-	

[[ cc   3c   5c   7c   1c   nc  ]	of Signal Name	BACK DOOR SW	DOOR SW (DR)	DOOR SW (RL)
000	Color of Wire	σ.	GR	a.
H.S.	erminal No.	43	47	48

	·····	,	,		,	r	,
Signal Name	ACC SW	DOOR SW (AS)	DOOR SW (RR)	KEY SW	IGN SW	CAN-H	CAN-L
Color of Wire	G/B	re	٦	8	W/R	٦	۵
Terminal No.	-	12	13	37	38	39	40



Signal Name	FLASHER OUTPUT (RIGHT)	ROOM LAMP	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	BAT (F/L)
Color of Wire	ŋ	BR	>	J	В	⋧
Terminal No.	61	63	65	99	29	70

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



Signal Name	BATTERY SAVER OUTPUT	BAT (FUSE)	DOOR UNLOCK OUTPUT (DR)	FLASHER OUTPUT (LEFT)
Color of Wire	R/Y	R/Y	GR	P
Terminal No.	56	57	59	09

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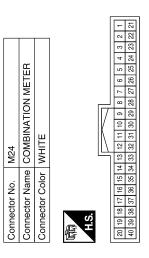
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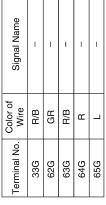
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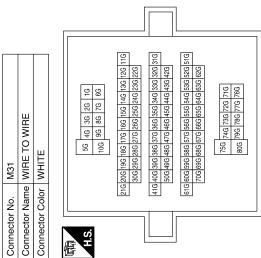
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Signal Name	BATTERY	CAN-L	CAN-H	GROUND	RUN START	POWER GND
Color of Wire	R/Υ	Ь	٦	GR	M/G	В
Terminal No.	3	11	12	13	16	23







ABKIA0376GB

	Connector No.   M64	A B C D
Signal Name	Signal Name	F G
		Н
Color of Wire	Color of S4J   Wire 60J   P   G6J	I
	Temi	J
11M MI	121 E8 131 E8 141 E8 14	DLK
TO WIRE   SM   SM   SM   SM   SM   SM   SM   S	S. TO WIRE  1.0	L
M36   Connector Name   WIRE TO WIRE	Connector No. M40  Connector Name WIRE TO WIRE  Connector Color WHITE  53 43 31 24 13  100 90 80 80 77 86 75 84 83 32 11  30 80 80 80 77 86 80 80 81 71  610 60 80 80 80 77 86 85 80 80 80 80 71  610 60 80 80 80 77 86 80 80 80 80 80 80 80 80 80 80 80 80 80	M
Connector No. M Connector Name W Connector Color W Connector Color W Connector Color W Connector Color W Connector No. M Conne	Connector No. M Connector Name W Connector Color W  A11 220 330 611 620 611 620	N
Connector No. Connector Coll	Connector Nar. Connector Nam Connector Colc H.S.	0
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Connector No.	). M67	7
Connector Name	ame RE	REMOTE KEYLESS ENTRY RECEIVER
Connector Color WHITE	olor WF	IITE
呵句 H.S.		2 3 4
Terminal No. Wire	Color of Wire	Signal Name
-	0	
2	Œ	ı
3	BB	ł
4	≥	-

M67	RECEIVER RECEIVER	WHITE	1 2 3 4	Color of Sign	0	В	ВВ	10/
Connector No.	Connector Name REMOTE KEY	Connector Color WHITE	用.S.	Terminal No. W	-	2	3	7
	~~			[	7			

Connector No.	). M66	3
Connector Name	ume KR	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color GRAY	olor GR	47
	1	
H.S.	1 2	3 4 5 6
Terminal No.	Color of Wire	Signal Name
-	œ	
2	9	I
8	B/B	ŧ
4	SB	***

	STEERING LOCK SOLENOID	卫	3 4	Signal Name	<b>8</b> +	+5V	SIG	GND
. M65	me STE SOL	llor WH		Color of Wire	B/B	0	>	SB
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	-	2	က	4

Connector No.	. M75	
Connector Name WIRE TO WIRE	me WIRE	TO WIRE
Connector Color WHITE	lor WHIT	ш
H.S.	12 11 10 9	8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Terminal No.	Color of Wire	Signal Name
12	В	I

l					I		
	RE TO WIRE	TE	5 5 1 2 2 1 1 1 0 0 0 1 1 1 1 0 0 0 1 1 1 1	Signal Name	I	ı	ı
. M74	me WIF	lor WH	16 15 14 1	Color of Wire	>	۵	Œ
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire		2	6

Connector No.		M68	
Connector Name	me /	NSTF	INSTRUMENT PANEL AREA ANTENNA
Connector Color GRAY	olor	звау	-
南 H.S.	9		
Terminal No.	Color of Wire	r of	Signal Name
	>		tee
2	LG	(D	1
			***************************************

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Signal Name	PUSH SW INPUT	DR STATUS SW INPUT	BACK DOOR REQ SW	5V	***	STRG LOCK SIG	3RD ROW ANT (+)	3RD ROW ANT (-)	Į.	-	AS ANTENNA (+)	AS ANTENNA (-)	P RANGE SW	RLY CTRL LOCK AS
Color of Wire	O	۵	GR	≥	1	>	უ	Œ	I	ı	۵.	>	SB	Œ
Terminal No.	27	28	29	30	31	32	33	34	35	36	37	38	39	40

M158	A/T SHIFT SELECTOR (WITH MANUAL MODE SWITCH AND INTELLIGENT KEY SYSTEM)	WHITE	4 5 6 8 10	of Signal Name	1	1
	L	ylor W	- 2	Color of Wire	മ	ď
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	2	8

Signal Name		1	Signal Name	BAT	GND	ANT2 (+)	ANT2 (-)	ANT1 (+)	ANT1 (-)	REAR BUMPER ANT (+)	REAR BUMPER ANT (-)	DR ANTENNA (+)	DR ANTENNA (-)	RSSI	I	BACK DOOR AUTO CLOSURE	BACK DOOR OP SW	AS REQUEST SW	ı
Wire	മ	SB	Color of Wire	B/B	Ω.	×	BR	>	re	æ	<u>ب</u>	>	Α	BR	ł	SB	W	В	1
Terminal No.	2	4	Terminal No.	=	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

Connector No.	M91	
Connector Name	ıme WII	WIRE TO WIRE
Connector Color WHITE	lor WF	HE.
H.S.	7 6 5 4	4 4 13 12 11 10 9 8
Terminal No. Wire	Color of Wire	Signal Name
10	۵	ii .
+	_	ŀ

	19 20 39 40		*******	,	,	·	,,,,,,,,,,	,	,	,	,	,
M164 INTELLIGENT KEY UNIT WHITE	9 10 11 12 13 14 15 16 17 18	Signal Name	5V OUTPUT	CAN-H	CAN-L	BUZZER DR OUTPUT	DR REQUEST SW	IGN SW INPUT	KEY SW INPUT	GND	SIGNAL	1
	6 7 8 8 20 20 20 20 20 20 20 20 20 20 20 20 20	Color of Wire	0	لب	а	GR	re	W/G	SB	0	В	ı
Connector No. Connector Name Connector Color	H.S. 1 2 3 4 5 5 21 22 23 24 25 5	Terminal No.	,	2	3	4	5	9	2	œ	6	10
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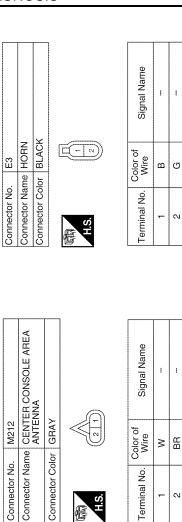
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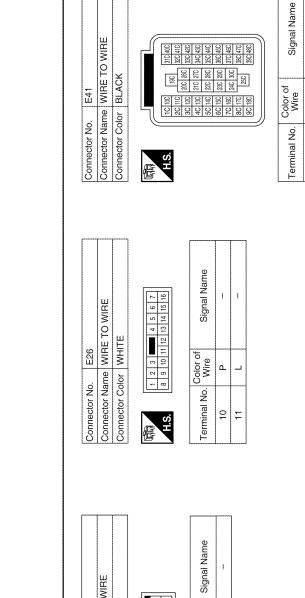
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. M202	Connector Name WIRE TO WIRE	lor WHITE	4 0 0 0
Connector No.	Connector Na	Connector Color WHITE	H.S.

Connector Color | GRAY

Color of Wire

Terminal No.

Signal Name

Color of Wire

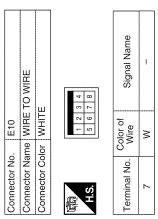
Terminal No. ო 4

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Connector No. | M212

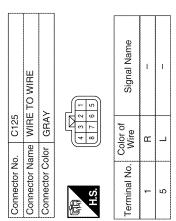


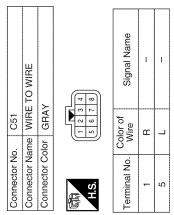
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Connector Name MODULE ENGINE ROOM) Connector Color BLACK	E2 61 60	Il No. Wire	59 B GND (POWER)			Connector Name WIRE TO WIRE Connector Color BLACK			190	460 580 200 110 50 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80	300 240		Terminal No. Wire Signal Name	8C R	- 7 J		
PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	4 8 37 4 37	Signal Name	GND (SIGNAL) CAN-H	CAN-L ANT THEFT HORN	Signal		1	1 1	-								
Connector Name POWER I MODULE Connector Color WHITE	H.S. 42 41 401 39 38 37 48 47 48 45 44 43	l No. Wire	38 B C	LG P	Terminal No. With S	R/B	-	63G R/B 64G R	+								
8 8										20G 21G	8 40G 41G	800 616	70G				
e INTELLIGENT KEY WARNING BUZZER r BROWN	Color of Signal Name		GR		E152	e WIRE TO WIRE	-1	2	16 26 36 46 50 66 76 86 96 10G	11G 12G 13G 14G 15G 15G 17G 18G 19G 20G 22G 23G 24G 25G 28G 27G 28G 23G	31G   32G   33G   34G   35G   36G   37G   38G   39G   40G   41G   42G   43G   43G   43G   43G   63G   50G   50G	51G 52G 53G 54G 55G 56G 57G 58G 59G 60G	62G 63G 64G 65G 66G 67G 68G 89G	716 726 736 746 756	908 16/ 68/ 19/ 60		
Connector Name	H.S. Co		e		Connector No.	Connector Name Connector Color		E	ý T			[5]					

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	ANTENNA			Vame		
	REAR BUMPER ANTENNA	>		Signal Name	I	
5. C127		olor GRAY	<b>—</b>	Color of Wire	œ	ـــ
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	,	2





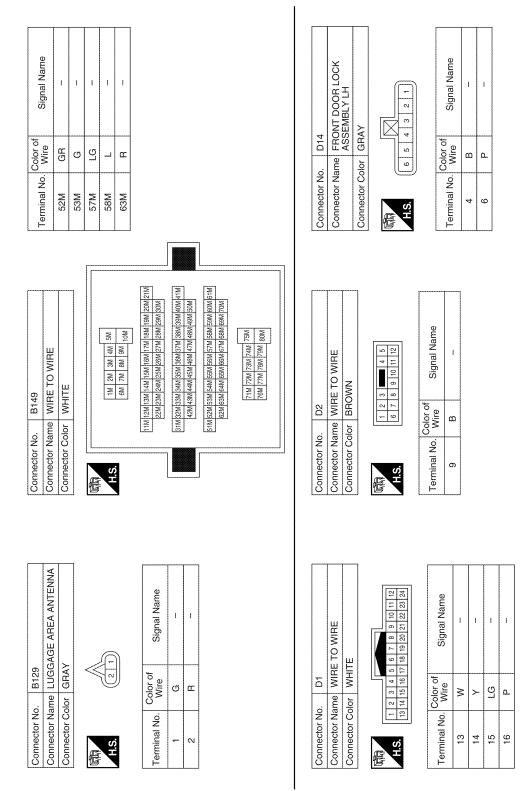
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B43	ŧ	1 1	1 2 3 7 9 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Color of Wire	*	O.
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	<b>~~</b>	4

		,			
e .	REAR DOOR SWITCH LH	WHITE		Signal Name	ą
. B18		lor Wh		Color of Wire	α.
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.	2

	FRONT DOOR SWITCH LH	WHITE	<b>⋈</b> as	Signal Name	
, B8	me FR	lor W		Color of Wire	GR
Connector No.	Connector Name	Connector Color	中 H.S.	Terminal No.	2

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B116 REAR DOOR SWITCH RH WHITE  rof Signal Name	В
B116 B116 WHITE	С
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Connector No. Connector Name Connector Color H.S. H.S.	Е
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From Signal Name	G
Color of Wire GR	Н
Connector No.  Connector No.  Connector Color  Terminal No.  Color  Connector Color  Connector Color  Connector Color  Co	I
Terminal No. Connector No. Connector Na. Connector Na. Connector Cold	J
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B69	L
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<del></del>	RE TO WIRE	TE	9 10 11 12	Signal Name	ı
. D101	me WIF	lor WH	6 7 8	Color of Wire	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	所 H.S.	Terminal No. Wire	12

Connector No.	, D16	
Connector Name		FRONT DOOR REQUEST SWITCH LH
Connector Color GRAY	ilor GR/	٨٨
H.S.		\alpha
Terminal No. Wire	Color of Wire	Signal Name
<b>-</b> -	В	1
24	9	•

	OUTSIDE A LH			Signal Name	ı	1
UIS	FRONT OUTSIDE ANTENNA LH	GRAY			- M	ا -
	Name	Color		<u>§</u>		
	Connector Name	Connector Color GRAY	斯利 H.S.	Terminal No. Wire	Ψ-	2

Connector No	D116	4
Connector Name	e	FRONT DOOR REQUEST
Connector Color		ICH HH
南 H.S.		<u></u>
Terminal No. Wire	Color of Wire	Signal Name
-	ω	Lane
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ı,	FRONT OUTSIDE ANTENNA RH	١٨		Signal Name	ı	ŧ
D115		lor GRAY	2	Color of Wire	>	۵
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	,-	2

WIRE 7 8 15 16 15 16 15 16 16 17 17 17 18 17 17 17 17 17 17 17 17 17 17 17 17 17		······	,	,			,		<b></b>	
102 HTE TO 11 12 15 6 17 13 14 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	32	WIRE TO WIRE	ILE		2 9	13 14 15	Signal Name		san .	
D102   HPE   Hor   WHIT		Ime WII	flor WF		က	10 11	Color of Wire	>	۵.	æ
al No.	Connector No	Connector Na	Connector Co	4	SH		Terminal No.		2	6

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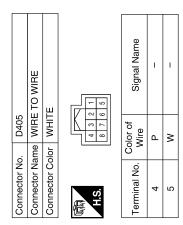
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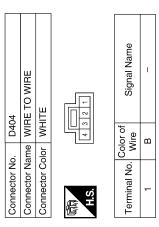
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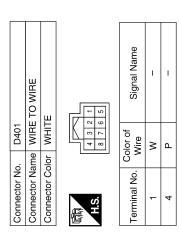
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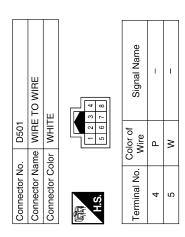
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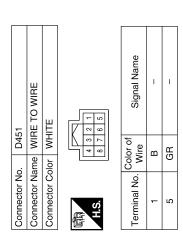
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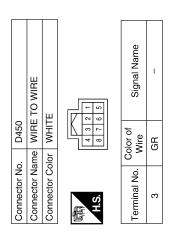












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Connector No.	. D511	Ξ
Connector Name		BACK DOOR OPENER SWITCH (WITH INTELLIGENT KEY SYSTEM)
Connector Color		BROWN
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nal No.	Terminal No. Wire	Signal Name
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2	മ	ı

	TO WIRE		[4]	Signal Name	ţ
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Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	原为 H.S.	Terminal No. Wire	-

Connector No.	D502	
Connector Name		BACK DOOR LATCH
Connector Color	olor WHITE	Ш
原 H.S.	4	<u></u>
Terminal No.	Color of Wire	Signal Name
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Connector No.	o. D552	52
Connector Name		BACK DOOR REQUEST SWITCH
Connector Color	olor GRAY	AY
S.H		2
Terminal No.	Color of Wire	Signal Name
	GR	1
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Connector No.	. D550	
Connector Name	3	WIRE TO WIRE
Connector Color	for WHITE	m
原 H.S.	2 9	8 7 7 8
Terminal No.	Color of Wire	Signal Name
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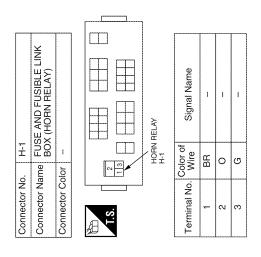
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Fail Safe

#### Fail-safe operation

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

#### INTELLIGENT KEY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# SYMPTOM DIAGNOSIS

# INTELLIGENT KEY SYSTEM SYMPTOMS

Symptom Table

# ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-7. "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)

- "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
	Check Intelligent Key function and battery inspection.	<u>DLK-101</u>
	2. Check Intelligent Key unit power supply and ground circuit.	DLK-53
All doors and ignition switch do not respond to Intelligent Key comand.	Check remote keyless entry receiver.	DLK-98
	Check BCM power supply and ground circuit.	DLK-53
	5. Replace Intelligent Key unit.	DLK-101

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#### DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# DOOR LOCK FUNCTION SYMPTOMS DOOR LOCK AND UNLOCK SWITCH

# DOOR LOCK AND UNLOCK SWITCH: Symptom Table

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#### DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to <u>DLK-7, "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)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- · Ignition switch is not depressed.
- All doors are closed.

Symptom		Diagnosis/service procedure	Reference page
		Check BCM Power supply and ground circuit.	BCS-34
Power door lock does not operate with door lock	2.	Check door lock and unlock switch.	<u>DLK-60</u>
and unlock switch.	3.	Check door lock actuator (driver side)	<u>DLK-76</u>
	4.	Check Intermittent Incident.	<u>GI-37</u>
Power door lock does not operate with door key	1.	Check key cylinder switch.	<u>DLK-67</u>
cylinder operation. (Power door lock operate properly with door lock and unlock switch.)	2.	Replace power window main switch.	PWC-95
	1a.	Check driver side door lock actuator.	DLK-76
	1b.	Check passenger side door lock actuator.	<u>DLK-77</u>
	1c.	Check rear LH side door lock actuator.	DLK-78
Specific door lock actuator does not operate.	1d.	Check rear RH side door lock actuator.	DLK-80
	1e.	Check back door lock actuator.	<u>DLK-81</u>
	1f.	Check glass hatch lock actuator.	DLK-83
	2.	Check Intermittent Incident.	<u>GI-37</u>
Back door does not operate using back door open-	1.	Check back door opener switch.	DLK-65
er switch (door locks are open).		Check back door lock actuator.	<u>DLK-81</u>
Glass hatch does not open using glass hatch ajar switch (door locks are open).		Check glass hatch ajar switch.	DLK-58
		Check glass hatch lock actuator.	DLK-83
		Door switch check.	<u>DLK-55</u>
Door lock/unlock do not operate by request switch.	2.	Ignition knob switch check.	DLK-111
	3.	Replace Intelligent Key unit.	SEC-118
	1.	Front door request switch LH check.	DLK-71
Door lock/unlock does not operate by request switch (LH side).	2.	Front outside antenna LH check.	DLK-92
	3.	Replace Intelligent Key unit.	SEC-118
5	1.	Front door request switch RH check.	DLK-71
Door lock/unlock does not operate by request switch (RH side).	2.	Front outside antenna RH check.	DLK-92
(/	3.	Replace Intelligent Key unit.	SEC-118
	1.	Back door request switch check.	DLK-73
Door lock/unlock does not operate by request switch (back door).	2.	Rear bumper antenna check.	DLK-92
	3.	Replace Intelligent Key unit.	SEC-118

#### DOOR LOCK FUNCTION SYMPTOMS

#### < SYMPTOM DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

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

# **INTELLIGENT KEY**

# **INTELLIGENT KEY: Symptom Table**

# REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION NOTE:

Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to <u>DLK-7. "Work Flow"</u>.

 Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.

• If the following "symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

- Ignition switch is not depressed.
- · All doors are closed.

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#### [WITH INTELLIGENT KEY SYSTEM]

Symptom		Diagnosis/service procedure	Reference page
All of the remote keyless entry functions do not operate.		Intelligent Key battery and function inspection.	DLK-101
		Remote Keyless Entry function check.	DLK-98
		Replace Intelligent Key unit.	SEC-118
Selective unlock function does not operate by Intel-		1. Check "SELECT UNLOCK FUNCTION" setting in "WORK SUPPORT".	
ligent Key remote control button.	2.	Intelligent Key battery inspection.	DLK-101
	3.	Replace Intelligent Key unit.	SEC-118
	1.	Check "AUTO RELOCK TIMER" setting in "WORK SUPPORT".	DLK-41
	2.	Key switch check (BCM).	DLK-110
Auto logic function does not accept manage.	3.	Glass hatch ajar switch check.	DLK-58
Auto lock function does not operate properly.	4.	Ignition knob switch check.	DLK-111
	5.	Door switch check.	DLK-55
	6.	Replace Intelligent Key unit.	SEC-118
	1.	Check "ANTI KEY LOCK IN FUNCTION" setting in "WORK SUPPORT".	<u>DLK-41</u>
	2.	Door switch check.	DLK-55
	3.	Glass hatch ajar switch check.	DLK-58
	4a.	Instrument panel area antenna check.	DLK-47
Key reminder function does not operate properly.	4b.	Center console area antenna check.	DLK-49
	4c.	Luggage area antenna check.	DLK-51
	5.	Front door lock actuator LH (door unlock sensor) check.	DLK-69
	6.	Intelligent Key battery inspection.	DLK-101
	7.	Replace Intelligent Key unit.	SEC-118
	1.	Check "PANIC ALARM DELAY" setting in "WORK SUPPORT".	DLK-41
	2.	Theft warning operation check.	SEC-19
Pania alarm function does not energic promotion	3.	Intelligent Key battery inspection.	DLK-101
Panic alarm function does not operate properly.	4.	Key switch check (BCM).	DLK-110
	5.	Ignition knob switch check.	DLK-111
	6.	Replace Intelligent Key unit.	SEC-118
Dower window down function does not encerta	1.	Check "PW DOWN SET" setting in "WORK SUPPORT".	DLK-41
Power window down function does not operate.	2.	Intelligent Key battery inspection.	DLK-101

# KEY WARNING LAMP (GREEN) ILLUMINATES **NOTE**:

- Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to <u>DLK-</u>7, "Work Flow".
- Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnoses/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

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

#### DOOR LOCK FUNCTION SYMPTOMS

#### < SYMPTOM DIAGNOSIS >

#### [WITH INTELLIGENT KEY SYSTEM]

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

#### KEY WARNING LAMP (RED) ILLUMINATES

#### NOTE:

- Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to <u>DLK-</u>7, "Work Flow".
- Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnoses/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

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

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

#### KEY WARNING LAMP DOES NOT ILLUMINATE

#### NOTE:

- Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to <u>DLK-7, "Work Flow".</u>
- Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnoses/service procedure" column in this order.
- Check if ignition switch turns using mechanical key. If it turns, check if "ENGINE START BY I-KEY" in "WORK SUPPORT" mode is ON.

Conditions of Vehicle (Operating Conditions)

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

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

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#### WARNING FUNCTION SYMPTOMS

[WITH INTELLIGENT KEY SYSTEM]

# WARNING FUNCTION SYMPTOMS

Symptom Table

#### WARNING FUNCTION MALFUNCTION

#### NOTE

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

#### **Conditions of Vehicle (Operating Conditions)**

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

Symptom		Diagnosis/service procedure	Reference page
		Check ignition knob switch.	<u>DLK-111</u>
	For internal	2. Check door switch.	DLK-55
	For Internal	Check warning chime function.	DLK-106
OFF position warn-		Check Intermittent Incident.	<u>GI-37</u>
ing does not oper- ate.		Check ignition knob switch.	<u>DLK-111</u>
	For total	Check door switch.	DLK-55
For external	Check Intelligent Key warning buzzer.	<u>DLK-87</u>	
	Check Intermittent Incident.	<u>GI-37</u>	
		Check Park position switch.	DLK-96
		Check door switch.	DLK-55
D position warning d	loos not aparata	Check Intelligent Key warning buzzer.	DLK-87
P position warning d	loes not operate.	Check warning chime function.	<u>DLK-106</u>
		Check combination meter display function.	<u>DLK-105</u>
		Check Intermittent Incident.	<u>GI-37</u>
		Check ignition knob switch.	<u>DLK-111</u>
ACC warning doos r	not operate	Check warning chime function.	DLK-106
ACC warning does not operate		Check combination meter display function.	DLK-105
		Check Intermittent Incident.	<u>GI-37</u>

# **WARNING FUNCTION SYMPTOMS**

# [WITH INTELLIGENT KEY SYSTEM]

Symptom			Diagnosis/service procedure					
		1.	Check door switch.		DLK-55			
				Instrument panel area	<b>DLK-47</b>			
		2.	Check inside key antennas	Center console area	DLK-49			
				Luggage area	DLK-51			
	Door open to close	3.	Check Intelligent Key warning buzzer.		DLK-87			
		4.	DLK-106					
		5.	Check ignition knob switch.		DLK-111			
		6.	Check combination meter display functio	DLK-105				
		7.	Check Intermittent Incident.		<u>GI-37</u>			
		1.	Check ignition knob switch.		DLK-111			
				Instrument panel area	<u>DLK-47</u>			
	Duch button igni	2.	Check inside key antennas	Center console area	DLK-49			
	Push-button igni- tion switch opera-			Luggage area	DLK-51			
	tion	3.	Check warning chime function.	+	DLK-106			
		4.	Check combination meter display functio	n.	DLK-105			
ake away warning bes not operate.		5.	Check Intermittent Incident.		<u>GI-37</u>			
ood not operate.		Check ignition knob switch.		DLK-111				
				Instrument panel area	DLK-47			
		2.	Check inside key antennas	Center console area	DLK-49			
	Door is open		·	Luggage area	DLK-51			
	3.	Check combination meter display function	n.	DLK-105				
		4.	Check Intermittent Incident.		<u>GI-37</u>			
		1.	Check "TAKE OUT FROM WIN WARN" s	DLK-41				
				Instrument panel area	DLK-47			
		2.	Check inside key antennas	Center console area	DLK-49			
	Take away through			Luggage area	DLK-51			
	window	3.	Check warning chime function.		DLK-106			
		4.	Check ignition knob switch.		DLK-111			
		5.	Check combination meter display function	n.	DLK-105			
		6.	Check Intermittent Incident.		<u>GI-37</u>			
	1	1.	Check door switch.		DLK-55			
		2.	Check warning chime function.		DLK-106			
(ey warning chime	does not operate.	3.	DLK-111					
-	·	4.	DLK-105					
		5.	<u>GI-37</u>					
		1.	Check Intermittent Incident.  Check door switch.		DLK-55			
		2.	Check ignition knob switch.		DLK-111			
		3.	Check Intelligent Key warning buzzer.		DLK-87			
	warning chime does		5	Instrument panel area	DLK-47			
ot operate.				Center console area	DLK-49			
			225	Luggage area	DLK-51			
		5.	<u>GI-37</u>					

**DLK-175** Revision: July 2009 2010 Pathfinder

#### **KEY REMINDER FUNCTION SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# **KEY REMINDER FUNCTION SYMPTOMS**

Symptom Table

#### KEY REMINDER FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to DLK-7, "Work Flow".
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- · "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK FUNCTION" is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- · All doors are closed.
- · Ignition switch is not depressed.

Symptom		Diagnosis/service p	Reference page	
		Check "ANTI KEY LOCK IN FUNCTI" PORT".	DLK-41	
Key reminder function does not operate.	2.	Check door switch.		DLK-55
	3.	Check inside key antennas	Instrument panel area	DLK-47
			Center console area	DLK-49
			Luggage area	DLK-51
	4.	Check unlock sensor.	DLK-69	
	5.	Check Intelligent Key battery inspecti	DLK-101	
	6.	Check Intermittent Incident.		<u>GI-37</u>

# HAZARD FUNCTION

Symptom Table

#### HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to DLK-7, "Work Flow".
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

- "LOCK/UNLOCK BY I-KEY" is ON when setting on CONSULT-III.
- "ANSWER BACK FUNCTION" is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- · All doors are closed.
- · Ignition switch is not depressed.

Symptom		Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request	1.	Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	<u>DLK-41</u>
switch. (Buzzer reminder operate.)	2.	Check hazard function.	DLK-107
(Suzzoi rommoor oporator)	3.	Check Intermittent incident.	<u>GI-37</u>
Hazard reminder does not operate by Intelligent Key.	1.	Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	DLK-41
(Buzzer reminder operate.)	2.	Check hazard function.	DLK-107
	3.	Check Intelligent Key battery inspection.	DLK-101
Buzzer reminder does not operate by request switch. (Hazard reminder operate.)	1.	Check "ANS BACK I-KEY LOCK" or "ANS BACK I-KEY UNLOCK" setting in "WORK SUPPORT".	DLK-41
	2.	Check Intelligent Key warning buzzer.	<u>DLK-87</u>
	3.	Check Intermittent incident.	<u>GI-37</u>

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# HORN FUNCTION

Symptom Table

# HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

- Before performing the diagnosis in the following table, check "Work flow". Refer to DLK-7, "Work Flow".
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

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

Symptom		Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch.		Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	DLK-41
(Horn reminder operate.)	2.	Check hazard function.	DLK-107
	3.	Check Intermittent Incident.	<u>GI-37</u>
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1.	Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	DLK-41
	2.	Check hazard function.	DLK-107
	3.	Check Intelligent Key battery inspection.	DLK-101
Horn reminder does not operate by request switch.		Check "ANSWER BACK WITH I-KEY LOCK" or "ANSWER BACK WITH I-KEY UNLOCK" setting in "WORK SUPPORT".	DLK-41
(Hazard reminder operate.)	2.	Check Intelligent Key warning buzzer.	DLK-87
	3.	Check Intermittent Incident.	<u>GI-37</u>
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1.	Check "HORN WITH KEYLESS LOCK" setting in "WORK SUPPORT".	DLK-41
	2.	Check horn function.	DLK-103
		Check Intermittent Incident.	<u>GI-37</u>

# **HOMELINK UNIVERSAL TRANSCEIVER**

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

# HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

#### HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

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

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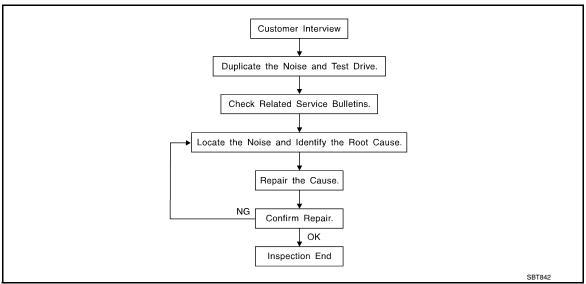
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# SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



#### **CUSTOMER INTERVIEW**

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to <a href="DLK-184">DLK-184</a>, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

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

#### DUPLICATE THE NOISE AND TEST DRIVE

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES **[WITH INTELLIGENT KEY SYSTEM]** < 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: Α 1) Close a door. 2) Tap or push/pull around the area where the noise appears to be coming from. 3) Rev the engine. В 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 D 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. Е 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 tem- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise. placing a piece of paper between components that you suspect are causing the noise. · looking for loose components and contact marks. Refer to <u>DLK-182</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: DLK - 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. L **CAUTION:** Do not use excessive force as many components are constructed of plastic and may be damaged. Always check with the Parts Department for the latest parts information. The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed. URETHANE PADS [1.5 mm (0.059 in) thick] N Insulates connectors, harness, etc. 76268-9E005:  $100 \times 135$  mm  $(3.94 \times 5.31 \text{ in})/76884-71L01$ :  $60 \times 85$  mm  $(2.36 \times 3.35 \text{ in})/76884-71L01$ 71L02:  $15 \times 25 \text{ mm} (0.59 \times 0.98 \text{ in})$ 

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,  $50 \times 50$  mm (1.97  $\times$  1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30  $\times$  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

**DLK-181** Revision: July 2009 2010 Pathfinder

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

SILICONE GREASE

Used in place of UHMW tape that will be visible or not fit. Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

**DUCT TAPE** 

Use to eliminate movement.

### CONFIRM THE REPAIR

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

## Inspection Procedure

INFOID:0000000005259997

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

### **INSTRUMENT PANEL**

Most incidents are caused by contact and movement between:

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

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

### **CAUTION:**

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

### CENTER CONSOLE

Components to pay attention to include:

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

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

### DOORS

Pay attention to the:

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

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

### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

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

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

### SUNROOF/HEADLINING

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

- Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- 2. 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.

### SFATS

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.

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Revision: July 2009 DLK-183 2010 Pathfinder

# **Diagnostic Worksheet**

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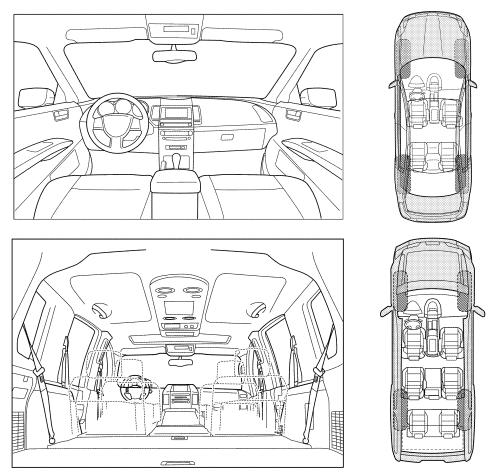
### Dear Customer:

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

### **SQUEAK & RATTLE DIAGNOSTIC WORKSHEET**

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

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



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

# **SQUEAK AND RATTLE TROUBLE DIAGNOSES**

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

	ise occurs:
II. WHEN DOES IT OCCUR? (please che	eck the boxes that apply)
Anytime	☐ After sitting out in the rain
1st time in the morning	☐ When it is raining or wet
Only when it is cold outside	☐ Dry or dusty conditions
Only when it is hot outside	Other:
III. WHEN DRIVING:	IV. WHAT TYPE OF NOISE
☐ Through driveways	☐ Squeak (like tennis shoes on a clean floor)
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 min	utes
TO BE COMPLETED BY DEALERSHIP F	PERSONNEL
est Drive Notes:	
Test Drive Notes:	
Test Drive Notes:	
Test Drive Notes:	YES NO Initials of person
Test Drive Notes:	YES NO Initials of person performing
Vehicle test driven with customer	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired	performing
Vehicle test driven with customer - Noise verified on test drive	performing
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confin	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confin	
Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired - Follow up test drive performed to confin	m repair Customer Name
'ehicle test driven with customer  Noise verified on test drive  Noise source located and repaired  Follow up test drive performed to confin	

# **PRECAUTION**

## **PRECAUTIONS**

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

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

### **WARNING:**

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000005260000

### NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYS-TEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

## **OPERATION PROCEDURE**

1. Connect both battery cables.

### NOTE:

- Supply power using jumper cables if battery is discharged.
- 2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.

## **PRECAUTIONS**

### < PRECAUTION >

## [WITH INTELLIGENT KEY SYSTEM]

5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)

6. Perform a self-diagnosis check of all control units using CONSULT-III.

Precaution for work

- 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**

# Special Service Tool

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

Tool number (Kent-Moore No.) Tool name		Description
(J-39570) Chassis ear	SIIAO993E	Locating the noise
— (J-43980) NISSAN Squeak and Rat- tle Kit	SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	LEL946A	Used to test keyfobs

# **PREPARATION**

# < PREPARATION >

**Commercial Service Tool** 

# [WITH INTELLIGENT KEY SYSTEM]

INFOID:0000000005260003

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

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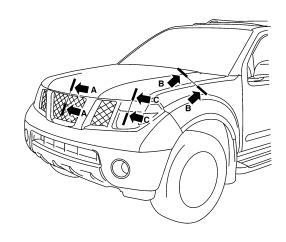
# **ON-VEHICLE REPAIR**

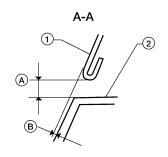
# HOOD

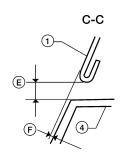
# Fitting Adjustment

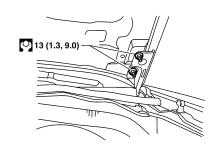
### INFOID:0000000005260004

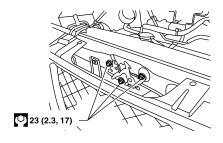
### **SEC.650**

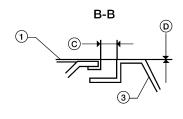












WIIA0774E

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

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

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

## CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

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

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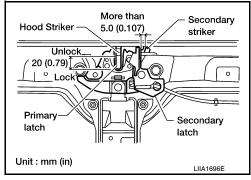
- Tighten the bolts to specification.
- Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
- Install the front grille. Refer to <u>EXT-18</u>, "Removal and Installation".

### HOOD LOCK ADJUSTMENT

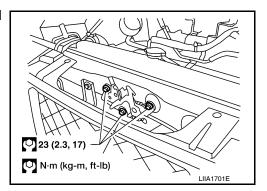
- 1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
- 2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
- 3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

## **CAUTION:**

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

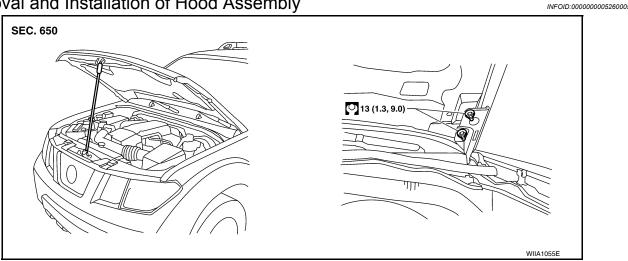


After adjusting hood lock, tighten the lock bolts to the specified torque.



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

# Removal and Installation of Hood Assembly



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

Operate with two workers, because of its heavy weight.

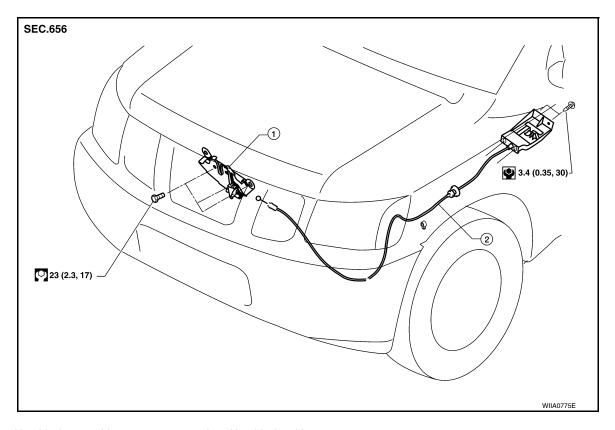
Installation is in the reverse order of removal.

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

**DLK-191** 2010 Pathfinder Revision: July 2009

# Removal and Installation of Hood Lock Control

INFOID:0000000005260006



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

## **REMOVAL**

- 1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
- 2. Remove the front fender protector (LH). Refer to <u>EXT-23</u>, "Removal and Installation of Front Fender Protector".
- 3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
- 4. Remove the bolts, and the hood release handle.
- Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.

## **CAUTION:**

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

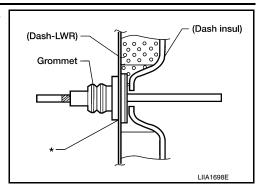
### INSTALLATION

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

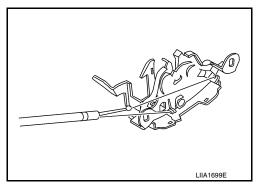
### [WITH INTELLIGENT KEY SYSTEM]

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

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



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



Install the front grille. Refer to <u>EXT-18</u>, "Removal and Installation".

# **Hood Lock Control Inspection**

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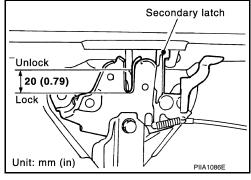
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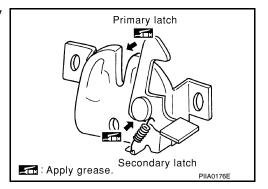
### **CAUTION:**

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

- 1. Remove the front grille. Refer to <a>EXT-18</a>, "Removal and Installation"</a>.
- 2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
- 3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



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



Install the front grille. Refer to <u>EXT-18, "Removal and Installation"</u>.

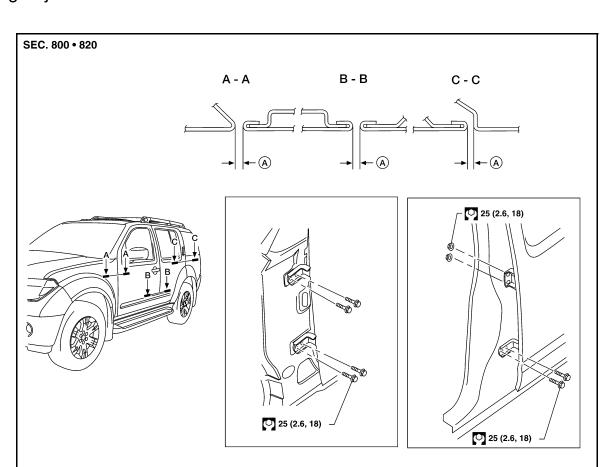
Revision: July 2009 DLK-193 2010 Pathfinder

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## **DOOR**

# Fitting Adjustment



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

## Front door

Longitudinal clearance and surface height adjustment at front end

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

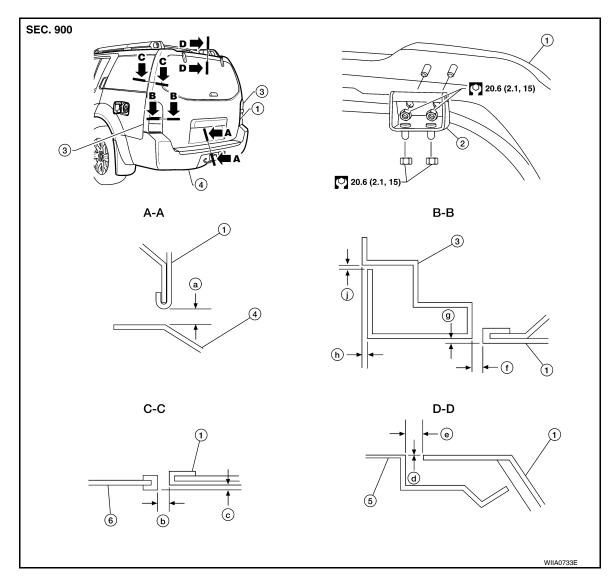
### Rear door

Longitudinal clearance and surface height adjustment at front end

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

### Back door

Longitudinal clearance and surface height adjustment



- 1. Back door assembly
- 4. Rear bumper fascia
- a.  $7.2 \pm 2.0 \text{ mm} (0.28 \pm 0.06 \text{ in})$
- d.  $1.0 \pm 1.5 \text{ mm} (0.04 \pm 0.06 \text{ in})$
- g.  $0.8 \pm 2.0 \text{ mm} (0.03 \pm 0.08 \text{ in})$
- 2. Back door hinge
- 5. Roof
- b.  $6.0 \pm 1.5 \text{ mm} (0.24 \pm 0.06 \text{ in})$
- e.  $8.0 \pm 1.5$  mm  $(0.31 \pm 0.06$  in)
- h.  $0.8 \pm 1.0 \text{ mm} (0.03 \pm 0.04 \text{ in})$
- 3. Tail lamp assembly
- 6. Side window glass
- c. 2.0  $\pm$  2.0 mm ( 0.08  $\pm$  0.08 in)
- f.  $5.3 \pm 2.0 \text{ mm} (0.21 \pm 0.08 \text{ in})$
- j.  $2.0 \pm 1.0 \text{ mm} (0.08 \pm 0.04 \text{ in})$

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

# Striker adjustment

**BODY SIDE DOORS** 

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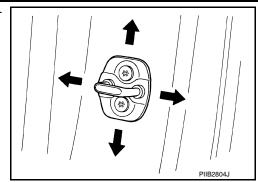
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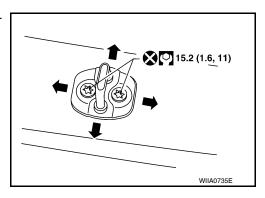
### [WITH INTELLIGENT KEY SYSTEM]

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



### **BACK DOOR**

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



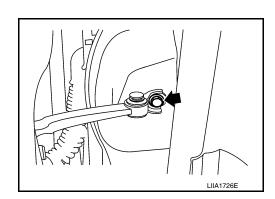
## Removal and Installation

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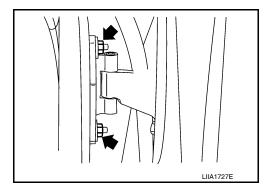
### FRONT DOOR

### **CAUTION:**

- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
- 1. Remove the front door glass and regulator. Refer to GW-15, "Front Door Glass Regulator".
- 2. Remove the door harness.
- 3. Remove the check link bolt from the hinge pillar.

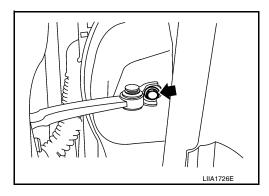


4. Remove the door-side hinge nuts, and the door assembly. Installation is in the reverse order of removal.



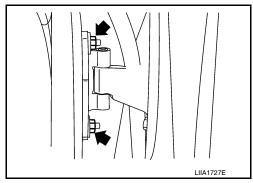
### **REAR DOOR**

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



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

Installation is in the reverse order of removal.



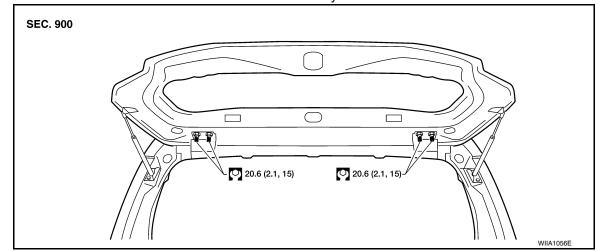
### **BACK DOOR**

- 1. Remove the glass hatch. Refer to GW-24, "Removal and Installation".
- 2. Remove the license lamp finisher. Refer to EXT-21, "Removal and Installation".
- Remove the back door lock assembly. Refer to <u>DLK-203, "Component Structure"</u>.
- 4. Remove the back door wire harness.
- 5. Remove the rear washer nozzle and hose from the back door. Refer to <a href="https://www.83, "Removal and Installation"><u>WW-83, "Removal and Installation"</u></a>

### **CAUTION:**

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

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



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## **DOOR**

[WITH INTELLIGENT KEY SYSTEM]

Installation is in the reverse order of removal.

• Align the back door. Refer to <a href="DLK-194">DLK-194</a>, "Fitting Adjustment".

# FRONT DOOR LOCK

# Component Structure

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

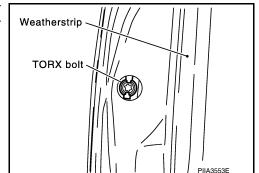
- 3. Door lock assembly
- 6. Inside handle cable
- 9. Door key cylinder
- 12. Outside handle
- ∀ehicle front

## Removal and Installation

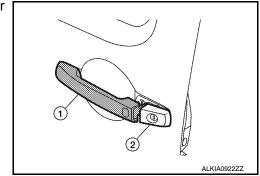
**REMOVAL** 

Remove the front door window regulator. Refer to <u>GW-15, "Front Door Glass Regulator"</u>.

Remove door side grommet, and remove door key cylinder assembly (driver side) or outside handle escutcheon (passenger side) bolts (TORX T30) from grommet hole.



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



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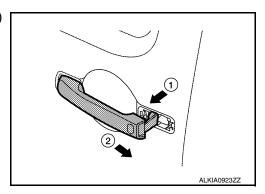
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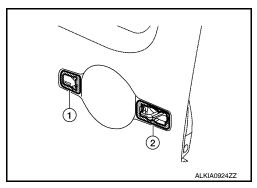
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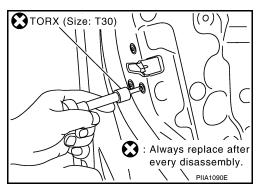
- 4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.
- 5. Disconnect the intelligent key electrical connectors.
- 6. While pulling outside handle (1), slide toward rear of vehicle (2) to remove outside handle.



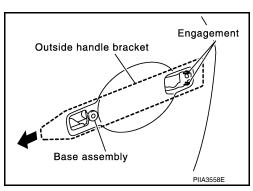
7. Remove the front gasket (1) and rear gasket (2).



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



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



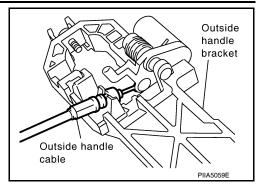
10. Disconnect the door lock actuator electrical connector.

## FRONT DOOR LOCK

## < ON-VEHICLE REPAIR >

## [WITH INTELLIGENT KEY SYSTEM]

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



## **INSTALLATION**

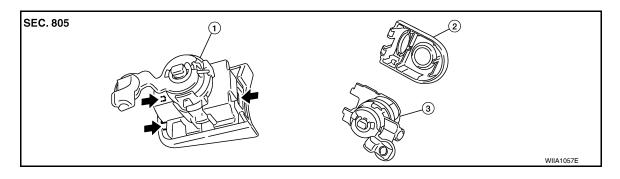
Installation is in the reverse order of removal.

### **CAUTION:**

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

# Disassembly and Assembly

## DOOR KEY CYLINDER ASSEMBLY



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

 $\Leftarrow$  Pawl

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

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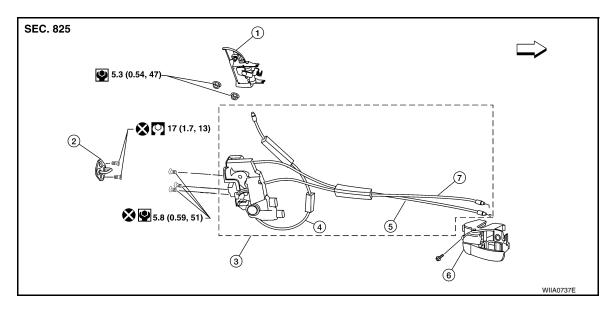
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# **REAR DOOR LOCK**

# Component Structure

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

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

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

## Removal and Installation

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## **REMOVAL**

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

### **INSTALLATION**

Installation is in the reverse order of removal.

# [WITH INTELLIGENT KEY SYSTEM]

# **BACK DOOR LOCK**

# **Component Structure**

SEC. 905 5.8 (0.59, 51) 15.2 (1.6, 11) 5.8 (0.59, 51) AWKIA1438GB

- 1. Glass hatch latch assembly
- 4. Back door latch assembly
- 7. Key button
- ← Front

- 2. Back door control assembly
- 5. Back door release button
- 8. Glass hatch release handle
- 3. Back door striker
- 6. Back door finisher
- 9. Glass hatch release cable

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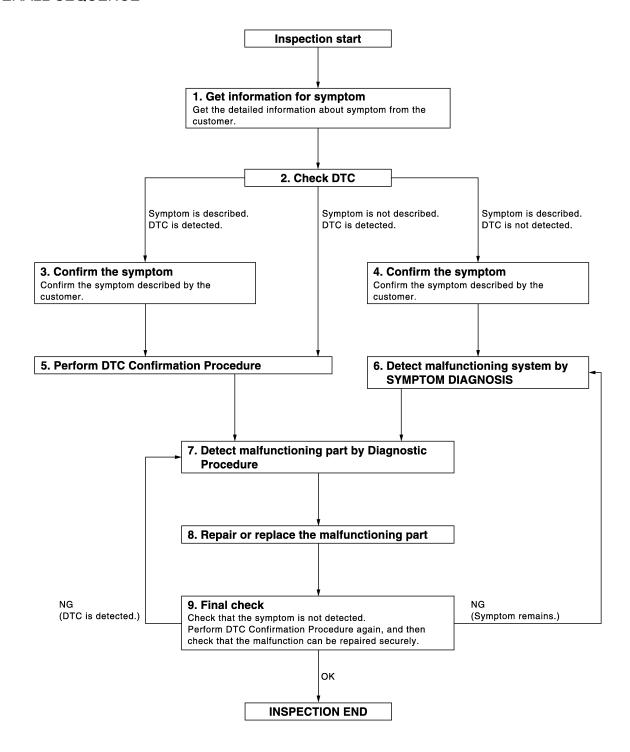
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

**OVERALL SEQUENCE** 



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## DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITHOUT INTELLIGENT KEY SYSTEM]

# $1.\mathsf{GET}$ INFORMATION FOR SYMPTOM

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

>> GO TO 2

## 2.CHECK DTC

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

## Is any symptom described and any DTC detected?

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

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

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

# 3.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

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

>> GO TO 5

## f 4.CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

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

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

>> GO TO 6

# ${f 5}$ PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to DLK-298, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

### NOTE:

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

### Is DTC detected?

YES >> GO TO 7

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

# 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 7

# / .DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

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**DLK-205** Revision: July 2009 2010 Pathfinder

## **DIAGNOSIS AND REPAIR WORKFLOW**

### < BASIC INSPECTION >

## [WITHOUT INTELLIGENT KEY SYSTEM]

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

### <u>Is malfunctioning part detected?</u>

YES >> GO TO 8

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

# 8. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 9

# 9. FINAL CHECK

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

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

### Is the inspection result normal?

NO (DTC is detected) >>GO TO 7

NO (Symptom remains) >>GO TO 6

YES >> Inspection End.

# INSPECTION AND ADJUSTMENT [WITHOUT INTELLIGENT KEY SYSTEM]

< BASIC INSPECTION >

INSPECTION AND ADJUSTMENT
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

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

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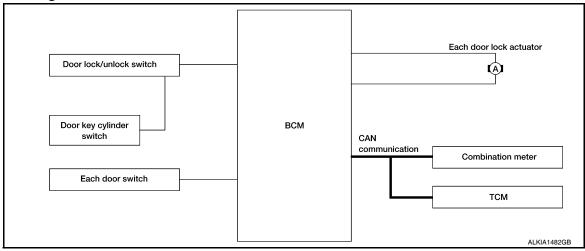
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# **FUNCTION DIAGNOSIS**

# **AUTOMATIC DOOR LOCKS**

System Diagram

INFOID:0000000005260019



# System Description

INFOID:0000000005260020

Input	Single	Function	Actuator
Door lock/unlock switch	Door lock/unlock signal	Door lock function	
Door key cylinder switch	Door lock/utiliock signal	Door lock fullction	
Each door switch	Door open/close signal	Key reminder function Each door lock actua	
Combination meter	Warning buzzer signal	Key reminder function	Each door lock actuator
Valida annul signal		Automatic door lock/unlock	
TCM Shift position signal		function	

### DOOR LOCK FUNCTION

- The door lock and unlock switch (driver side) is built into power window main switch.
- The door lock and unlock switch (passenger side) is on door trim.
- Interlocked with the locking operation of door lock and unlock switch, door lock actuators of all doors are locked.
- Interlocked with the unlocking operation of door lock and unlock switch, door lock actuators of all doors are unlocked.

### Door Key Cylinder

- With the door key inserted in the door key cylinder on driver side, turning it to "LOCK", will lock door lock actuator of all doors.
- With the door key inserted in the door key cylinder on driver side, turning it to "UNLOCK" once unlocks the driver side door lock actuator; turning it to "UNLOCK" again within 5 seconds after the first unlock operation unlocks all of the other doors. (SELECTIVE UNLOCK OPERATION)

Selective unlock operation mode can be changed using "DOOR LOCK-UNLOCK SET" mode in "WORK SUP-PORT". Refer to <a href="https://dock.consult-ill.function">DLK-219</a>, "DOOR LOCK: CONSULT-Ill Function (BCM - DOOR LOCK)".

## AUTOMATIC DOOR LOCKS (LOCK OPERATION)

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

### Vehicle Speed Sensing Auto Door Lock\*1

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

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

## AUTOMATIC DOOR LOCKS

## < FUNCTION DIAGNOSIS >

## [WITHOUT INTELLIGENT KEY SYSTEM]

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

Setting change of Automatic Door Locks (LOCK) Function

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

### (P)With CONSULT-III

The ON/OFF switching of the automatic door locks (LOCK) function and the type selection of the automatic door locks (LOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-219, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

### Without CONSULT- III

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

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

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

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

## AUTOMATIC DOOR LOCKS (UNLOCK OPERATION)

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

### IGN OFF Interlock Door Unlock\*1

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

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

Setting change of Automatic Door Locks (UNLOCK) Function

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

### (P)With CONSULT-III

The ON/OFF switching of the automatic door locks (UNLOCK) function and the type selection of the automatic door locks (UNLOCK) function can be performed at the WORK SUPPORT setting of CONSULT-III. Refer to DLK-219, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

## Without CONSULT- III

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

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

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

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

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

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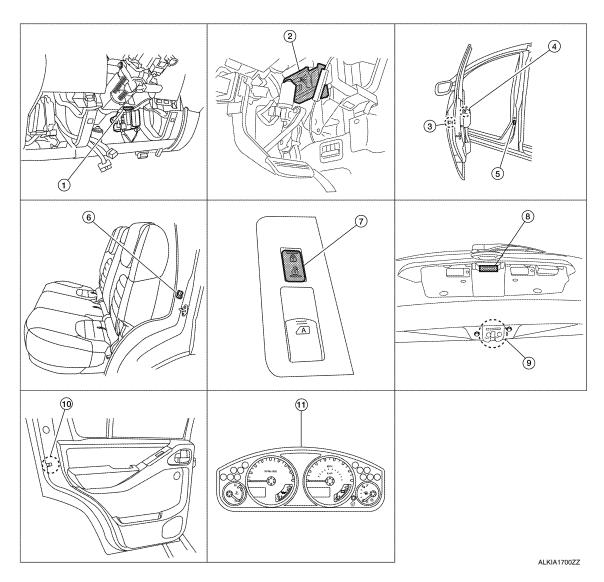
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# Component Parts Location

< FUNCTION DIAGNOSIS >

INFOID:0000000005260021



1. Key switch M27

- 2. BCM M18, M19, M20
- Main power window and door lock/unlock switch D7, D8
- Power window and door lock/unlock switch RH D105
- Rear door lock actuator LH D205 RH D305
- 5. Front door switch LH B8 RH B108
- 8. Back door opener switch D510
- 11. Combination meter M24

- Front door lock assembly LH (key cylinder switch) D14 Front door lock assembly RH (door lock actuator) D119 Front door lock assembly RH (door unlock sensor) D103
- 6. Rear door switch LH B18 RH B116
- 9. Back door latch (door ajar switch) D502

# Component Description

INFOID:0000000005260022

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

# **AUTOMATIC DOOR LOCKS**

## < FUNCTION DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Item	Function	
Door switch	Input door open/close condition to BCM.	
Door key cylinder switch	<ul> <li>Input lock or unlock signal to main power window and door lock/unlock switch.</li> <li>Main power window and door lock/unlock switch transmits door lock/unlock signal to BCM.</li> </ul>	
Combination meter	<ul> <li>Receive buzzer signal from BCM via CAN communication line, and sounds the buzzer.</li> <li>Transmits vehicle speed signal to CAN communication line.</li> </ul>	

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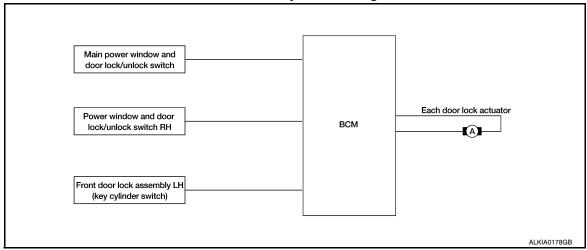
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# DOOR LOCK FUNCTION DOOR LOCK AND UNLOCK SWITCH

## DOOR LOCK AND UNLOCK SWITCH: System Diagram

INFOID:000000005260023



## DOOR LOCK AND UNLOCK SWITCH: System Description

INFOID:0000000005260024

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

 Interlocked with the locking operation of door key cylinder, door lock actuators of all doors are locked, back door opener switch is disabled, and mechanical glass hatch switch is disabled.

## Selective Unlock Operation

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

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

### Key Reminder System

Refer to <u>DLK-256</u>, "<u>Diagnosis Procedure</u>".

# DOOR LOCK AND UNLOCK SWITCH: Component Parts Location

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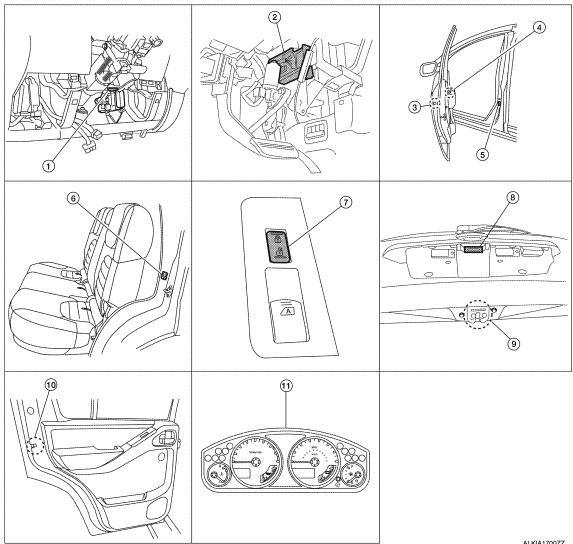
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Key switch M27

- 2. BCM M18, M19, M20
- Front door lock assembly LH (key cylinder switch) D14 Front door lock assembly RH (door lock actuator) D119 Front door lock assembly RH (door unlock sensor) D103

- Main power window and door lock/unlock switch D7, D8
- RH B108 Back door opener switch D510 8.

Front door switch LH B8

Rear door switch LH B18 RH B116

- Power window and door lock/unlock switch RH D105
- Back door latch (door ajar switch) D502

- 10. Rear door lock actuator LH D205 **RH D305**
- Combination meter M24 11.

# DOOR LOCK AND UNLOCK SWITCH: Component Description

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

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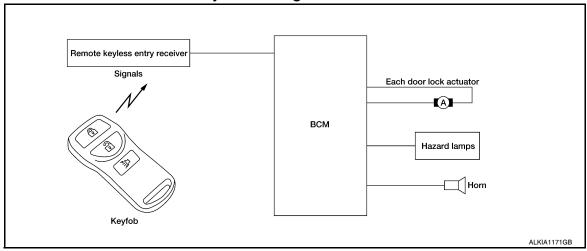
## [WITHOUT INTELLIGENT KEY SYSTEM]

Item Function	
Door lock actuator	Receives lock/unlock signal from BCM and locks/unlocks each door.
Door switch Transmits door open/close condition to BCM.	

## REMOTE KEYLESS ENTRY

# REMOTE KEYLESS ENTRY: System Diagram

INFOID:0000000005260027



# REMOTE KEYLESS ENTRY: System Description

INFOID:0000000005260028

### **OPERATED PROCEDURE**

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

### REMOTE CONTROL ENTRY FUNCTIONS

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

## REMOTE CONTROL ENTRY OPERATION CONDITIONS

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

## DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## **AUTO RELOCK FUNCTION**

**Operation Description** 

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

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

### **ACTIVE CHECK FUNCTION**

### Operation Description

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

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

Operating function of hazard and horn reminder

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

### HAZARD AND HORN REMINDER

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

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

### How to change hazard and horn reminder mode

With CONSULT-III

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

## Without CONSULT-III

Refer to Owner's Manual for instructions.

### INTERIOR LAMP OPERATION

When the following input signals are both supplied:

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

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

### PANIC ALARM OPERATION

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

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

## KEYLESS POWER WINDOW DOWN (OPEN) OPERATION

When keyfob unlock switch is turned ON with ignition switch OFF, and the switch is detected to be ON continuously for more than 3 second, the driver's door and passenger's door power windows are simultaneously opened.

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

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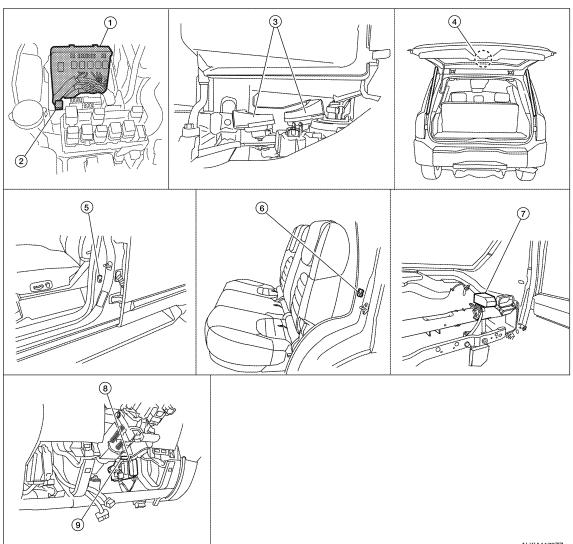
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Revision: July 2009 DLK-215 2010 Pathfinder

# REMOTE KEYLESS ENTRY: Component Parts Location

INFOID:0000000005260029



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

# REMOTE KEYLESS ENTRY: Component Description

INFOID:0000000005260030

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

# **HOMELINK UNIVERSAL TRANSCEIVER**

< FUNCTION DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

# HOMELINK UNIVERSAL TRANSCEIVER

# **Component Description**

INFOID:0000000005260031

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

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**COMMON ITEM** 

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

INFOID:0000000005483719

## APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-54, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	<ul> <li>Enables to read and save the vehicle specification.</li> <li>Enables to write the vehicle specification when replacing BCM.</li> </ul>

## SYSTEM APPLICATION

BCM can perform the following functions for each system.

## NOTE:

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

System	Sub system selection item	Diagnosis mode				
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST		
BCM	BCM	×				
Door lock	DOOR LOCK	×	×	×		
Rear window defogger	REAR DEFOGGER		×	×		
Warning chime	BUZZER		×	×		
Interior room lamp timer	INT LAMP	×	×	×		
Remote keyless entry system <sup>1</sup>	MULTI REMOTE ENT	×	×	×		
Exterior lamp	HEAD LAMP	×	×	×		
Wiper and washer	WIPER	×	×	×		
Turn signal and hazard warning lamps	FLASHER		×	×		
Air conditioner	AIR CONDITONER		×			
Intelligent Key system <sup>2</sup>	INTELLIGENT KEY		×			
Combination switch	COMB SW		×			
Immobilizer	IMMU		×	×		
Interior room lamp battery saver	BATTERY SAVER	×	×	×		
Back door open	TRUNK		×	×		
RAP (retained accessory power)	RETAINED PWR	×	×	×		
Signal buffer system	SIGNAL BUFFER		×	×		
TPMS (tire pressure monitoring system)	AIR PRESSURE MONITOR	×	×	×		
Vehicle security system	THEFT ALM	×	×	×		
Panic alarm	PANIC ALARM			×		

<sup>1:</sup> With remote keyless entry system

# DOOR LOCK

<sup>2:</sup> With Intelligent Key

[WITHOUT INTELLIGENT KEY SYSTEM]

# < FUNCTION DIAGNOSIS >

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

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# **WORK SUPPORT**

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

# **DATA MONITOR**

Monitor Item [Unit}	Description
IGN ON SW [ON/OFF]	Indicates condition of ignition switch in ON position
KEY ON SW [ON/OFF]	Indicates condition of key switch
CDL LOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Indicates condition of door lock and unlock switch
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch LH
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch RH
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH
DOOR SW-RL [ON/OFF]	Indicates condition of rear door switch LH
BACK DOOR SW [ON/OFF]	Indicates condition of back door switch
KEY CYL LK-SW [ON/OFF]	Indicates condition of lock signal from door key cylinder switch
KEY CYL UN-SW [ON/OFF]	Indicates condition of unlock signal from door key cylinder switch
KEYLESS LOCK <sup>1</sup> [ON/OFF]	Indicates condition of lock signal from keyfob
KEYLESS UNLOCK <sup>1</sup> [ON/OFF]	Indicates condition of unlock signal from keyfob
I-KEY LOCK <sup>2</sup> [ON/OFF]	Indicates condition of lock signal from Intelligent Key
I-KEY UNLOCK <sup>2</sup> [ON/OFF]	Indicates condition of unlock signal from Intelligent Key

<sup>1:</sup> With remote keyless entry system

## **ACTIVE TEST**

Test Item	Description		
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].		

# **MULTIREMOTE ENT**

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<sup>2:</sup> With Intelligent Key

[WITHOUT INTELLIGENT KEY SYSTEM]

# < FUNCTION DIAGNOSIS >

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

INFOID:0000000005483721

# **WORK SUPPORT**

Test Iter	m						Descrip	otion				
		Kon	Koufah ID aada aan ha ragistar				Descrip	Juon				
REMO CONT ID R		,	Keyfob ID code can be register  Keyfob ID code can be erased.									
	REMO CONT ID ERASUR											
REMO CONT ID C				cked whet								
HORN CHIRP SET	•		Horn chirp function mode can be changed in this mode. The function mode will be "CHANG SETT" on CONSULT-III screen is touched.					oe change	ed when			
HAZARD LAMP SE	T			function m					e function	n mode wil	l be chan	ged whe
MULTI ANSWER B	ACK SET			orn remin G SETT" (					e. The rei	minder mo	de will be	change
AUTO LOCK SET				unction m					e function	mode wil	l be chan	ged whe
PANIC ALRM SET				peration n		-			operatio	n mode wi	ll be chan	iged whe
PW DOWN SET			Keyless power window down (open) operation mode can be changed in this mode. The oper mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.					peration				
Hazard and horn remi	nder mode	e										
	MODE (C mod		I M()I		DE 3 MODE 4		МО	MODE 5 MO		DE 6		
Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	_	_	_	Twice	Once	Twice	_	_	Once
Horn sound	Once	_	_	_	_	_	_	_	Once	_	Once	_
Auto locking function i	node											l'
			N	ODE 1			MODE	2		MC	MODE 3	
Auto locking fun	ction		5	minutes		Nothing 1 minute						
Panic alarm operation	mode								I .			
·		MODE 1 MODE 2			MC	MODE 3						
Keyfob operation	n	0.5 seconds			Nothing				1.5 seconds			
Back door open opera	ition mode	)							· ·			
· · ·			N	1ODE 1		MODE 2				MODE 3		
Keyfob operation	Keyfob operation 0.5 seconds				Nothing 0.5 seconds							
Keyless power window	v down on	eration m	ode									
•	- 1			MODE 1			MOD	E 2		М	ODE 3	

# **DATA MONITOR**

Keyfob operation

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.

Nothing

5 seconds

3 seconds

# < FUNCTION DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Monitored Item	Description
IGN ON SW	Indicates [ON/OFF] condition of ignition switch in ON position.
KEYLESS PANIC	Indicates [ON/OFF] condition of panic signal from keyfob.
KEYLESS UNLOCK	Indicates [ON/OFF] condition of unlock signal from keyfob.
KEYLESS LOCK	Indicates [ON/OFF] condition of lock signal from keyfob.
KEY CYL LK-SW	Indicates [ON/OFF] condition of lock signal from door key cylinder switch.
KEY CYL UN-SW	Indicates [ON/OFF] condition of unlock signal from door key cylinder switch.
CDL UNLOCK SW	Indicates [ON/OFF] condition of unlock signal from lock/unlock switch.
CDL LOCK SW	Indicates [ON/OFF] condition of lock signal from lock/unlock switch.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
RKE LCK-UNLCK	Indicates [ON/OFF] condition of lock/unlock signal at the same time from keyfob.
RKE KEEP UNLK	Indicates [ON/OFF] condition of unlock signal from keyfob.

# **ACTIVE TEST**

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

# TRUNK

# TRUNK: CONSULT-III Function (BCM - TRUNK)

INFOID:0000000005483722

# **DATA MONITOR**

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

# **ACTIVE TEST**

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

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# **U1000 CAN COMM CIRCUIT**

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# COMPONENT DIAGNOSIS

# U1000 CAN COMM CIRCUIT

Description INFOID:000000005260036

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Modern vehicle is equipped with many electronic control unit, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H-line, CAN L-line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only. CAN Communication Signal Chart. Refer to LAN-53, "CAN Communication Signal Chart".

DTC Logic

## DTC DETECTION LOGIC

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

# Diagnosis Procedure

INFOID:0000000005260038

# 1.PERFORM SELF DIAGNOSTIC

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

# Is "CAN COMM CIRCUIT" displayed?

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

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

# **U1010 CONTROL UNIT (CAN)**

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# U1010 CONTROL UNIT (CAN)

**DTC Logic** INFOID:0000000005260039

# DTC DETECTION LOGIC

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

# Diagnosis Procedure

INFOID:0000000005260040

# 1.REPLACE BCM

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

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>> Replace BCM.

# Special Repair Requirement

INFOID:0000000005260041

# 1. REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to BCS-59, "Removal and Installation" for BCM configura-

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

>> Work End.

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**DLK-223** Revision: July 2009 2010 Pathfinder DLK

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# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000005485386

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

# 1. CHECK FUSES AND FUSIBLE LINK

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

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

## Is the fuse blown?

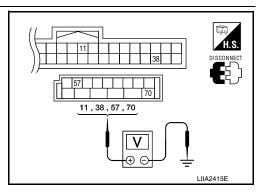
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminals		Power	Condition	Voltage (V) (Ap-
Connector	(+)	(-)	source	Condition	prox.)
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage
10120	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage



## Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

# **POWER SUPPLY AND GROUND CIRCUIT**

# < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

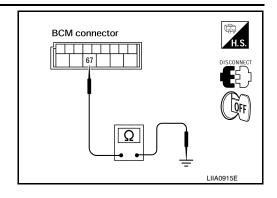
Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector Terminal		Ground	Continuity
M20	67		Yes

# Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



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# **DOOR SWITCH**

< COMPONENT DIAGNOSIS >

## [WITHOUT INTELLIGENT KEY SYSTEM]

# **DOOR SWITCH**

Description INFOID:000000005260043

Detects door open/close condition.

Component Function Check

INFOID:0000000005260044

# 1. CHECK FUNCTION

# (II) With CONSULT-III

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

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

## Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to <u>DLK-226, "Diagnosis Procedure"</u>.

# Diagnosis Procedure

INFOID:0000000005260045

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —</u>".

# 1. CHECK DOOR SWITCHES INPUT SIGNAL

## (I)With CONSULT-III

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

• When doors are open:

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

· When doors are closed:

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

## Without CONSULT-III

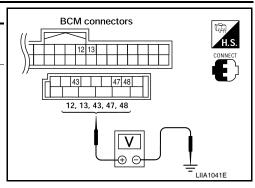
Check voltage between BCM connector M18 or M19 terminals 12, 13, 43, 47, 48 and ground.

# **DOOR SWITCH**

## < COMPONENT DIAGNOSIS >

## [WITHOUT INTELLIGENT KEY SYSTEM]

Connec-	Item 1		inals	Condition	Voltage (V)	
tor	item	(+)	(-)	Condition	(Approx.)	
	Back door switch/latch	43	Ground			
M19	Front door switch LH	47		Open ↓ Closed	0 ↓ Battery voltage	
	Rear door switch LH	48				
M18	Front door switch RH	12		213000		
IVI I O	Rear door switch RH	13				



## Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2

# 2. CHECK DOOR SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect door switch and BCM.
- Check continuity between BCM connector (A) M18, M19 terminals 12, 13, 43, 47, 48 and door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D502 terminal 3.

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

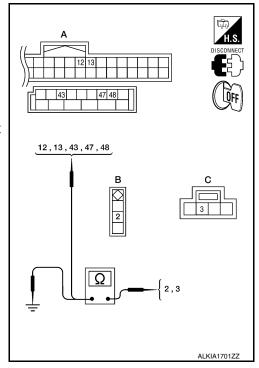
Check continuity between door switch connector (B) B8 (Front LH), B108 (Front RH), B18 (Rear LH), B116 (Rear RH) terminal 2 or back door latch connector (C) D502 terminal 7 and ground.

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

# Is the inspection result normal?

YES >> (Front and rear doors) GO TO 3.

YES >> (Back door) GO TO 4. NO >> Repair or replace harness.



# 3. CHECK DOOR SWITCH

· Check continuity between door switch terminals.

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# **DOOR SWITCH**

# < COMPONENT DIAGNOSIS >

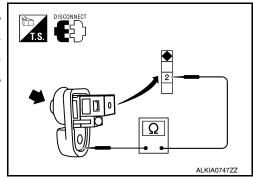
# [WITHOUT INTELLIGENT KEY SYSTEM]

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

# Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> Replace door switch.



# 4. CHECK BACK DOOR LATCH CIRCUIT

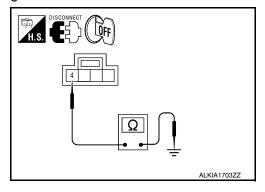
Check continuity between back door latch connector terminal 4 and ground.

Connector	Terminals	Continuity
Back door latch	4 – Ground	Yes

# Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.



# 5. CHECK BACK DOOR LATCH SWITCH

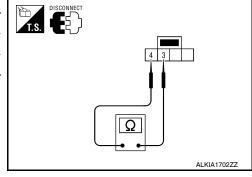
Check continuity between back door latch switch terminals.

Switch	Terminals	Condition	Continuity
Back door latch	3 _ 1	Open	Yes
Back door later	3 – 4	Closed	No

# Is the inspection result normal?

YES >> Back door latch switch circuit is OK.

NO >> Replace back door latch.



# **GLASS HATCH AJAR SWITCH**

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# **GLASS HATCH AJAR SWITCH**

Description INFOID:000000005260046

Detects glass hatch open/close condition.

# Component Function Check

# 1. CHECK FUNCTION

# With CONSULT-III

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

Monitor item	Condition
GLASS HATCH SW	$CLOSE \to OPEN : \; OFF \to ON$

# Is the inspection result normal?

YES >> Glass hatch switch is OK.

NO >> Refer to <u>DLK-229</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —".</u>

# 1. CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

# With CONSULT-III

Check glass hatch ajar switch "GLASS HATCH SW" in DATA MONITOR mode with CONSULT-III.

· When glass hatch is open:

# GLASS HATCH SW :ON

· When glass hatch is closed:

## GLASS HATCH SW : OFF

# Without CONSULT-III

Check voltage between BCM connector M19 terminals 42 and ground.

Connector	Item	Terminals		Condition	Voltage (V)
Connector	item	(+)	(-)	Condition	(Approx.)
M19	ВСМ	42	Ground	Open ↓	0 ↓
				Closed	Battery voltage

## Is the inspection result normal?

YES >> Glass hatch ajar switch circuit is OK.

NO >> GO TO 2

# 2.CHECK GLASS HATCH AJAR SWITCH CIRCUIT

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

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# **GLASS HATCH AJAR SWITCH**

# < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

# 42 - 1 :Continuity should exist

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

# 42 - Ground :Continuity should not exist

## Is the inspection result normal?

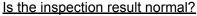
YES >> GO TO 3

NO >> Repair or replace harness.

# 3.check glass hatch ajar switch

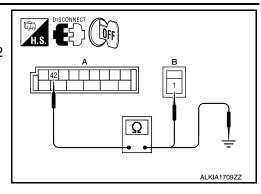
Check continuity between glass hatch ajar switch connector terminal 1 and ground.

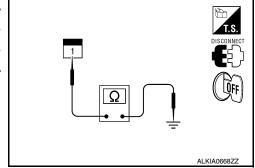
	Terminals	Condition	Continuity
Glass hatch ajar	1 – Ground		Yes
switch	i – Giouna	Closed	No



YES >> Refer to GI-37, "Intermittent Incident".

NO >> Replace glass hatch ajar switch.





< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# DOOR LOCK AND UNLOCK SWITCH

**DRIVER SIDE** 

DRIVER SIDE: Description

INFOID:0000000005260049

Transmits door lock/unlock operation to BCM.

DRIVER SIDE: Component Function Check

INFOID:0000000005260050

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# 1. CHECK FUNCTION

# (P)With CONSULT-III

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

Monitor item		Condition	
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
ODE DIVEOUR SVV	UNLOCK	: ON	

## Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

>> refer to DLK-231, "DRIVER SIDE : Diagnosis Procedure". NO

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000005260051

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-<u>TEM —".</u>

# 1. CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

# (I)With CONSULT-III

Without CONSULT-III

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

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

**CDL LOCK SW** :ON

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

**CDL UNLOCK SW** :ON

Remove key from ignition key cylinder.

2. Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when the main power window and door lock/unlock switch is turned to LOCK or UNLOCK.

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

**DLK-231** Revision: July 2009 2010 Pathfinder DLK

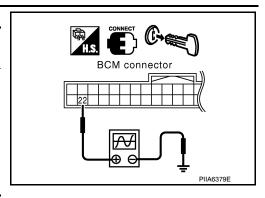
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## < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Connector	Terr	minal	Voltage (V)	
Connector	(+)	(-)	voltage (v)	
M18	22	Ground	(V) 15 10 5 0	



## Is the inspection result normal?

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

NO >> GO TO 2

# 2.CHECK BCM OUTPUT SIGNAL

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

## The front windows should be lowered.

## Is the inspection result normal?

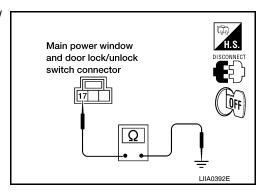
YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-59, "Removal and Installation".

# 3. CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

- 1. Disconnect main power window and door lock/unlock switch.
- 2. Check continuity between main power window and door lock/ unlock switch connector D8 terminal 17 and ground.

17 - Ground : Continuity should exist.



## Is the inspection result normal?

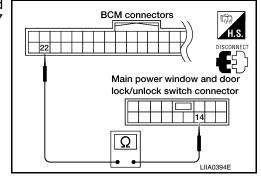
YES >> GO TO 4

NO >> Repair or replace harness.

# 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

22 - 14 : Continuity should exist.



## < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Check continuity between BCM connector M18 terminal 22 and ground.

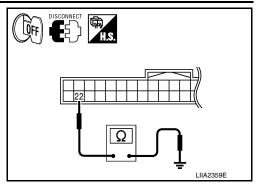
## 22 - Ground

: Continuity should not exist.

## Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.



PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000005260052

Transmits door lock/unlock operation to BCM.

PASSENGER SIDE : Component Function Check

INFOID:0000000005260053

# 1. CHECK FUNCTION

(P)With CONSULT-III

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

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

## Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

>> Refer to DLK-233, "PASSENGER SIDE : Diagnosis Procedure". NO

# PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000005260054

Regarding Wiring Diagram information, refer to DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-<u>TEM —".</u>

# ${f 1}$ .CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

( With CONSULT-III

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

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

:ON CDL LOCK SW

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

#### :ON **CDL UNLOCK SW**

# Without CONSULT-III

Revision: July 2009

Remove key from ignition key cylinder.

Using an oscilloscope, check the signal between BCM connector M18 terminal 22 and ground when power window and door lock/unlock switch RH is turned to LOCK or UNLOCK.

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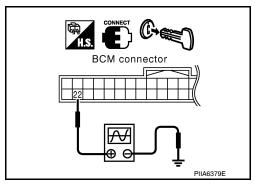
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## [WITHOUT INTELLIGENT KEY SYSTEM]

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

Connector	Terr	minal	Voltage (V)	
Connector	(+)	(-)		
M18	22	Ground	(V) 15 10 5 0 10 ms	



## Is the inspection normal?

YES >> Power window and door lock/unlock switch RH circuit is OK.

NO >> GO TO 2

# 2.CHECK BCM OUTPUT SIGNAL

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

## The front windows should be lowered.

## Is the inspection normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-59, "Removal and Installation".

# 3.check door lock/unlock switch ground harness

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 terminal 11 and ground

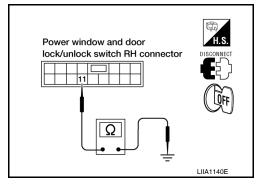
## 11 - Ground

: Continuity should exist.

# Is the inspection normal?

YES >> GO TO 4

NO >> Repair or replace harness.

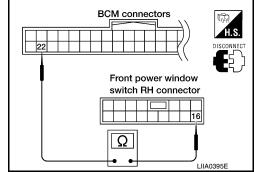


# 4. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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



: Continuity should exist.



# < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

3. Check continuity between BCM connector M18 terminal 22 and ground.

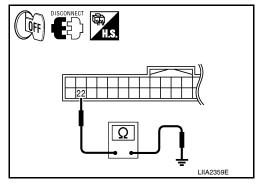
## 22 - Ground

: Continuity should not exist.

## Is the inspection normal?

YES >> Replace power window and door lock/unlock switch RH.

NO >> Repair or replace harness.



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# **BACK DOOR OPENER SWITCH**

# Diagnosis Procedure

INFOID:0000000005260055

Regarding Wiring Diagram information, refer to <u>DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —".</u>

# 1. CHECK BACK DOOR OPENER SWITCH

## (P)With CONSULT-III

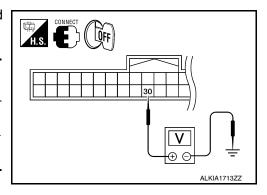
Check back door opener switch ("TRUNK OPNR SW") in "DATA MONITOR" mode.

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

## Without CONSULT-III

- 1. Turn ignition switch OFF.
- 2. Check voltage between BCM connector M18 terminal 30 and ground.

Connector	Term	inals	Condition	Voltage (V)
Comicotor	(+)	(–)	Condition	(Approx.)
M18	30	Ground	Back door opener switch is pressed	0
10110	30	Ground	Back door opener switch is released	5



## Is the inspection result normal?

YES >> Back door opener switch is OK.

NO >> GO TO 2

# 2.CHECK BACK DOOR OPENER SWITCH OPERATION

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

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

# T.S. DISCONNECT T.S. DISCONNECT OFF WIIA1186F

## Is the inspection result normal?

YES >> GO TO 3

NO >> Replace back door opener switch.

3. CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

## NOTE:

# The passenger door must be unlocked during this step.

Check continuity between back door opener switch harness connector D510 terminal 2 and ground.

# **BACK DOOR OPENER SWITCH**

# < COMPONENT DIAGNOSIS >

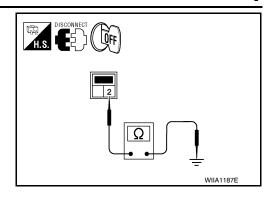
## [WITHOUT INTELLIGENT KEY SYSTEM]

## 2 - Ground

## : Continuity should exist.

## Is the inspection result normal?

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



# 4. CHECK BACK DOOR OPENER SWITCH CIRCUIT

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

#### 30 - 1 : Continuity should exist.

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

#### 30 - Ground : Continuity should not exist.

## Is the inspection result normal?

>> Replace BCM. Refer to BCS-59, "Removal and Installa-YES tion".

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

# 5.CHECK BACK DOOR OPENER SWITCH GROUND CIRCUIT

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

# : Continuity should exist.

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

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

# Is the inspection result normal?

YES >> GO TO 6

NO >> Repair or replace harness.

# O.CHECK DOOR UNLOCK SENSOR CIRCUIT

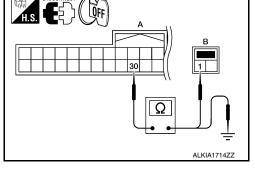
Check continuity between front door lock assembly RH (door unlock sensor) connector D103 terminal 5 and ground.

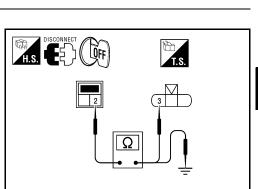
#### 5 - Ground : Continuity should exist.

# Is the inspection result normal?

YES >> Replace front door lock assembly RH (door unlock sen-

NO >> Repair or replace harness for open.





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**DLK-237** 2010 Pathfinder Revision: July 2009

# KEY CYLINDER SWITCH

**Description** 

The main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

# Component Function Check

INFOID:0000000005260057

# 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Monitor item	Cor	ndition
KEY CYL LK-SW	Lock	: ON
RET GTE ER-SW	Neutral / Unlock	
KEY CYL UN-SW	Unlock	: ON
RETUTE ON-SW	Neutral / Lock	: OFF

## Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to <u>DLK-238</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

INFOID:000000005260058

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR KEY CYLINDER SWITCH LH

## (P)With CONSULT-III

Check front door lock assembly LH (key cylinder switch) ("KEY CYL LK-SW") and ("KEY CYL UN-SW) in DATA MONITOR mode with CONSULT-III.

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

# KEY CYL LK-SW : ON

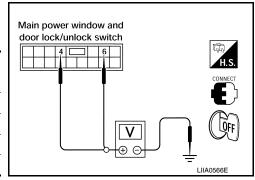
When key inserted in left front key cylinder is turned to UNLOCK:

## KEY CYL UN-SW : ON

## 

Check voltage between main power window and door lock/unlock switch connector D7 terminals 4, 6 and ground.

Connector	Terr	ninals	Condition of left front key cylinder	Voltage (V)
Connector	(+)	(–)	(Approx.	
	4		Neutral/Unlock	5
5-	7		Lock	0
D7	6	Ground	Neutral/Lock	5
		Unlock	0	



## Is the inspection result normal?

# **KEY CYLINDER SWITCH**

# < COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

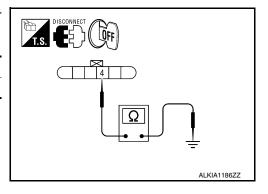
YES >> Key cylinder switch signal is OK.

NO >> GO TO 2

# $2.\mathsf{CHECK}$ door key cylinder switch LH ground Harness

- Turn ignition switch OFF.
- 2. Disconnect front door lock assembly LH (key cylinder switch).
- 3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 4 and body ground.

Connector	Terminals	Continuity
D14	4 – Ground	Yes



## Is the inspection result normal?

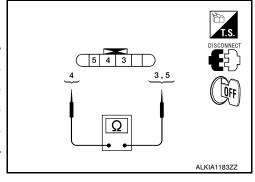
YES >> GO TO 3

NO >> Repair or replace harness.

# 3.CHECK DOOR KEY CYLINDER SWITCH LH

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

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



## Is the inspection result normal?

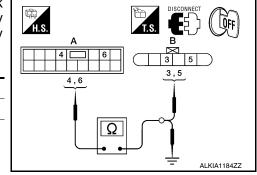
YES >> GO TO 4

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-322, "Removal and</u> Installation".

# 4. CHECK DOOR KEY CYLINDER HARNESS

Check continuity between main power window and door lock/unlock switch connector (A) D7 terminals 4, 6 and front door lock assembly LH (key cylinder switch) connector (B) D14 terminals 3, 5 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A. Main	4	B: Front	5	Yes
A: Main power win- dow and door lock/ unlock switch	6	door lock assembly LH (key cylinder switch)	3	Yes
SWILCH	4, 6	G	round	No



## Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch.

NO >> Repair or replace harness.

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Revision: July 2009 DLK-239 2010 Pathfinder

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:000000005260059

INFOID:0000000005260060

Locks/unlocks the door with the signal from BCM.

DRIVER 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-240</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

DRIVER SIDE: Diagnosis Procedure

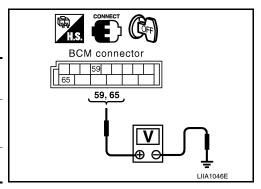
INFOID:0000000005260061

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



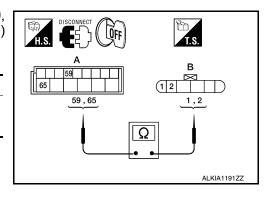
## Is the inspection result normal?

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

# 2.CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
IVIZU	65	D14	1	163



## Is the inspection result normal?

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

## < COMPONENT DIAGNOSIS >

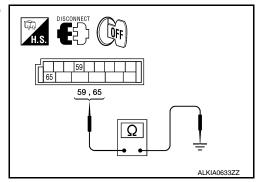
[WITHOUT INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness.

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Connector	Ter	minals	Continuity
M20	59	Ground	No
IVIZU	M20 65		INO



Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

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-241</u>, "<u>PASSENGER SIDE</u>: <u>Diagnosis Procedure</u>".

PASSENGER SIDE : Diagnosis Procedure

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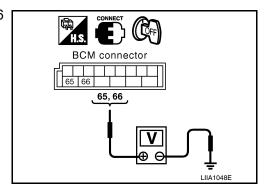
Regarding Wiring Diagram information, refer to <u>DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

Turn ignition switch OFF.

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

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



Is the inspection result normal?

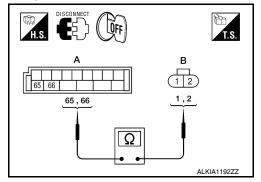
YES >> GO TO 2

NO >> GO TO 3

# 2.CHECK DOOR LOCK ACTUATOR HARNESS

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

Te	rminal	Continuity
65	2	Yes
66	1	163



## Is the inspection result normal?

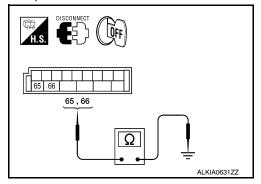
YES >> Replace front door lock assembly RH (door lock actuator). Refer to <u>DLK-322</u>, "Removal and Installation".

NO >> Repair or replace harness.

# 3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity	
65	Ground	No	
66	Glound	140	



## Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

INFOID:0000000005260065

Locks/unlocks the door with the signal from BCM.

REAR LH: Component Function Check

INFOID:0000000005260066

# 1. CHECK FUNCTION

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

# Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-242</u>, "REAR LH: <u>Diagnosis Procedure</u>".

# REAR LH: Diagnosis Procedure

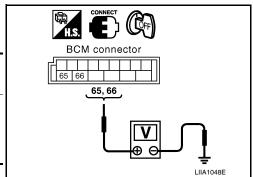
INFOID:0000000005260067

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



## Is the inspection result normal?

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

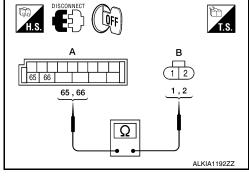
2.CHECK DOOR LOCK ACTUATOR HARNESS

## NOTE:

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

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

Ter	minals	Continuity
65	2	Yes
66	1	ies



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# Is the inspection result normal?

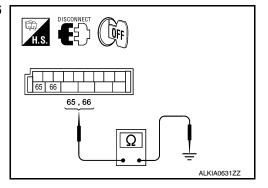
YES >> Replace rear door lock actuator LH.

NO >> Repair or replace harness or passenger select unlock relay.

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

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

Ter	minals	Continuity
65	Ground	No
66	Ground	No



# Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness or passenger select unlock relay.

REAR RH

[WITHOUT INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

**REAR RH: Description** 

INFOID:000000005260068

Locks/unlocks the door with the signal from BCM.

REAR RH: Component Function Check

INFOID:0000000005260069

# 1. CHECK FUNCTION

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

# Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to <u>DLK-244</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

# REAR RH: Diagnosis Procedure

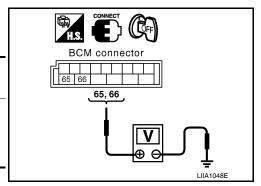
INFOID:0000000005260070

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



## Is the inspection result normal?

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

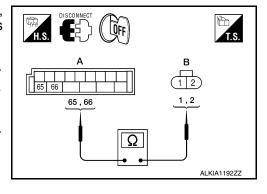
# 2.check door lock actuator harness

## NOTE

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

- 1. Disconnect BCM and rear door lock actuator RH.
- 2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 1, 2.

Ter	minals	Continuity
65	2	Yes
66	1	i les



## Is the inspection result normal?

YES >> Replace rear door lock actuator RH.

NO >> Repair or replace harness or passenger select unlock relay.

# < COMPONENT DIAGNOSIS >

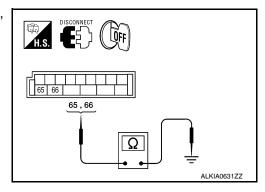
# [WITHOUT INTELLIGENT KEY SYSTEM]

# 3. CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

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

Terminals		Continuity
65	Ground	No
66	Glound	INO



## Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-59</u>, "Removal and Installation".

NO >> Repair or replace harness or passenger select unlock relay.

BACK DOOR LATCH

**BACK DOOR LATCH: Description** 

Locks/unlocks the door with the signal from BCM.

**BACK DOOR LATCH: Diagnosis Procedure** 

Regarding Wiring Diagram information, refer to <u>DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

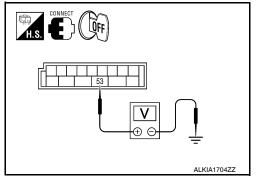
# 1. CHECK BACK DOOR LATCH SIGNAL

## NOTE:

Ensure back door opener switch is operating properly before proceeding.

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

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



## Is the inspection result normal?

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

2.CHECK BACK DOOR LATCH HARNESS FOR OPEN

1. Disconnect BCM and back door latch.

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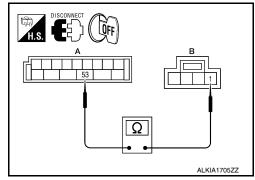
Revision: July 2009 DLK-245 2010 Pathfinder

# < COMPONENT DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

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

Terminals		Continuity
53	1	Yes



# Is the inspection result normal?

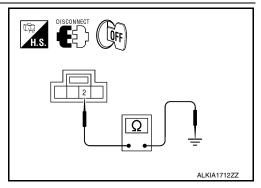
YES >> GO TO 3

NO >> Repair or replace harness.

# 3.CHECK BACK DOOR LATCH GROUND

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

Terminals		Continuity
2	Ground	Yes



# Is the inspection result normal?

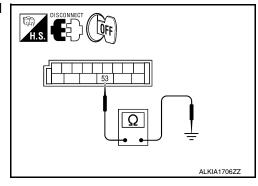
YES >> Replace back door latch.

NO >> Repair or replace harness.

# 4. CHECK BACK DOOR LATCH HARNESS FOR SHORT

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

Terminals		Continuity
53	Ground	No



## Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-59, "Removal and Installation".

NO >> Repair or replace harness.

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# GLASS HATCH LOCK ACTUATOR

Description

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

# Component Function Check

# 1. CHECK FUNCTION

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

## Is the inspection result normal?

YES >> Glass hatch lock actuator is OK.

NO >> Ensure glass hatch mechanical linkage is OK. Refer to <a href="DLK-247">DLK-247</a>, "Diagnosis Procedure".

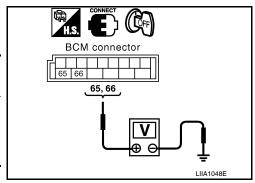
# Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-275, "Wiring Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK GLASS HATCH LOCK ACTUATOR SIGNAL

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

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



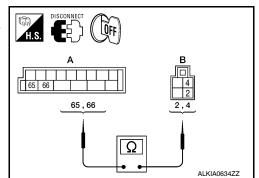
## Is the inspection result normal?

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

# 2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	4	Yes
66	2	163



# Is the inspection result normal?

YES >> Replace glass hatch lock actuator.

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# **GLASS HATCH LOCK ACTUATOR**

# < COMPONENT DIAGNOSIS >

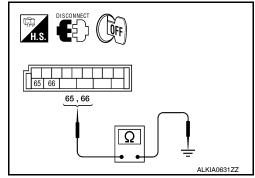
[WITHOUT INTELLIGENT KEY SYSTEM]

NO >> Repair or replace harness.

# $3. \mathsf{CHECK}$ GLASS HATCH LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66	Glound	INO



# Is the inspection result normal?

>> Replace BCM. Refer to BCS-59, "Removal and Installation". YES

NO >> Repair or replace harness.

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# REMOTE KEYLESS ENTRY RECEIVER

Description INFOID:000000005260076

Receives keyfob operation and transmits to BCM.

# Component Function Check

# 1.CHECK FUNCTION

# (P)With CONSULT-III

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

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

## Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

NO >> Refer to <u>DLK-249</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-275</u>. "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —"</u>.

# 1. CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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

Terminals				
(+	)			
Remote keyless entry re- ceiver connector	Terminal	(-)	Keyfob condition	Signal (Reference value)
M120 2 Groun	Ground	No function	(V) 6 4 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Glouid	Any button is pressed	(V) 6 4 2 0 + 0.2s OCC3880D	
Is the inspection result normal?				

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Is the inspection result normal?

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

# 2.REMOTE KEYLESS ENTRY RECEIVER 5-VOLT CIRCUIT INSPECTION

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# REMOTE KEYLESS ENTRY RECEIVER

## < COMPONENT DIAGNOSIS >

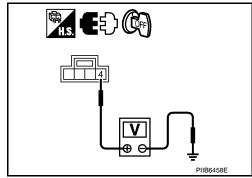
## [WITHOUT INTELLIGENT KEY SYSTEM]

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

4 - Ground : Approx. 5 volt.

Is the inspection result normal?

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



# 3. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

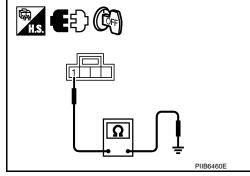
Check continuity between remote keyless entry receiver connector M120 terminal 1 and ground.

1 - Ground : Continuity should exist.

Is the inspection result normal?

YES >> Replace remote keyless entry receiver.

NO >> GO TO 4



# 4. HARNESS INSPECTION BETWEEN BCM AND RKE RECEIVER

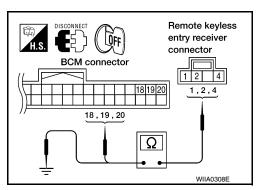
1. Disconnect remote keyless entry receiver and BCM connectors.

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

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

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

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



## Is the inspection result normal?

YES >> Replace remote keyless entry receiver.

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

# **KEYFOB BATTERY AND FUNCTION**

# < COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# **KEYFOB BATTERY AND FUNCTION**

Description

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

- Door lock/unlock
- Panic alarm

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

# Component Function Check

# INFOID:0000000005260080

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# 1. CHECK FUNCTION

# (P)With CONSULT-III

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

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

# Is the inspection result normal?

YES >> Keyfob is OK.

NO >> Refer to <u>DLK-251</u>, "<u>Diagnosis Procedure</u>".

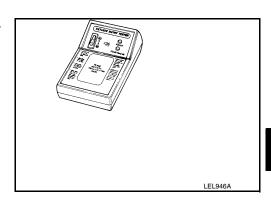
# Diagnosis Procedure

## INFOID:0000000005260081

# 1. CHECK KEYFOB FUNCTION

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

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



# 2. CHECK KEY FOB COMPONENTS

1. Open the lid using a coin.

## **CAUTION:**

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

## **CAUTION:**

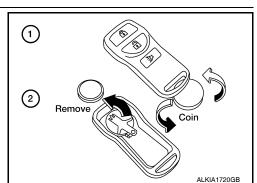
- Keep dirt, grease, and other foreign materials off the electrode contact area.
- 3. Visually inspect keyfob internal components.

## Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace malfunctioning parts.

3.CHECK KEY FOB BATTERY



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# **KEYFOB BATTERY AND FUNCTION**

# < COMPONENT DIAGNOSIS >

## [WITHOUT INTELLIGENT KEY SYSTEM]

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

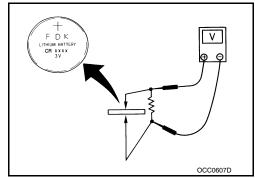
## Standard : Approx. 2.5 - 3.0V

Is the measurement value within specification?

YES >> Key fob battery is OK. Check remote keyless entry receiver. Refer to <u>DLK-249.</u>

"Component Function Check".

NO >> GO TO 4



# 4. REPLACE KEY FOB BATTERY

- 1. Replace the key fob battery, positive side down.
- 2. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

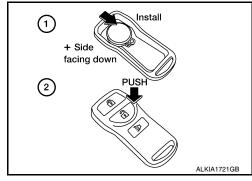
## **CAUTION:**

- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.
- 3. After replacing the battery, check that all key fob functions work properly.

# Is the inspection result normal?

YES >> Key fob is OK.

NO >> Check remote keyless entry receiver. Refer to <u>DLK-249</u>. "Component Function Check".



# HORN FUNCTION

**Description** 

Perform answer-back for each operation with horn.

## Component Function Check

# 1. CHECK FUNCTION

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

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

#### Is the operation normal?

YES >> Inspection End.

NO >> Refer to <u>DLK-253</u>, "<u>Diagnosis Procedure</u>".

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>DLK-287, "Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM —"</u>.

# 1. CHECK HORN FUNCTION

Check horn function with horn switch.

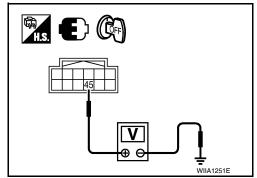
#### Does the horn sound?

YES >> GO TO 2

NO >> Refer to <u>HRN-4, "Wiring Diagram"</u>.

# 2.CHECK HORN RELAY POWER SUPPLY

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



IPDM E/R		Ground	Test item		Voltage (V)
Connector	Terminal	Ground	iest ileiti		(Approx.)
E122 45		Ground	Ground HORN	$OFF \to ON \to OFF$	Battery voltage $\rightarrow$ 0 $\rightarrow$ Battery voltage
L 122	E122 45 Ground	HONN	Other than above	Battery voltage	

#### Is the inspection result normal?

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

NO >> GO TO 3

## 3.CHECK HORN RELAY CIRCUIT

Revision: July 2009 DLK-253 2010 Pathfinder

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INFOID:0000000005260084

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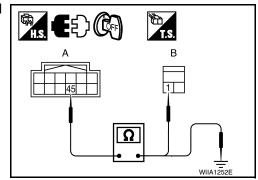
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#### HORN FUNCTION

#### [WITHOUT INTELLIGENT KEY SYSTEM]

- 1. Turn ignition switch OFF.
- 2. Disconnect IPDM E/R and horn relay connector.
- 3. Check continuity between IPDM E/R harness connector and horn relay harness connector.



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

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

IPD	M E/R	Ground	Continuity	
Connector	Terminal	Oround	Continuity	
E122	45	Ground	No	

#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

# 4. CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

#### Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-33, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

## **HAZARD FUNCTION**

<	COI	MP()	VENT	DIAG	NOSIS.	>

## [WITHOUT INTELLIGENT KEY SYSTEM]

< COMPONENT DIAGNOSIS > [WITH	OUT INTELLIGENT KEY SYSTEM]
HAZARD FUNCTION	
Description	INFOID:000000005260091
Perform answer-back for each operation with number of blinks.	
Component Function Check	INFOID:000000005260092
1. CHECK FUNCTION	
Check hazard warning lamp "FLASHER" in ACTIVE TEST.	
Is the inspection result normal?  YES >> Hazard warning lamp circuit is OK.	
YES >> Hazard warning lamp circuit is OK. NO >> Refer to <u>DLK-255</u> , " <u>Diagnosis Procedure</u> ".	
Diagnosis Procedure	INFOID:000000005260093
1.CHECK HAZARD SWITCH CIRCUIT	
Operate the hazard lights by turning ON the hazard warning switch.	
Do the lights operate normally?	
YES >> Replace the BCM. Refer to <u>BCS-59</u> , "Removal and Installa NO >> Repair or replace hazard warning switch circuit. Refer to <u>E</u>	

Revision: July 2009 DLK-255 2010 Pathfinder

# **KEY SWITCH (BCM INPUT)**

## Diagnosis Procedure

INFOID:0000000005260094

Regarding Wiring Diagram information, refer to <u>DLK-275</u>, "Wiring <u>Diagram — POWER DOOR LOCK SYS-TEM —</u>".

# 1. CHECK KEY SWITCH INPUT SIGNAL

#### With CONSULT-III

Check key switch "KEY ON SW" in DATA MONITOR mode with CONSULT-III. Refer to <u>DLK-219</u>, "DOOR <u>LOCK</u>: <u>CONSULT-III Function</u> (<u>BCM - DOOR LOCK</u>)".

When key is inserted to ignition key cylinder:

#### KEY ON SW : ON

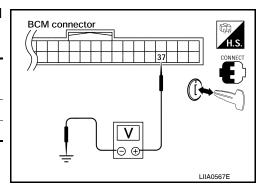
· When key is removed from ignition key cylinder:

KEY ON SW : OFF

## Without CONSULT-III

Check voltage between BCM connector M18 terminal 37 and ground.

Connec-	Connec- Terminal		Condition	Voltage (V)	
tor	(+)	(-)	Condition	voitage (v)	
M18 37 Ground -		Ground	Key is inserted.	Battery voltage	
		Key is removed.	0		



## Is the inspection result normal?

YES >> Key switch (insert) circuit is OK.

NO >> GO TO 2

# 2. CHECK KEY SWITCH (INSERT)

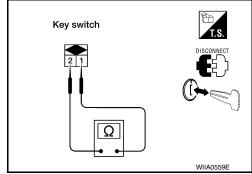
- 1. Turn ignition switch OFF.
- 2. Disconnect key switch connector.
- 3. Check continuity between key switch terminals.

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

#### Is the inspection result normal?

YES >> Repair or replace harness or fuse.

NO >> Replace key switch.



# **HEADLAMP FUNCTION**

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< COMPONENT DIAGNOSIS >	[WITHOUT INTELLIGENT KEY SYSTEM]
HEADLAMP FUNCTION	
Diagnosis Procedure	INFOID:000000005260095
1. CHECK HEADLAMP OPERATION	
Do headlamps operate with headlamp switch?	
YES or NO YES >> Headlamp circuit is OK.	
NO >> Check headlamp circuit. Refer to EXL-4, "Work Flo	<u>ow"</u> .

**DLK-257** Revision: July 2009 2010 Pathfinder

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

# Diagnosis Procedure

INFOID:0000000005260096

# 1. CHECK MAP LAMP OPERATION

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

#### Is the inspection result normal?

YES >> Map lamp circuit is OK.

NO >> Check map lamp circuit. Refer to <a href="INL-3">INL-3</a>, "Work Flow".

#### **KEYFOB ID SET UP WITH CONSULT-III**

< COMPONENT DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITH CONSULT-III

## ID Code Entry Procedure

INFOID:0000000005260097

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#### KEYFOB ID SET UP WITH CONSULT-III

#### NOTE:

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

Use this mode to register a keyfob ID code.

#### NOTE:

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

- "REMO CONT ID ERASUR"
  - Use this mode to erase a keyfob ID code.
- "REMO CONT ID CONFIR"

Use this mode to confirm if a keyfob ID code is registered or not.

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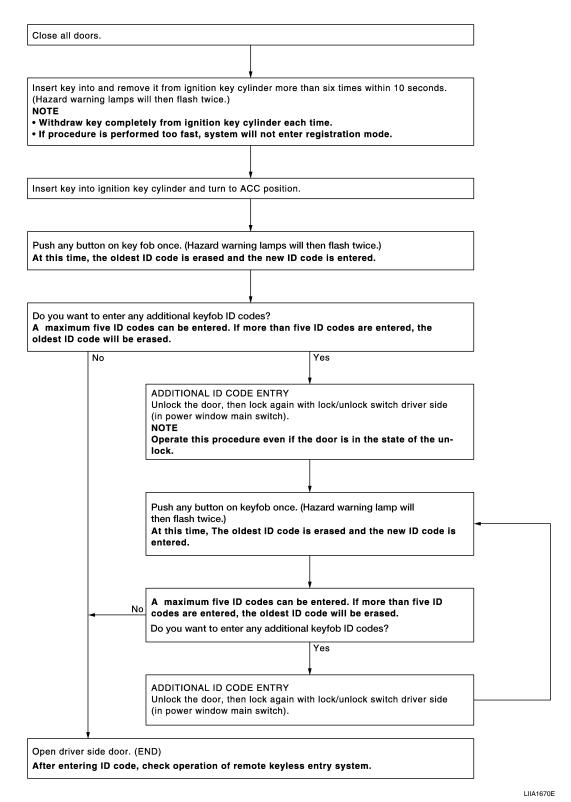
Revision: July 2009 DLK-259 2010 Pathfinder

INFOID:0000000005260098

## KEYFOB ID SET UP WITHOUT CONSULT-III

## **ID Code Entry Procedure**

#### KEYFOB ID SET UP WITHOUT CONSULT-III



#### NOTE:

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

#### **KEYFOB ID SET UP WITHOUT CONSULT-III**

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT INTELLIGENT KEY SYSTEM]

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

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

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

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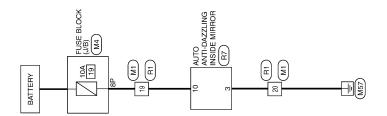
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Wiring Diagram

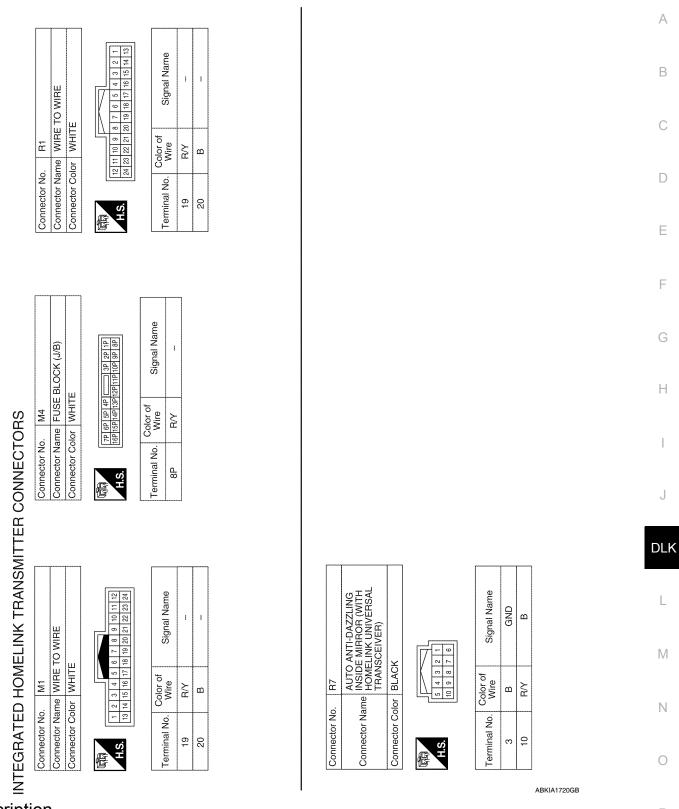


INTEGRATED HOMELINK TRANSMITTER

AWKWA0054GB

< COMPONENT DIAGNOSIS >

#### [WITHOUT INTELLIGENT KEY SYSTEM]



Description P

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

#### < COMPONENT DIAGNOSIS >

#### [WITHOUT INTELLIGENT KEY SYSTEM]

# Component Function Check

INFOID:0000000005260101

# 1. CHECK FUNCTION

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

#### Is the inspection result normal?

YES >> GO TO 2.

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

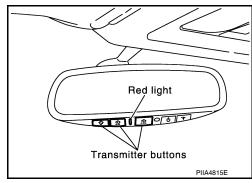
# 2. CHECK ILLUMINATION

- 1. Turn ignition switch "OFF".
- 2. Press each of the transmitter buttons and watch for the red light to illuminate with each button.

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Refer to <u>DLK-264, "Diagnosis Procedure"</u>.



# 3. CHECK TRANSMITTER

Check transmitter with Tool\*.

\*: For details, refer to Technical Service Bulletin.

#### Is the inspection result normal?

YES >> Receiver or hand-held transmitter malfunction, not vehicle related.

NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

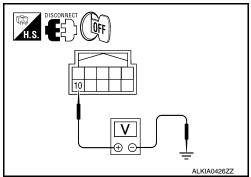
## Diagnosis Procedure

INFOID:0000000005260102

Regarding Wiring Diagram information, refer to <u>DLK-262, "Wiring Diagram"</u>.

# 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			Condition	Voltage (V) (Approx.)
R7	10	Ground	Ignition switch position: LOCK	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 2

#### < COMPONENT DIAGNOSIS >

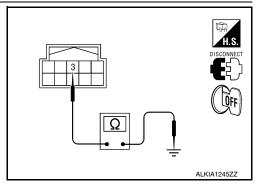
[WITHOUT INTELLIGENT KEY SYSTEM]

NO

- >> Check the following.
  - 10A fuse [No. 19 located in the fuse block (J/B)]
  - Harness for open or short between fuse and auto anti-dazzling inside mirror (homelink universal transceiver).

# 2. CHECK GROUND CIRCUIT

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



Auto anti-dazzling inside mirror (Homelink universal transceiver) connector	Terminal	Ground	Continuity
R7	3		Yes

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

# 3. CHECK INTERMITTENT INCIDENT

Refer to GI-37, "Intermittent Incident".

>> Inspection End.

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# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

# **ECU DIAGNOSIS**

# **BCM (BODY CONTROL MODULE)**

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
AIR COIND 3W	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
AUT LIGHT 313	Outside of the room is bright	ON
ALITO LIGHT OW	Lighting switch OFF	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
DACK DOOD CW	Back door closed	OFF
BACK DOOR SW	Back door opened	ON
ODL LOCK OW	Door lock/unlock switch does not operate	OFF
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	ON
ODL HINII OOK OW	Door lock/unlock switch does not operate	OFF
CDL UNLOCK SW	Press door lock/unlock switch to the UNLOCK side	ON
DOOD CW AC	Front door RH closed	OFF
DOOR SW-AS	Front door RH opened	ON
DOOD OW DD	Front door LH closed	OFF
DOOR SW-DR	Front door LH opened	ON
DOOD OW DI	Rear door LH closed	OFF
DOOR SW-RL	Rear door LH opened	ON
DOOD OW DD	Rear door RH closed	OFF
DOOR SW-RR	Rear door RH opened	ON
ENGINE DUN	Engine stopped	OFF
ENGINE RUN	Engine running	ON
ED EOO OW	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
ED WACHED CW	Front washer switch OFF	OFF
FR WASHER SW	Front washer switch ON	ON
ED MIDED I OM	Front wiper switch OFF	OFF
FR WIPER LOW	Front wiper switch LO	ON
ED WIDED III	Front wiper switch OFF	OFF
FR WIPER HI	Front wiper switch HI	ON
ED WIDED INT	Front wiper switch OFF	OFF
FR WIPER INT	Front wiper switch INT	ON
ED WIDED STOD	Any position other than front wiper stop position	OFF
FR WIPER STOP	Front wiper stop position	ON
LIAZADD CVA	When hazard switch is not pressed	OFF
HAZARD SW	When hazard switch is pressed	ON
LICHT CW 4CT	Lighting switch OFF	OFF
LIGHT SW 1ST	Lighting switch 1st	ON

# **BCM (BODY CONTROL MODULE)**

## < ECU DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status	_
IEAD LAMD CW/4	Headlamp switch OFF	OFF	
HEAD LAMP SW1	Headlamp switch 1st	ON	
HEAD LAMP SW2	Headlamp switch OFF	OFF	
TEAD LAWP 5W2	Headlamp switch 1st	ON	
II DE AM CVA	High beam switch OFF	OFF	
HI BEAM SW	High beam switch HI	ON	
CAL CAL CIA	Ignition switch OFF or ACC	OFF	
GN ON SW	Ignition switch ON	ON	<del></del>
IONI OWI OWN	Ignition switch OFF or ACC	OFF	
GN SW CAN	Ignition switch ON	ON	
NT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7	
	LOCK button of Intelligent Key is not pressed	OFF	
-KEY LOCK <sup>1</sup>	LOCK button of Intelligent Key is pressed	ON	
	UNLOCK button of Intelligent Key is not pressed	OFF	
-KEY UNLOCK <sup>1</sup>	UNLOCK button of Intelligent Key is pressed	ON	
(E) ( O) ( O) (	Mechanical key is removed from key cylinder	OFF	
KEY ON SW	Mechanical key is inserted to key cylinder	ON	
	LOCK button of key fob is not pressed	OFF	
KEYLESS LOCK <sup>2</sup>	LOCK button of key fob is pressed	ON	<u></u>
	UNLOCK button of key fob is not pressed	OFF	
KEYLESS UNLOCK <sup>2</sup>	UNLOCK button of key fob is pressed	ON	
OIL PRESS SW	Ignition switch OFF or ACC     Engine running	OFF	
	Ignition switch ON	ON	
	Other than lighting switch PASS	OFF	
PASSING SW	Lighting switch PASS	ON	
	Return to ignition switch to LOCK position	OFF	
PUSH SW <sup>1</sup>	Press ignition switch	ON	
	Rear window defogger switch OFF	OFF	
REAR DEF SW	Rear window defogger switch ON	ON	
	Rear washer switch OFF	OFF	
RR WASHER SW	Rear washer switch ON	ON	
	Rear wiper switch OFF	OFF	
RR WIPER INT	Rear wiper switch INT	ON	
	Rear wiper switch OFF	OFF	<u></u>
RR WIPER ON	Rear wiper switch ON	ON	
	Rear wiper stop position	OFF	<u></u>
RR WIPER STOP	Other than rear wiper stop position	ON	
	Lighting switch OFF	OFF	
TAIL LAMP SW	Lighting switch 1ST	ON	
	When back door opener switch is not pressed	OFF	
TRNK OPNR SW	When back door opener switch is pressed	ON	
	Turn signal switch OFF	OFF	
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**DLK-267** Revision: July 2009 2010 Pathfinder

# BCM (BODY CONTROL MODULE)

#### < ECU DIAGNOSIS >

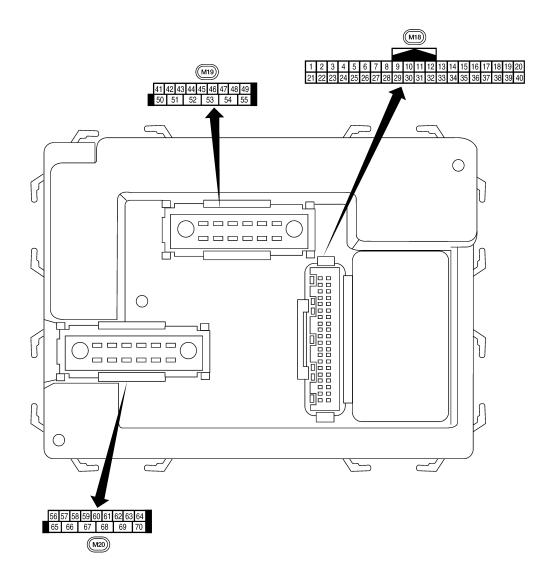
# [WITHOUT INTELLIGENT KEY SYSTEM]

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

<sup>1:</sup> With Intelligent Key

<sup>2:</sup> With remote keyless entry system

Terminal Layout



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Physical Values

			Oiemed.		Measuring condition	
Terminal	Wire color	Signal name	Signal input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
		Ignition keyhole illumi-	0	OFF	Door is locked (SW OFF)	Battery voltage
1	BR	nation	Output	OFF	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **-5ms
5	L	Combination switch				
6	R	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ****5ms
					Rear window defogger switch ON	0V
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH	Input	OFF	ON (open) OFF (closed)	0V Battery voltage
13	L	Rear door switch RH	Input	OFF	ON (open) OFF (closed)	0V  Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	_	5V
18	BR	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	_	0V

# < ECU DIAGNOSIS >

# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

			Signal		Measuring condition	
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
19	V	Remote keyless entry receiver (power sup- ply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0 **50 ms
20	G	Remote keyless entry	Input	OFF	Stand-by (keyfob buttons released)	(V) 6 4 2 0 **50 ms LIIA1894E
20	J	receiver (signal)	При	911	When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	(V) 6 4 2 0 •••50 ms
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
22	V	BUS	_	_	Ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms
23	G	Security indicator lamp	Output	OFF	Goes OFF $\rightarrow$ illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF $\rightarrow$ ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
27	W	Compressor ON sig-	Inn: +	ON	A/C switch OFF	5V
	VV	nal	Input	ON	A/C switch ON	0V
28	LG	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
			F		Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V 0V
30 <sup>1</sup>	G	Back door opener switch	Input	OFF	ON (open) OFF (closed)	Battery voltage
					ON (open)	0V
30 <sup>2</sup>	SB	Back door opener switch	Input	OFF	OFF (closed)	Battery voltage
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Revision: July 2009 DLK-271 2010 Pathfinder

# **BCM (BODY CONTROL MODULE)** [WITHOUT INTELLIGENT KEY SYSTEM]

< ECU D	IAGN		м (воі	DY CO	NTROL MODULE) [WITHOUT IN]	ELLIGENT KEY SYSTEM]
1			Signal		Measuring condition	
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 → +5ms SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ++5ms SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5291E
35	BR	Combination switch output 2				(V)
36	LG	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
37 <sup>1</sup>	В	Key switch and key	Input	OFF	Key inserted	Battery voltage
<u> </u>		lock solenoid	input	511	Key inserted	0V
37 <sup>2</sup>	В	Key switch and igni-	Input	OFF	Intelligent Key inserted	Battery voltage
		tion knob switch		J	Intelligent Key inserted	0V
38	W/R	Ignition switch (ON)	Input	ON	_	Battery voltage
39	L	CAN-H	_	_	_	_
40	Р	CAN-L	_	_	_	<del>-</del>
42	LG	Glass hatch ajar	Input	ON	Glass hatch open	0V
		switch	-		Glass hatch closed	Battery voltage
43	Р	Back door latch switch	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

	\AC		Signal		Measuring condition	Deference value of		
erminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)		
					Rise up position (rear wiper arm on stopper)	0V		
					A Position (full clockwise stop position)	Battery voltage		
44	0	Rear wiper auto stop switch	Input	ON	Forward sweep (counterclockwise direction)	Fluctuating		
					B Position (full counterclock- wise stop position)	0V		
					Reverse sweep (clockwise direction)	Fluctuating		
47	GR	Front door switch LH	Input	OFF	ON (open)	0V		
41	GK	TIOHE GOOF SWILCH LM	iriput	OFF	OFF (closed)	Battery voltage		
48	Р	Rear door switch LH	Innut	OFF	ON (open)	0V		
40	۲	Real door Switch LH	Input	OFF	OFF (closed)	Battery voltage		
49	L	Cargo lamp	Output	OFF	Any door open (ON)	0V		
43	L	Cargo ramp	Output	OFF	All doors closed (OFF)	Battery voltage		
51	Ο	Trailer turn signal (right)	Output	ON	Turn right ON	(V) 15 10 5 0 500 ms SKIA3009J		
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	(V) 15 10 5 0 		
53		Back door latch actua-	Output	OFF	OFF	0		
55	L	tor	Output	OFF	ON	Battery voltage		
55	W	Rear wiper output cir-	Output	ON	OFF	0		
55	V V	cuit 1	Output	OIN	ON	Battery voltage		
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V		
				ON	_	Battery voltage		
57	R/Y	Battery power supply	Input	OFF	_	Battery voltage		
58	W	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more		
55	• •	- Palodi 0011001	put	J.1	When optical sensor is not illuminated	0.6V or less		
<b>E</b> 0	CD	Front door lock as-	Otmt	055	OFF (neutral)	0V		
59	GR	sembly LH actuator (unlock)	Output	OFF	ON (unlock)	Battery voltage		

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Revision: July 2009 DLK-273 2010 Pathfinder

# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

#### < ECU DIAGNOSIS >

	ı			T			
	Wire		Signal		Measuring con	dition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	(Approx.)
60	LG	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 50 500 ms SKIA3009J
61	G	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 5 0 500 ms SKIA3009J
	DD	Interior room/map	0 1: 1	055	Any door	ON (open)	0V
63	BR	lamp	Output	OFF	switch	OFF (closed)	Battery voltage
	.,	All door lock actuators	0.1.1	OFF	OFF (neutral)		0V
65	V	(lock)	Output	OFF	ON (lock)		Battery voltage
		Front door lock actua-			OFF (neutral)		0V
66	L	tor RH, rear door lock actuators LH/RH and glass hatch lock actu- ator (unlock)	Output	OFF	ON (unlock)		Battery voltage
67	В	Ground	Input	ON			0V
					Ignition switch	ON	Battery voltage
					Within 45 seconds after ignition switch OFF		Battery voltage
68	0	Power window power supply (RAP)	Output	t	More than 45 seconds after ig- nition switch OFF		0V
					When front do open or power operates	or LH or RH is r window timer	0V
69	L	Power window power supply	Output	_		_	Battery voltage
70	W	Battery power supply	Input	OFF			Battery voltage

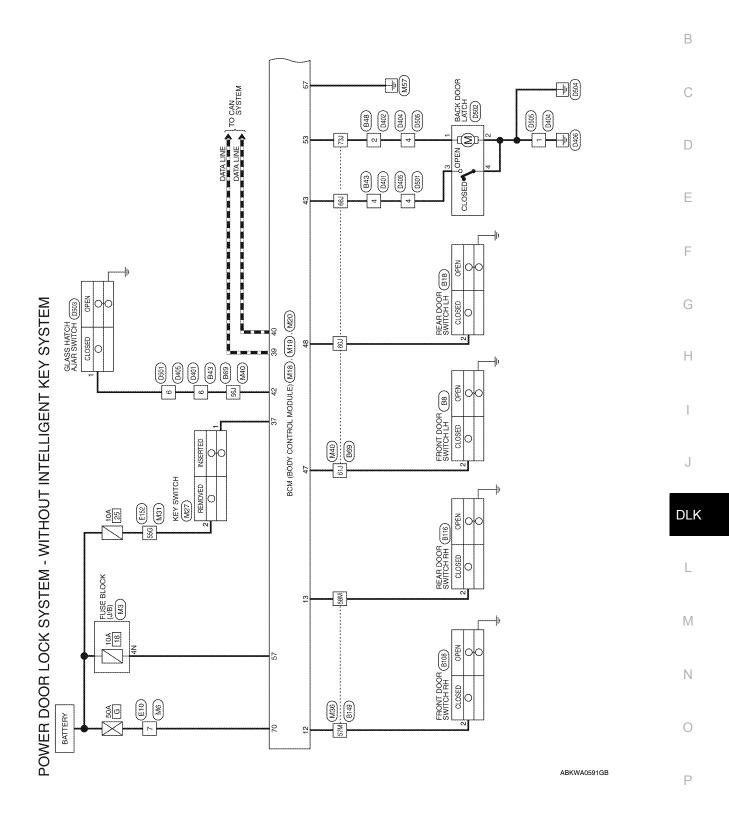
<sup>1:</sup> With remote keyless entry system

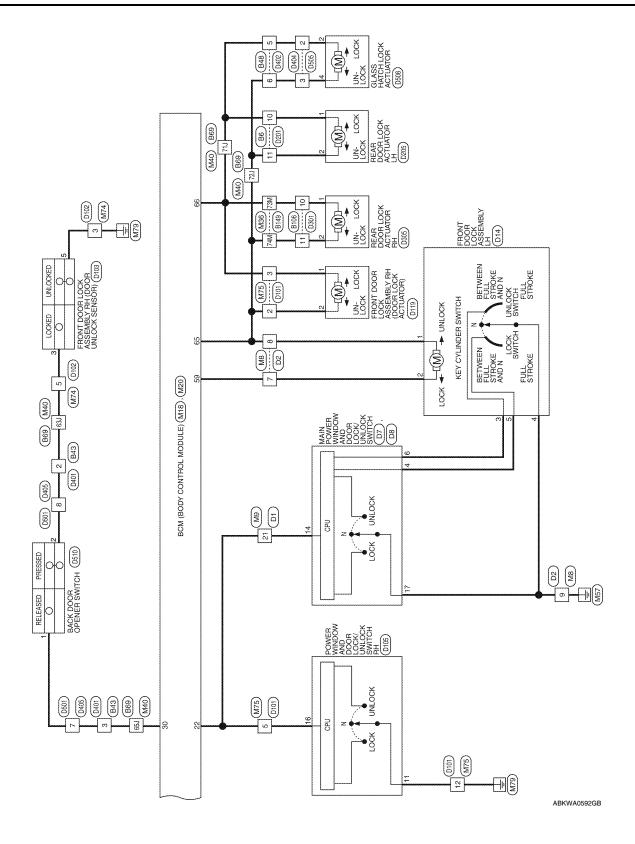
<sup>2:</sup> With Intelligent Key system

Wiring Diagram — POWER DOOR LOCK SYSTEM —

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# [WITHOUT INTELLIGENT KEY SYSTEM]

# POWER DOOR LOCK SYSTEM CONNECTORS - WITHOUT INTELLIGENT KEY SYSTEM

Connector No. M3	o. M3		Connector No. M6	M6	Connector No. M8	. W8	
Connector Name FUSE	ame FUS	SE BLOCK (J/B)	Connector Nam	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITI	olor WH	ПТЕ	Connector Color WHITE	r WHITE	Connector Color   BROWN	lor BRC	WN
H.S.	3N 77N F		所 H.S.	8 7 8 8 5 1 8 8 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9	(京) H.S.	5 4 4 11 11 11	5 4
						Color of	
Terminal No. Wire	Color of	Signal Name	Terminal No. Wire	Wire Signal Name	Terminal No. Wire	Wire	Signal Nar
	2		7	- M	7	m U	
AN	<u>≥</u>	ı	•	>	,	5	

Signal Name

GR > മ

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	<b>,</b>	,	,						
6	BCM (BODY CONTROL MODULE)	WHITE	51 52 53 54 55	Signal Name	GLASS HATCH SW	BACK DOOR SW	DOOR SW (DR)	DOOR SW (RL)	LIFTGATE OPENER OUTPUT
o. M19	ļ	ļ	41 42 43	Color of Wire	FG	۵	GR	œ.	
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	42	43	47	48	53

			19 20	39 40								
œ.	BCM (BODY CONTROL MODULE)	WHITE	9 10 11 12 18 14 15 16 17 18	33 34 35 36 37 38	Signal Name	DOOR SW (AS)	DOOR SW (RR)	ANTI-PINCH SERIAL LINK (RX, TX)	LIFTGATE OPENER SW	KEY SW	CAN-H	CAN-L
		ļ	8 2	26 27 28	Color of Wire	9	ب	>	ග	മ		۵
Connector No.	Connector Name	Connector Color	斯斯 H.S.	23 24 25	Terminal No.	12	13	22	30	37	39	40

Connector No.	. M9	
Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITE	lor WHI	ш
H.S. 24	24 23 22 21	8 7 6 5 4 3 2 1 20 19 16 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
21	>	

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#### Signal Name Signal Name Connector Name | KEY SWITCH ~ Connector Color | WHITE Color of Wire M27 Color of Wire 9 Ω SB > Connector No. Terminal No. Terminal No. 57M 58M 73M 74M Q F 21M 20M 19M 18M 17M 16M 15M 14M 19M 12M 11M 30M 29M 28M 27M 26M 25M 24M 23M 22M 61M 60M 59M 58M 57M 56M 56M 54M 53M 52M 51M 70M 69M 69M 67M 66M 68M 64M 63M 62M 41M 40M 38M 38M 37M 36M 35M 34M 33M 32M 31M 50M 43M 43M 43M 47M 46M 45M 44M 44M 42M DOOR UNLOCK OUTPUT (OTHER) DOOR LOCK OUTPUT (ALL) GND (POWER) 75M 74M 73M 72M 71M 80M 79M 78M 77M 76M Signal Name 5M 4M 3M 2M 1M 10M 9M 8M 7M 6M BAT (F/L) Connector Name | WIRE TO WIRE Connector Color | WHITE Color of Wire ∞ ≥ > Connector No. Terminal No. 70 92 99 29 偃 21G 20G 19G 19G 17G 16G 15G 14G 13G 12G 11G 30G 29G 28G 27G 26G 25G 24G 23G 22G 41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 3 50G 49G 48G 47G 46G 45G 44G 43G 42G 61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 70G 69G 68G 67G 66G 65G 64G 63G 62G 75G 74G 73G 72G 71G 80G 79G 78G 77G 76G 5G 4G 3G 2G 1G 10G 9G 8G 7G 6G DOOR UNLOCK OUTPUT (DR) Signal Name Connector Name BCM (BODY CONTROL MODULE) BAT (FUSE) Signal Name | 56|57|58|59|60|61|62|63|64 | 65 | 66 | 67 | 68 | 69 | 70 Connector Name | WIRE TO WIRE BLACK Connector Color | WHITE M20 Color of Wire M31 Color of Wire ξ GR Connector Color Connector No. Connector No. Terminal No. Terminal No. 55G 57 59

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Connector Color

Connector No.

#### [WITHOUT INTELLIGENT KEY SYSTEM] Α Signal Name В WIRE TO WIRE С WHITE Color of Wire Connector Name Connector Color Connector No. D Terminal No. ω <sub>Ω</sub> Е F Signal Name Signal Name Connector Name | WIRE TO WIRE Н WHITE E10 Color of Wire Color of Wire ე GR ≥ 0 മ ۵ > Connector Color Connector No. Terminal No. Terminal No. 56J 60J 61J 63J 65J 66J 71J 72J 733 J DLK 61J 60J 59J 58J 57J 56J 55J 54J 53J 52J 51J 70J 69J 69J 67J 66J 65J 64J 63J 62J 41J 40J 39J 38J 37J 36J 35J 34J 33J 32J 31J 50J 49J 48J 47J 48J 45J 44J 43J 42J 210 200 190 180 170 160 150 140 130 120 110 30 20 20 280 250 250 240 280 220 Signal Name 54 34 24 11 104 84 74 64 74J 73J 72J 71J 79J 78J 77J 76J L ī Connector Name WIRE TO WIRE Connector Name | WIRE TO WIRE M 75J 80J 5 4 12 11 10 9 WHITE Connector Color WHITE M40 M75 Color of Wire

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Terminal No.

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**DLK-279** Revision: July 2009 2010 Pathfinder

Connector No.

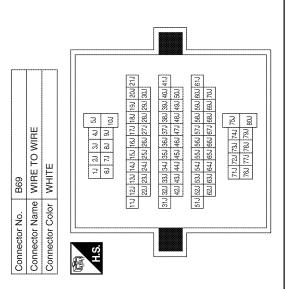
#### Connector Name | FRONT DOOR SWITCH LH Signal Name Signal Name Connector Name | WIRE TO WIRE 1 2 3 4 5 6 WHITE Connector Color | WHITE 3 2 1 Color of Wire Color of Wire B8 > G GR Connector Color Connector No. Connector No. Terminal No. Terminal No. 9 0 2 N E 偃 Signal Name Signal Name ī Connector Name | WIRE TO WIRE Connector Name | WIRE TO WIRE WHITE Connector Color WHITE Color of Wire Color of Wire ე 0 $^{\circ}$ ₾ > Connector Color Connector No. Connector No. Terminal No. **Terminal No** 9 Ξ ო 4 9 N 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 26G 27G 28G 29G 30G 31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G 42G 43G 43G 44G 45G 46G 47G 48G 49G 50G 51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G 62G 62G 63G 64G 65G 66G 67G 68G 69G 70G Connector Name | REAR DOOR SWITCH LH 716 726 736 746 756 766 776 786 79G 80G 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G Signal Name Signal Name Connector Name WIRE TO WIRE WHITE Connector Color WHITE E152 Q-~0 B18 Color of Wire Color of Wire ۵ Connector Color Connector No. Connector No. Terminal No. Terminal No. 55G Ø

Revision: July 2009 DLK-280 2010 Pathfinder

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# **BCM (BODY CONTROL MODULE)** [WITHOUT INTELLIGENT KEY SYSTEM] Signal Name Connector Name WIRE TO WIRE Connector Color WHITE B106 Color of Wire SB Connector No. Terminal No. 10 -

······									
Signal Name	i	1	1	ŀ	ł	Į	ı	ī	ļ
Color of Wire	FC	۵	GR	0	ŋ	О.	٦	۸	-1
Terminal No. Wire	56J	607	61J	637	65J	66J	71J	72.1	73.1



6	REAR DOOR SWITCH RH	ITE		Signal Name	I
. B116		lor WHITE		Color of Wire	
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	٥

	I			ſ	
98	FRONT DOOR SWITCH RH	WHITE		Signal Name	a a
B108	}	lor W		Color of Wire	n D
Connector No.	Connector Name	Connector Color	是 H.S.	Terminal No.	2

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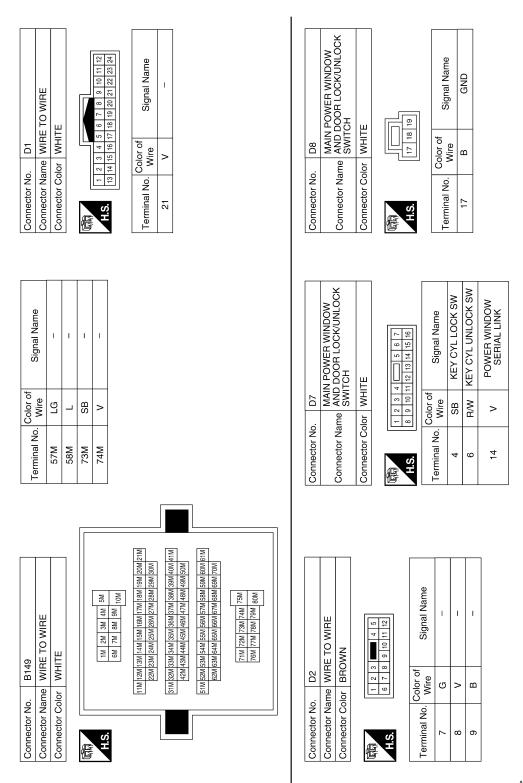
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# BCM (BODY CONTROL MODULE)

# [WITHOUT INTELLIGENT KEY SYSTEM]

	·	·	1 1		r	r
5	E TO WIRE	二	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Signal Name	ĵ	İ
. D102	me WIR	lor WHI	9 10 11 12 13 14	Color of Wire	В	0
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	所 H.S.	Terminal No. Wire	က	5
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				ame		

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Connector No.	b. D119	
Connector Name		FRONT DOOR LOCK ASSEMBLY RH (DOOR LOCK ACTUATOR)
Connector Color WHITE	olor WHIT	ш
原司 H.S.		Q
Terminal No.	Color of Wire	Signal Name
-	Ĝγ	ı
٥	۸	•

<b>-</b>	E TO WIRE	ш	9 10 11 12	Signal Name	Į	I	ı	ŧ	
500	me WIF	lor WH	6 1 7 8	Color of Wire	>	G/Y	>	В	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	雨 H.S.	Terminal No.	2	3	5	12	

Connector No.	D105	5
Connector Na	ame DO(	Connector Name DOOR LOCK/UNLOCK SWITCH RH
Connector Color WHITE	olor WH	丑
H.S.	8 0 10 8 10	2 3 4 ( ) 5 6 7 9 10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
=	В	GND
16	۸	POWER WINDOW

4	FRONT DOOR LOCK ASSEMBLY LH	IAY	4 3 2 1	Signal Name	I	1	ı	1	1
. D14		lor GRAY	8	Color of Wire	>	മ	R/W	മ	SB
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.		2	3	4	S

3	FRONT DOOR LOCK ASSEMBLY RH (DOOR UNLOCK SENSOR)	ÖK	<u> </u>	Signal Name	1	-
D103		or BLACK		Color of Wire	0	В
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.	3	5
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Revision: July 2009 DLK-283 2010 Pathfinder

# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

Connector No. D201 Connector Name WIRE TO WIRE Connector Color WHITE	o. D201 ame WIRE olor WHITE	TO WIRE	Connector No. D205 Connector Name REAR I ACTUA Connector Color WHITE	. D205 me REAR ACTUA	D205 REAR DOOR LOCK ACTUATOR LH WHITE	888	Connector No. D301 Connector Name WIRE T Connector Color WHITE	Connector No. D301 Connector Name WIRE TO WIRE Connector Color WHITE	O WIRE	
H.S.	5 4 11 10 9	8 7 2 1 8 7 2 1	原 用.S.				H.S.	5 4 7 3	8 7 6	
Terminal No. Wire 10 G	Color of Wire C	Signal Name	Terminal No.	Color of Wire G	Signal Name	<u> </u>	Terminal No. 10	Color of Wire G	Signal Name	
Connector No. Connector Name	o. D305 lame REAR I ACTUA	Connector No. D305 Connector Name REAR DOOR LOCK ACTUATOR RH Connector Color WHITE	Connector No. D401 Connector Name WIRE TO WIRE Connector Color WHITE	D401 me WIRE 1	TO WIRE	888	Connector No. D402 Connector Name WIRE T Connector Color WHITE	Connector No. D402 Connector Name WIRE TO WIRE Connector Color WHITE	O WIRE	
品S.			语.	8 7 8 9 4			H.S.	6 3 2 4 4		I
Terminal No.	<sub>ర</sub> >	Signal Name	Terminal No.	Color of Wire	Signal Name	Te	Terminal No.	Color of Wire	Signal Name	
- 0	<u>س</u> >	1 1	N m	o	1 1		2	>	1	
1	•		4	Д	ı		9	G	1	
			Ç	<u>c</u>	ı					

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# **BCM (BODY CONTROL MODULE)**

# [WITHOUT INTELLIGENT KEY SYSTEM]

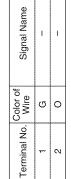
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WIRE TO WIRE WHITE	48	Signal Name	1	-	ı	ą		WIRE TO WIRE	52.1	<u>_</u>	Signal Name	ı	ł	1			
	1 2 3 5 6 7 7	Color of Wire	a.	97	5	0	o. D505	3 :	olor WHITE	1234	Color of Wire	В	>	g	J		
Connector Name Connector Color	H.S.	Terminal No.	4	9	7	88	Connector No.	Connector Name	Connector Color	H.S.	Terminal No.		2	ဇ	4		
212121		L		ł	II.		<u> </u>	L			L		J	3		ı	
		me						Œ				2					
O WIRE	2112	Signal Name	ŀ	1	-	1		GLASS HATCH AJAR	-		Signal Name		1				
me WIRE TO WIRE	8 4 9 5 5	Color of Wire	a.	97	ŋ	0	. D503	£ .		-1	Color of	wire	2				
Connector Name WIRE T	卓有 H.S.	Terminal No.	4	9	7	80	Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No	,					
,10101		L <u> </u>	1	1			۷		10								1
											<u>o</u>						
) WIRE		Signal Name	1	ı	ı			BACK DOOR LATCH			Signal Name	ı	l	ı	*		
Connector Color WHITE	4 3 2 1	Color of Wire	В	>	<b>5</b>	 	D502		v WHITE	4 3 2 1	Color of Wire		ш	c.	ВВ		
Connector Color	H.S.	Terminal No.	<b></b>	2	6	4	Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2	9	4		

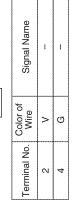
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Connector No.	D508
Connector Name	Connector Name GLASS HATCH LOCK ACTUATOR
Connector Color	WHITE



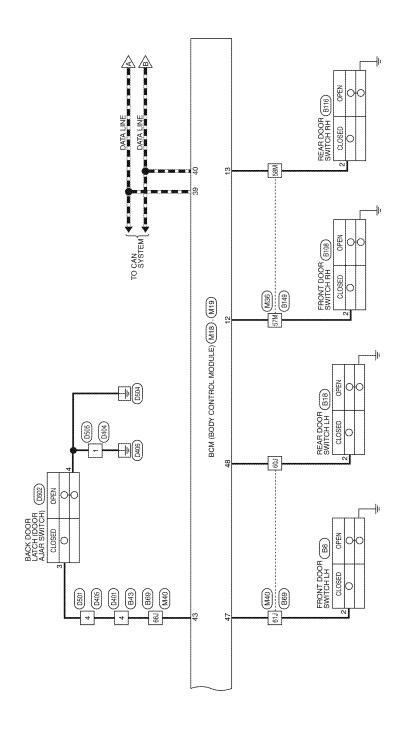
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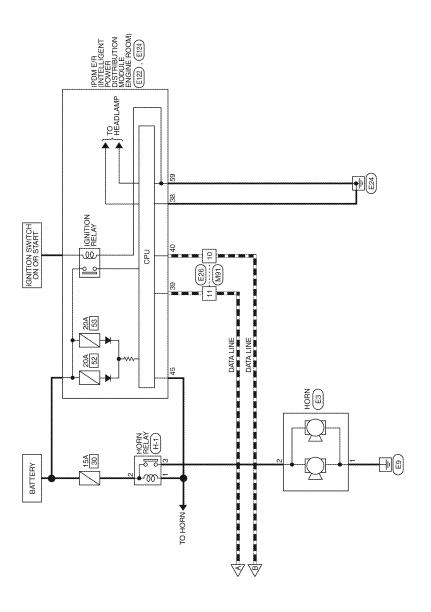
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Wiring Diagram — REMOTE KEYLESS ENTRY SYSTEM — INFOID:000000005260107

В TO INTERIOR ROOM LAMP С D Е F FUSE BLOCK (J/B) (M3), (M4) G IGNITION SWITCH ON OR START 40 -Н IGNITION SWITCH ACC OR ON 40 4 BCM (BODY CONTROL MODULE) (MZ0) J DLK REMOTE KEYLESS ENTRY SYSTEM L KEY SWITCH (M27) M M31 Ν (E10) (M6 0 ABKWA0593GB



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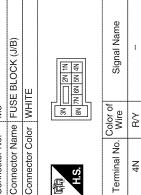
Connector Name WIRE TO WIRE WHITE

Connector Color

Connector No. M6

# REMOTE KEYLESS ENTRY SYSTEM CONNECTORS

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



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

SH	Terminal No.	4Þ	15P
7P 6P 5P 4P 1	Color of Wire	G/B	W/R
4F 13P 12P 11F	0)		

Signal Name

Terminal No.

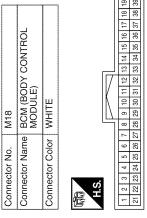
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1	G/B W/R	4P 15P
Signal Nam	Color of Wire	Terminal No.

MODULE)			22 49
MODULE) Connector Color WHITE			54 46
Connector Color WHITE	<u> </u>		53 46
MC   Connector Color   WH	2	==	44 4
Connector Color	Š	¥	2 43
Connector Colo			50 41
		Connector Colo	

		-	
G GR G	Terminal No.	Color of Wire	Signal Name
GR P	43	Ф	BACK DOOR SW
۵	47	GR	DOOR SW (DR)
	48	Ф	DOOR SW (RL)

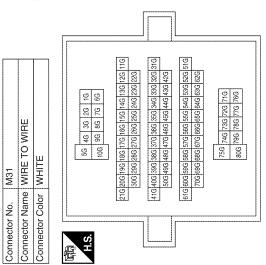
	-								r	
Signal Name	ACC SW	DOOR SW (AS)	DOOR SW (RR)	KEYLESS AND AUTO LIGHT SENSOR GND	KEYLESS TUNER POWER SUPPLY OUTPUT	KEYLESS TUNER SIGNAL	KEY SW	IGN SW	CAN-H	CAN-L
Color of Wire	G/B	re	ب.	ВВ	>	g	83	W/R		o.
Terminal No.	F	12	13	18	19	20	37	38	39	40



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AGN	BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]										
L	Connector Color WHITE		H.S.	Terminal No.   Color of   Signal Name		-					
Signal Name	FLASHER OUTPUT (LEFT)	FLASHER OUTPUT (RIGHT)	ROOM LAMP	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	BAT (F/L)	Signal Name			
Color of Wire	5	Ø	BR	>		В	3	Color of Wire			
Terminal No.	09	61	63	65	99	67	70	Terminal No.			
		l			I		T	310			

	I		1				
0	BCM (BODY CONTROL MODULE)	BLACK		Signal Name	BATTERY SAVER OUTPUT	BAT (FUSE)	DOOR UNLOCK OUTPUT (DR)
M20		ļ	56 57 58 65 66	Color of Wire	В/Y	₽₹	GR
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	56	57	59



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**DLK-291** Revision: July 2009 2010 Pathfinder DLK

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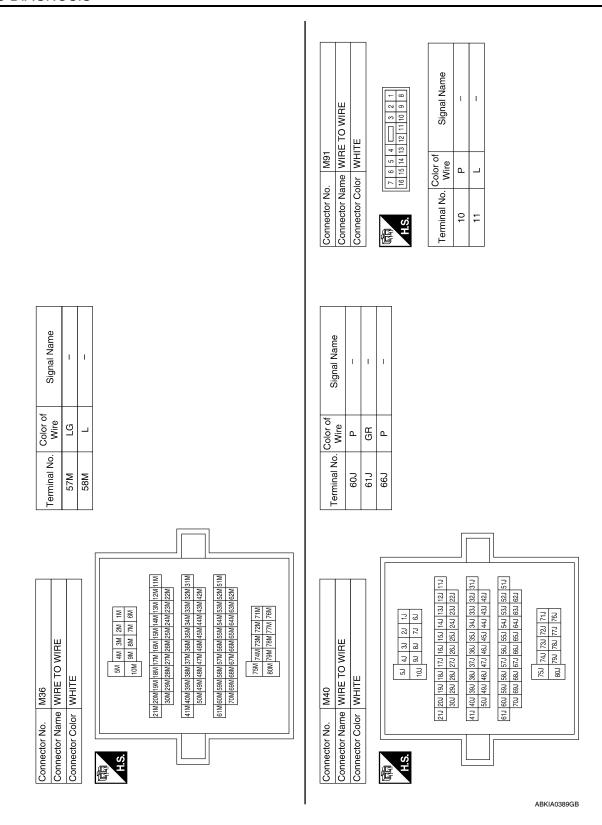
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# **BCM (BODY CONTROL MODULE)**

# [WITHOUT INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	, E10	
Connector Name WIRE TO WIRE	me WIRE	TO WIRE
Connector Color WHITE	lor WHIT	4 3 3
南 H.S.	~ m	8 C L 8
Terminal No.	Color of Wire	Signal Name
7	⋧	

Connector Color BLACK Connector No. E3 Connector Name HORN

Connector No. M120

	,	,	
8	Signal Name	-	
8 / 0 c	Color of Wire	W	
Ć.	erminal No.	7	

Signal Name

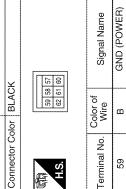
Color of Wire

Terminal No.

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Solor WHITE
Name POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector No.	E122
Connector Name	Connector Name POWER DISTRIBL MODULE ENGINE
Connector Color WHITE	WHITE

Signal Name	GND (SIGNAL)	CAN-H	CAN-L	ANT THEFT HORN
Color of Wire	В	١	a.	57
Terminal No.	38	39	40	45

Connector Name		REMOTE KEYLESS ENTRY RECEIVER
Connector Color		WHITE
H.S.		4
Terminal No.	Color of Wire	Signal Name
<b></b> -	BR	GND
2	g	SIGNAL
4	>	PWR

Connector No.	). E26	
Connector Name WIRE TO WIRE	me WIF	RE TO WIRE
Connector Color WHITE	olor WH	ITE
H.S.	8 9 10 11	3
Terminal No.	Color of Wire	Signal Name
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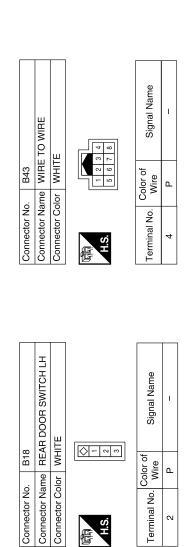
Connector Name WIRE TO WIRE WHITE

Connector Color

E152

Connector No.

# Connector Name FRONT DOOR SWITCH LH Signal Name Connector Color WHITE Q - α ε Color of Wire B8 GR Connector No. Terminal No. N Signal Name Color of Wire Terminal No. 55G | 11G | 12G | 13G | 14G | 15G | 16G | 17G | 18G | 19G | 20G | 21G | | 22G | 23G | 24G | 25G | 26G | 27G | 28G | 29G | 30G | | 31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G 42G 43G 44G 45G 46G 47G 48G 49G 50G 51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G 62G 63G 64G 65G 66G 67G 68G 69G 70G 71G 72G 73G 74G 75G 76G 77G 78G 79G 80G 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G

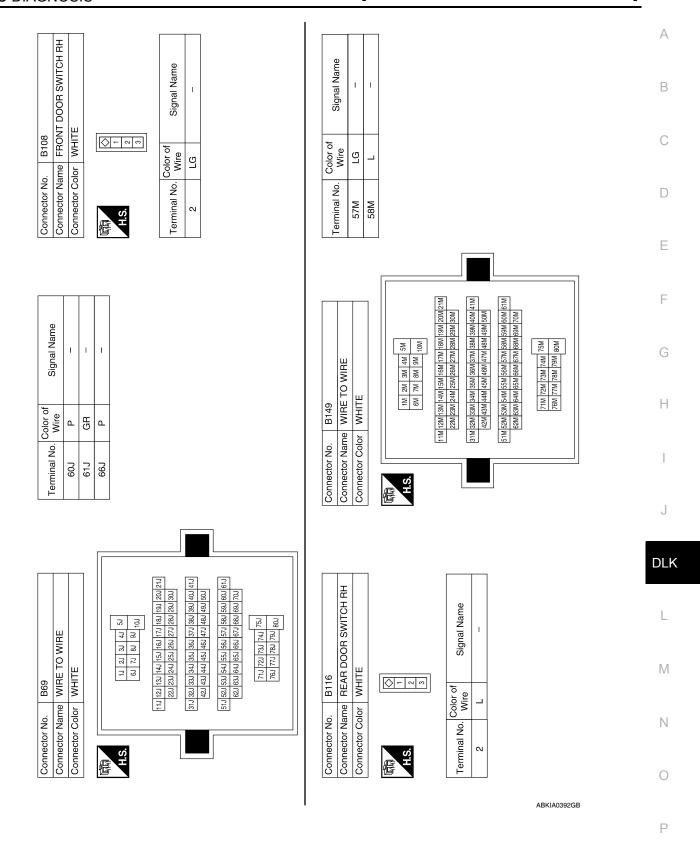


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# BCM (BODY CONTROL MODULE)

# < ECU DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]



Signal Name

Terminal No.

Signal Name

Terminal No.

Signal Name

Color of Wire

Terminal No.

P HB

Connector No. D401 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. D404 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. D405 Connector Name WIRE TO WIRE Connector Color WHITE
(五) H.S. (8) 7 6 5	(4 3 2 1) H.S.	H.S. 8 7 6 5
Terminal No. Wire Signal Name	Terminal No. Wire Signal Name 1 B -	Terminal No. Wire Signal Name 4 P -
		Connector Name WIRE TO WIRE Connector Color WHITE
H.S. (5 6 7 8 4	H.S. (4 3 2 1)	H.S.

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Fail-safe index

Fail Safe

FUSE AND FUSIBLE LINK BOX (HORN RELAY)

Connector Name Connector Color

Ī

Connector No.

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

Signal Name

Color of Wire

Terminal No.

B 0 5

0 0

# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

## < ECU DIAGNOSIS >

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

# DTC Inspection Priority Chart

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT
2	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2013: STRG COMM 1 B2552: INTELLIGENT KEY B2590: NATS MALFUNCTION
3	C1729: VHCL SPEED SIG ERR     C1735: IGNITION SIGNAL
4	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] FR C1711: [NO DATA] RR C1711: [NO DATA] RR C1711: [NO DATA] RR C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [CODE ERR] FL C1720: [CODE ERR] FR C1721: [CODE ERR] RR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FR C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR

DTC Index

### NOTE:

Details of time display

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

# BCM (BODY CONTROL MODULE) [WITHOUT INTELLIGENT KEY SYSTEM]

# < ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	Α
No DTC is detected. further testing may be required.	_	_	_	_	В
U1000: CAN COMM CIRCUIT	_	_	_	BCS-33	
B2013: STRG COMM 1	_	_	_	SEC-29	С
B2190: NATS ANTENNA AMP	_	_	_	SEC-32 (with I- Key), SEC-136 (without I-Key)	D
B2191: DIFFERENCE OF KEY	_	_	_	SEC-35 (with I- Key), SEC-139 (without I-Key)	E
B2192: ID DISCORD BCM-ECM	_	_	_	SEC-36 (with I- Key), SEC-140 (without I-Key)	F
B2193: CHAIN OF BCM-ECM	_	_	_	SEC-38 (with I- Key), SEC-142 (without I-Key)	G
B2552: INTELLIGENT KEY	_	_	_	SEC-40	
B2590: NATS MALFUNCTION	_	_	_	SEC-41	_
C1708: [NO DATA] FL	_	_	_	<u>WT-14</u>	Н
C1709: [NO DATA] FR	_	_	_	<u>WT-14</u>	_
C1710: [NO DATA] RR	_	_	_	<u>WT-14</u>	
C1711: [NO DATA] RL	_	_	_	<u>WT-14</u>	
C1712: [CHECKSUM ERR] FL	_	_	_	<u>WT-16</u>	_
C1713: [CHECKSUM ERR] FR	_	_	_	<u>WT-16</u>	J
C1714: [CHECKSUM ERR] RR	_	_	_	<u>WT-16</u>	
C1715: [CHECKSUM ERR] RL	_	_	_	<u>WT-16</u>	DL
C1716: [PRESSDATA ERR] FL	_	_	_	<u>WT-18</u>	DL
C1717: [PRESSDATA ERR] FR	_	_	_	<u>WT-18</u>	
C1718: [PRESSDATA ERR] RR	_	_	_	<u>WT-18</u>	L
C1719: [PRESSDATA ERR] RL	_	_	_	<u>WT-18</u>	
C1720: [CODE ERR] FL	_	_	_	<u>WT-16</u>	
C1721: [CODE ERR] FR			_	<u>WT-16</u>	M
C1722: [CODE ERR] RR		_	_	<u>WT-16</u>	_
C1723: [CODE ERR] RL	_		_	<u>WT-16</u>	Ν
C1724: [BATT VOLT LOW] FL	_	_	_	<u>WT-16</u>	
C1725: [BATT VOLT LOW] FR	_	_	_	<u>WT-16</u>	
C1726: [BATT VOLT LOW] RR	_	_	_	<u>WT-16</u>	0
C1727: [BATT VOLT LOW] RL	_	_	_	<u>WT-16</u>	
C1729: VHCL SPEED SIG ERR	_	_	_	<u>WT-19</u>	Р
C1735: IGNITION SWITCH	_	_	_	_	

Revision: July 2009 DLK-299 2010 Pathfinder

# SYMPTOM DIAGNOSIS

# **DOOR LOCK**

Symptom Table

# DOOR LOCK SYSTEM

### NOTE:

- Before performing the diagnosis in the following table, check "Work flow". Refer to <u>DLK-204, "Work Flow".</u>
- If the following symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Symptom	Repair order	Refer to page
	1. Door switch check	DLK-226
Key reminder door function does not operate properly.	2. Key switch (Insert) check	DLK-256
property.	3. Replace BCM.	BCS-59
Power door lock does not operate with door lock	Door lock/unlock switch check (driver side)	DLK-231
and unlock switch on main power window and door lock/unlock switch or power window and door lock/unlock switch RH.	Door lock/unlock switch check (passenger side)	DLK-233
	Door lock actuator check (Front LH)	DLK-240
	2. Door lock actuator check (Front RH)	DLK-241
Charifie door look actuator doos not aparata	3. Door lock actuator check (Rear LH)	DLK-242
Specific door lock actuator does not operate.	4. Door lock actuator check (Rear RH)	DLK-244
	5. Back door lock actuator check	DLK-245
	6.Glass hatch lock actuator check	DLK-247
Back door does not operate using back door	Check back door opener switch	DLK-236
opener switch (door locks are open).	Check back door lock actuator.	DLK-245
Glass hatch does not open using glass hatch ajar	Check glass hatch ajar switch	DLK-229
switch (door locks are open).	Check glass hatch lock actuator.	DLK-247
Power door lock does not operate with front door	Front door lock assembly LH (key cylinder switch) check	DLK-238
key cylinder LH operation.	2. Replace BCM.	BCS-59
	BCM power supply and ground circuit check	BCS-34
Power door lock does not operate.	2. Door lock/unlock switch check (driver)	DLK-231
	3. Door lock/unlock switch check (passenger)	DLK-233
Vehicle speed sensing auto LOCK operation does	Ensure automatic door lock/unlock function (lock operation) is enabled.	DLK-219
not operate.	Check combination meter vehicle speed signal.	<u>MWI-28</u>
or operate.	3. Check intermittent incident.	<u>GI-37</u>
Ignition OFF interlock door UNLOCK function	Ensure automatic door lock/unlock function (unlock operation) is enabled.	DLK-219
does not operate.	2. Check BCM for DTCs.	DLK-298
	3. Check intermittent incident.	<u>GI-37</u>

# **REMOTE KEYLESS ENTRY SYSTEM**

< SYMPTOM DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

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# REMOTE KEYLESS ENTRY SYSTEM

Symptom Table INFOID:0000000005260112

# REMOTE KEYLESS ENTRY SYSTEM

Symptom	Diagnoses/service procedure	Reference page
All functions of remote keyless entry system do not operate.	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)     NOTE:     If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
	2. Check BCM and remote keyless entry receiver.	DLK-249
	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)     NOTE:     If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
The new ID of keyfob cannot be entered.	2. Key switch (insert) check	DLK-256
	3. Door switch check	DLK-226
	4. ACC power check	BCS-34
	5. Replace BCM.	BCS-59
Door lock or unlock does not function. (If the power door lock system does not operate manually, check power door lock system)	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)     NOTE:     If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-214
	2. Replace BCM.	BCS-59
Hazard and horn reminder does not activate properly when pressing lock or unlock button of keyfob.	Check hazard and horn reminder mode with CONSULT-III     NOTE:     Hazard and horn reminder mode can be changed.     First check the hazard and horn reminder mode setting.	DLK-214
	2. Door switch check	DLK-226
	3. Replace BCM.	BCS-59
Hazard reminder does not activate properly when pressing lock or unlock button of keyfob.	Check hazard reminder mode with CONSULT-III     NOTE:     Hazard reminder mode can be changed.     First check the hazard reminder mode setting.	DLK-220
(Horn reminder OK)	2. Check hazard function with hazard switch	_
	3. Replace BCM.	BCS-59
Horn reminder does not activate properly when pressing lock or unlock button of keyfob. (Hazard reminder OK)	Check horn reminder mode with CONSULT-III     NOTE:     Horn reminder mode can be changed.     First check the horn reminder mode setting.	DLK-214
	2. Check horn function with horn switch	_
	3. IPDM E/R operation check	DLK-253
	4. Replace BCM.	BCS-59
	1. Room lamp operation check	INL-3
Room lamp and ignition keyhole illumination do not	2. Ignition keyhole illumination operation check	INL-3
operate properly.	3. Door switch check	DLK-226
	4. Replace BCM.	BCS-59

# REMOTE KEYLESS ENTRY SYSTEM

# < SYMPTOM DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

Symptom	Diagnoses/service procedure	Reference page
Panic alarm (horn and headlamp) does not activate when panic alarm button is continuously pressed.	Keyfob battery and function check (use Remote Keyless Entry Tester J-43241)     NOTE:     If the result of keyfob function check is OK, keyfob is not malfunctioning.	DLK-251
	2. Key switch (insert) check	DLK-256
	3. Replace BCM.	BCS-59
Auto door lock operation does not activate properly. (All other remote keyless entry functions OK.)	Check auto door lock operation mode with CONSULT-III     NOTE:     Auto door lock operation mode can be changed.     First check the auto door lock operation mode setting.	DLK-212
	2. Replace BCM.	BCS-59
Keyless power window down (open) operation does not activate properly. (All other remote keyless entry functions OK.)	Check power window down operation mode with CONSULT-III NOTE:  Power window down operation mode can be changed.  First check the power window down operation mode setting.	DLK-220
	2. Check power window function with switch	PWC-5
	3. Replace BCM.	BCS-59

# **HOMELINK UNIVERSAL TRANSCEIVER**

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

# HOMELINK UNIVERSAL TRANSCEIVER

Symptom Table

# HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom		Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1.	Check homelink universal transceiver function.	DLK-264
riomennik universal transceiver does not operate property.		Check Intermittent Incident.	<u>GI-37</u>

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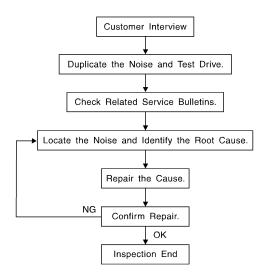
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Work Flow INFOID:000000005260114



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## **CUSTOMER INTERVIEW**

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to <a href="DLK-308">DLK-308</a>, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

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

## DUPLICATE THE NOISE AND TEST DRIVE

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

### < SYMPTOM DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

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

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

### CHECK RELATED SERVICE BULLETINS

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

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

# LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis Ear: J-39570, Engine Ear: J-39565 and mechanic's stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- removing the components in the area that you suspect the noise is coming from.

Do not use too much force when removing clips and fasteners, otherwise clips and fasteners can be broken or lost during the repair, resulting in the creation of new noise.

- tapping or pushing/pulling the component that you suspect is causing the noise.
  - Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only tem-
- feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
- placing a piece of paper between components that you suspect are causing the noise.
- · looking for loose components and contact marks. Refer to DLK-306, "Generic Squeak and Rattle Troubleshooting".

### REPAIR THE CAUSE

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

### **CAUTION:**

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

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

**INSULATOR** (Foam blocks)

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

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

**INSULATOR** (Light foam block)

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

FELT CLOTH TAPE

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

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

**UHMW (TEFLON) TAPE** 

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

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**DLK-305** Revision: July 2009 2010 Pathfinder

< SYMPTOM DIAGNOSIS >

[WITHOUT INTELLIGENT KEY SYSTEM]

### SILICONE GREASE

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

Note: Will only last a few months.

SILICONE SPRAY

Use when grease cannot be applied.

**DUCT TAPE** 

Use to eliminate movement.

### CONFIRM THE REPAIR

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

# Generic Squeak and Rattle Troubleshooting

INFOID:000000005260115

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

### **INSTRUMENT PANEL**

Most incidents are caused by contact and movement between:

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

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

### **CAUTION:**

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

### CENTER CONSOLE

Components to pay attention to include:

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

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

### DOORS

Pay attention to the:

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

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

### TRUNK

Trunk noises are often caused by a loose jack or loose items put into the trunk by the owner. In addition look for:

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

### < SYMPTOM DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

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

# SUNROOF/HEADLINING

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

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

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

# OVERHEAD CONSOLE (FRONT AND REAR)

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

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

### SEATS

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

Cause of seat noise include:

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

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

### UNDERHOOD

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

Causes of transmitted underhood noise include:

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

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

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Revision: July 2009 DLK-307 2010 Pathfinder

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# **Diagnostic Worksheet**

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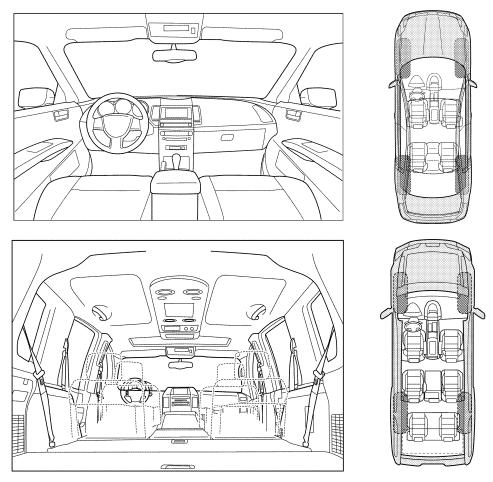
### Dear Customer:

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

### **SQUEAK & RATTLE DIAGNOSTIC WORKSHEET**

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

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



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

< SYMPTOM DIAGNOSIS >

# [WITHOUT INTELLIGENT KEY SYSTEM]

	noise occurs:			
I. WHEN DOES IT OCCUR? (please	check the boxes	that apply)		
Anytime	☐ After	sitting out in the r	ain	
1st time in the morning	☐ Wher	n it is raining or we	et	
Only when it is cold outside		r dusty conditions		
Only when it is hot outside	☐ Other	:		
II. WHEN DRIVING:	IV. WHA	T TYPE OF NOIS	E	
☐ Through driveways	☐ Squea	ak (like tennis sho	es on a clean floor)	
Over rough roads			an old wooden floor)	
Over speed bumps	☐ Rattle	(like shaking a b	aby rattle)	
Only about mph	☐ Knock	k (like a knock at t	he door)	
On acceleration	☐ Tick (	like a clock secor	d hand)	
Coming to a stop		p (heavy muffled I		
On turns: left, right or either (circle)	) 🔲 Buzz	(like a bumble be	e)	
With passengers or cargo				
Other:				
After driving miles or r	minutes			
TO BE COMPLETED BY DEALERSHI	IP PERSONNEL			
Test Drive Notes:	LIGOINILL			
		 'ES NO	Initials of person	
	١	res no	Initials of person performing	
Vehicle test driven with customer	١	res no	Initials of person performing	
- Noise verified on test drive	``````````````````````````````````````	res no	Initials of person performing	
<ul><li>Noise verified on test drive</li><li>Noise source located and repaired</li></ul>		/ES NO	Initials of person performing	
		/ES NO	Initials of person performing	
<ul><li>Noise source located and repaired</li><li>Follow up test drive performed to co</li><li>VIN:</li></ul>	nfirm repair Custom	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	performing	
<ul><li>Noise verified on test drive</li><li>Noise source located and repaired</li><li>Follow up test drive performed to co</li></ul>	nfirm repair Custom	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	performing	
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# **PRECAUTIONS**

[WITHOUT INTELLIGENT KEY SYSTEM]

# **PRECAUTION**

# **PRECAUTIONS**

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

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

### **WARNING:**

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

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

# **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution for work

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

# **PREPARATION**

< PREPARATION >

# [WITHOUT INTELLIGENT KEY SYSTEM]

# **PREPARATION**

# **PREPARATION**

Special Service Tool

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

Tool number (Kent-Moore No.) Tool name		Description
 (J-39570) Chassis ear	SIIAO993E	Locating the noise
— (J-43980) NISSAN Squeak and Rat- tle Kit	SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	LEL946A	Used to test keyfobs

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# **PREPARATION**

# [WITHOUT INTELLIGENT KEY SYSTEM]

# **Commercial Service Tool**

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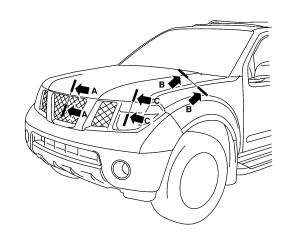
(Kent-Moore No.) Tool name		Description
(J-39565) Engine ear	SIIA0995E	Locating the noise

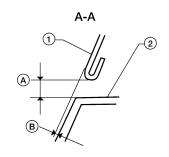
# **ON-VEHICLE REPAIR**

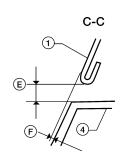
# HOOD

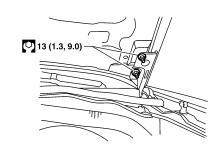
# Fitting Adjustment

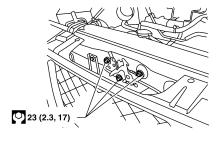
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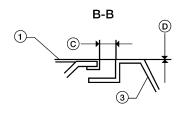












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- 1. Hood
- 4. Headlamp assembly
- C. 4.5 mm (0.18 in)
- F. 0.7 mm (0.03 in)

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

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

# CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

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

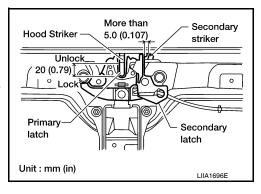
- 5. Tighten the bolts to specification.
- 6. Adjust the surface height of the hood according to the fitting standard dimension by rotating right and left rubber bumpers.
- 7. Install the front grille. Refer to EXT-18, "Removal and Installation".

### HOOD LOCK ADJUSTMENT

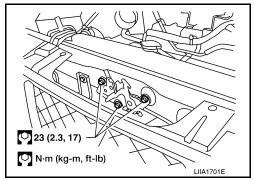
- 1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
- 2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
- Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

# **CAUTION:**

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



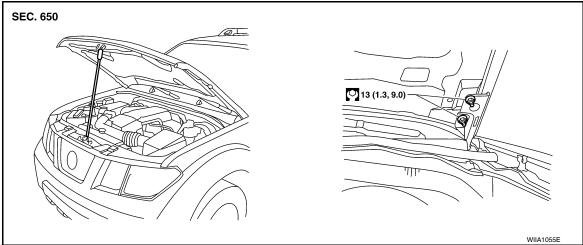
4. After adjusting hood lock, tighten the lock bolts to the specified torque.



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

# Removal and Installation of Hood Assembly

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

### CALITION

Operate with two workers, because of its heavy weight.

Installation is in the reverse order of removal.

Removal and Installation of Hood Lock Control

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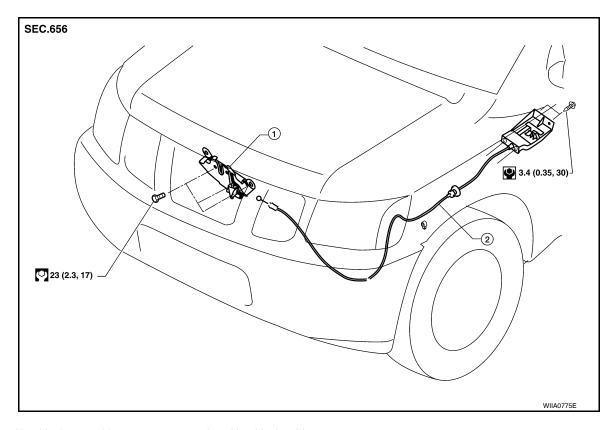
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Hood lock assembly

2. Hood lock cable

# REMOVAL

- Remove the front grille. Refer to <u>EXT-18</u>, "Removal and Installation".
- 2. Remove the front fender protector (LH). Refer to <u>EXT-23</u>, "Removal and Installation of Front Fender Protector".
- 3. Disconnect the hood lock cable from the hood lock, and unclip it from the radiator core support upper and hoodledge.
- 4. Remove the bolts, and the hood release handle.
- Separate the grommet from the lower dash panel. Pull the hood lock cable out through the passenger compartment.

# **CAUTION:**

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

### INSTALLATION

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

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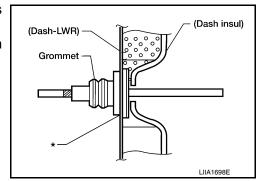
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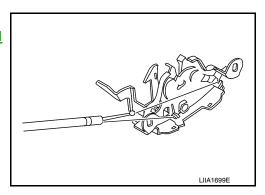
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Be careful not to bend the cable too much, keep the radius 100mm (3.94 in) or more.

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



- Install the cable securely to the lock.
- Adjust the hood lock. Refer to <u>DLK-316</u>, "Hood Lock Control Inspection".



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

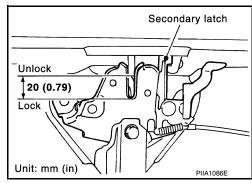
# **Hood Lock Control Inspection**

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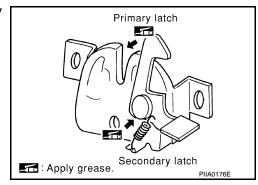
### **CAUTION:**

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

- 1. Remove the front grille. Refer to EXT-18, "Removal and Installation".
- Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
- 3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.



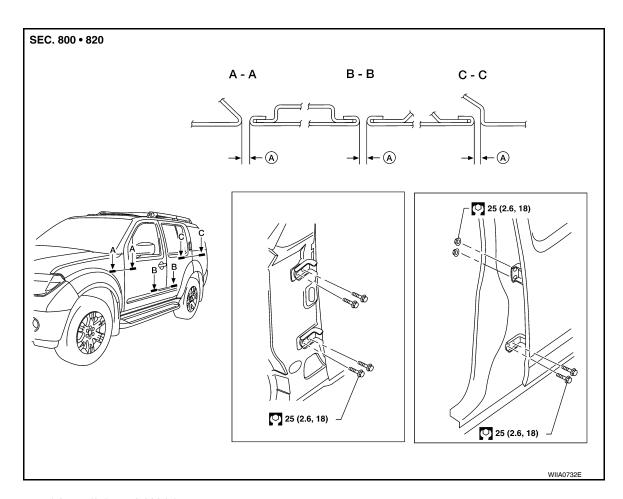
4. Check the hood lock lubrication condition. If necessary, apply "body grease" to the points shown.



Install the front grille. Refer to <u>EXT-18</u>, "Removal and Installation".

# **DOOR**

# Fitting Adjustment



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

# Front door

Longitudinal clearance and surface height adjustment at front end

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

## Rear door

Longitudinal clearance and surface height adjustment at front end

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

### Back door

Longitudinal clearance and surface height adjustment

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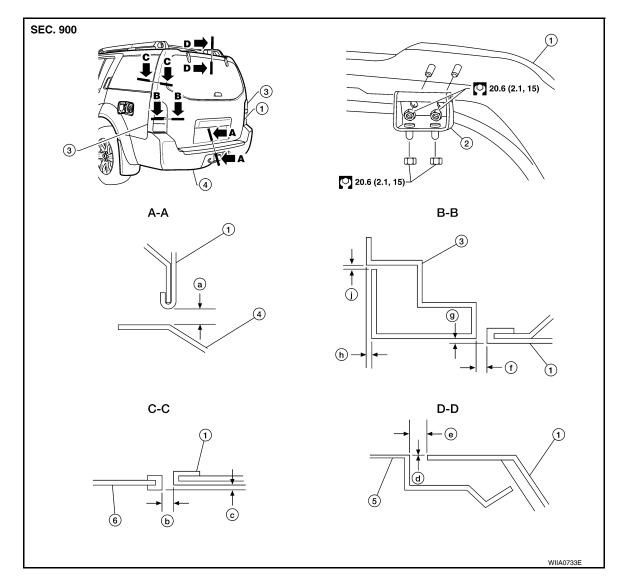
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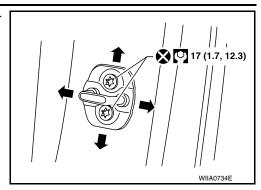
- 1. Back door assembly
- 4. Rear bumper fascia
- a.  $7.2 \pm 2.0 \text{ mm} (0.28 \pm 0.06 \text{ in})$
- d.  $1.0 \pm 1.5 \text{ mm} (0.04 \pm 0.06 \text{ in})$
- g.  $0.8 \pm 2.0 \text{ mm} (0.03 \pm 0.08 \text{ in})$
- 2. Back door hinge
- 5. Roof
- b.  $6.0 \pm 1.5 \text{ mm} (0.24 \pm 0.06 \text{ in})$
- e.  $8.0 \pm 1.5$  mm  $(0.31 \pm 0.06$  in)
- h.  $0.8 \pm 1.0 \text{ mm} (0.03 \pm 0.04 \text{ in})$
- 3. Tail lamp assembly
- 6. Side window glass
- c. 2.0  $\pm$  2.0 mm ( 0.08  $\pm$  0.08 in)
- f.  $5.3 \pm 2.0 \text{ mm} (0.21 \pm 0.08 \text{ in})$
- j.  $2.0 \pm 1.0 \text{ mm} (0.08 \pm 0.04 \text{ in})$

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

# Striker adjustment

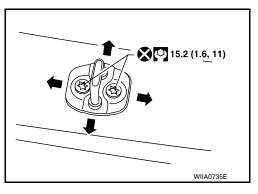
**BODY SIDE DOORS** 

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



### **BACK DOOR**

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



# Removal and Installation

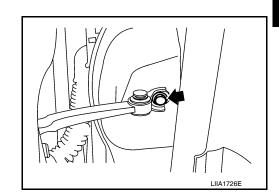
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### FRONT DOOR

### **CAUTION:**

- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".
- Remove the front door glass and regulator. Refer to GW-15, "Front Door Glass Regulator".
- 2. Remove the door harness.
- 3. Remove the check link bolt from the hinge pillar.

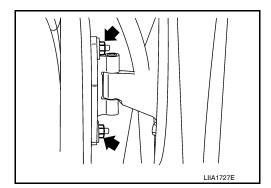
Check link to hinge pillar 14.7 N·m (1.5 kg-m, 11 ft-lb) bolt



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

Door hinge nuts 24.5 N·m (2.5 kg-m, 18 ft-lb)

Installation is in the reverse order of removal.



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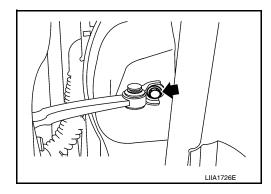
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## **REAR DOOR**

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

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

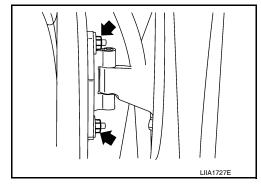


Remove the door-side hinge nuts, and remove the door assembly.

**Door hinge nuts** 

24.5 N·m (2.5 kg-m, 18 ft-lb)

Installation is in the reverse order of removal.



### **BACK DOOR**

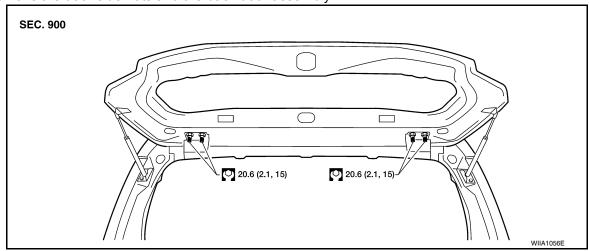
- 1. Remove the glass hatch. Refer to GW-24, "Removal and Installation".
- 2. Remove the license lamp finisher. Refer to EXT-21, "Removal and Installation".
- 3. Remove the back door lock assembly. Refer to <u>DLK-326, "Component Structure"</u>.
- 4. Remove the back door wire harness.
- 5. Remove the rear washer nozzle and hose from the back door. Refer to <a href="https://www.83, "Removal and Installation"><u>WW-83, "Removal and Installation"</u></a>

### **CAUTION:**

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

- 6. Support the back door.
- 7. Remove the back door stays.

8. Remove the door side nuts and the back door assembly.



Installation is in the reverse order of removal.

• Align the back door. Refer to DLK-317, "Fitting Adjustment".

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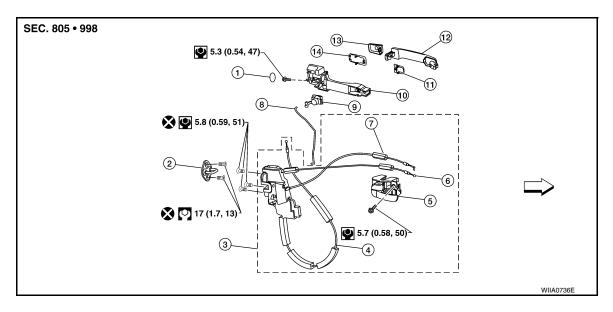
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# FRONT DOOR LOCK

# Component Structure

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

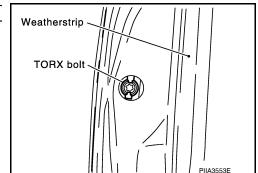
- 3. Door lock assembly
- 6. Inside handle cable
- 9. Door key cylinder
- 12. Outside handle

# Removal and Installation

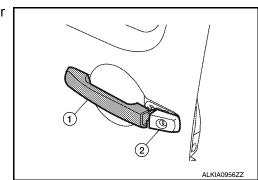
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# REMOVAL

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



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



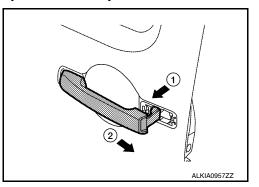
# FRONT DOOR LOCK

# < ON-VEHICLE REPAIR >

## [WITHOUT INTELLIGENT KEY SYSTEM]

4. If equipped, separate the door key cylinder rod from the door key cylinder assembly.

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



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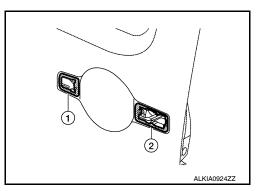
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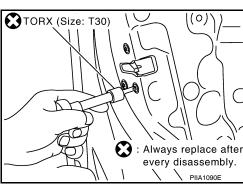
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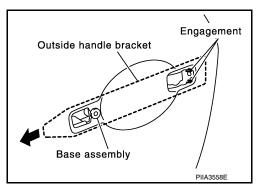
6. Remove the front gasket (1) and rear gasket (2).



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



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

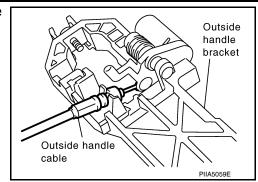


9. Disconnect the door lock actuator electrical connector.

# FRONT DOOR LOCK

# [WITHOUT INTELLIGENT KEY SYSTEM]

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



# **INSTALLATION**

Installation is in the reverse order of removal.

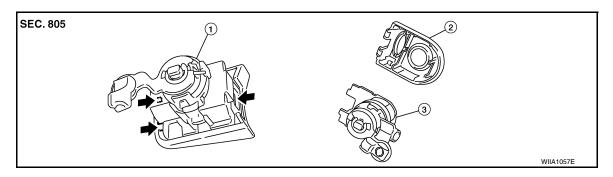
### **CAUTION:**

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

# Disassembly and Assembly

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## DOOR KEY CYLINDER ASSEMBLY



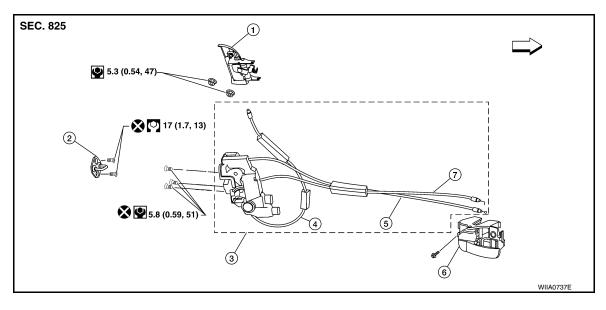
- 1. Door key cylinder assembly
- 2. Door key cylinder escutcheon
- 3. Door key cylinder

<= Pawl

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

# **REAR DOOR LOCK**

# Component Structure



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

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

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

# Removal and Installation

# REMOVAL

1. Remove the rear door window regulator. Refer to GW-19, "Rear Door Glass Regulator".

- 2. Remove door grommets, and remove outside handle nuts from the hole.
- 3. Remove outside handle.
- 4. Disconnect the outside handle cable connection.
- 5. Remove the inside door handle.
- Disconnect the door lock and inside door handle cables from the inside door handle.
- 7. Disconnect the door lock actuator connector and remove the assembly.

## **INSTALLATION**

Installation is in the reverse order of removal.

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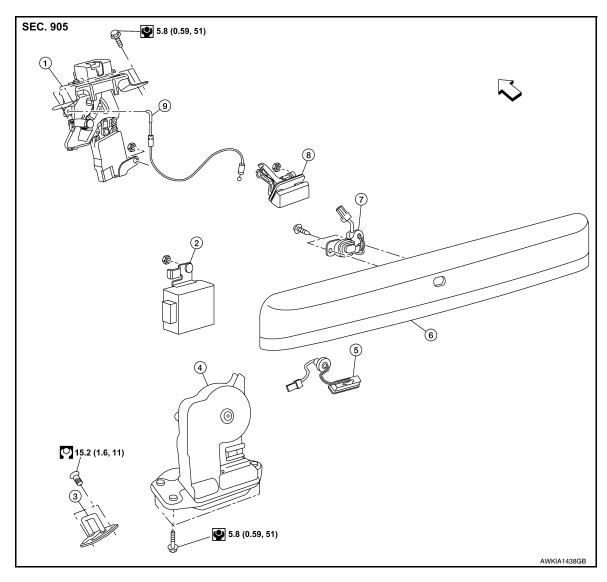
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# **BACK DOOR LOCK**

# Component Structure

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- Glass hatch latch assembly
- 4. Back door latch assembly
- 7. Glass hatch release handle
- ← Front

- 2. Back door control assembly
- 5. Back door release button
- 8. Glass latch release cable
- 3. Back door striker
- 6. Back door finisher
- 9. Glass hatch release cable