

## SECTION **DLK** DOOR & LOCK

### CONTENTS

#### WITH INTELLIGENT KEY SYSTEM

#### **BASIC INSPECTION ..... 6**

#### **DIAGNOSIS AND REPAIR WORKFLOW ..... 6** Work Flow .....6

#### **INSPECTION AND ADJUSTMENT ..... 9**

#### **ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL .....9**

ADDITIONAL SERVICE WHEN REMOVING  
BATTERY NEGATIVE TERMINAL : Description .....9  
ADDITIONAL SERVICE WHEN REMOVING  
BATTERY NEGATIVE TERMINAL : Special Repair Requirement .....9

#### **ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT .....9**

ADDITIONAL SERVICE WHEN REPLACING  
CONTROL UNIT : Description .....9  
ADDITIONAL SERVICE WHEN REPLACING  
CONTROL UNIT : Special Repair Requirement .....9

#### **FUNCTION DIAGNOSIS .....10**

#### **DOOR LOCK FUNCTION .....10**

#### **DOOR LOCK AND UNLOCK SWITCH .....10**

DOOR LOCK AND UNLOCK SWITCH : System  
Diagram .....10  
DOOR LOCK AND UNLOCK SWITCH : System  
Description .....10  
DOOR LOCK AND UNLOCK SWITCH :  
Component Parts Location .....11  
DOOR LOCK AND UNLOCK SWITCH :  
Component Description .....11

#### **DOOR REQUEST SWITCH .....12**

DOOR REQUEST SWITCH : System Diagram .....12  
DOOR REQUEST SWITCH : System Description...12  
DOOR REQUEST SWITCH :  
Component Parts Location .....15

DOOR REQUEST SWITCH :  
Component Description .....17

#### **INTELLIGENT KEY .....17**

INTELLIGENT KEY : System Diagram .....17  
INTELLIGENT KEY : System Description .....17  
INTELLIGENT KEY : Component Parts Location...20  
INTELLIGENT KEY : Component Description .....21

#### **BACK DOOR OPENER FUNCTION .....23**

#### **BACK DOOR OPENER SWITCH .....23**

BACK DOOR OPENER SWITCH : System Diagram .....23  
BACK DOOR OPENER SWITCH : System Description .....23  
BACK DOOR OPENER SWITCH :  
Component Parts Location .....28  
BACK DOOR OPENER SWITCH :  
Component Description .....28

#### **INTELLIGENT KEY .....29**

INTELLIGENT KEY : System Diagram .....29  
INTELLIGENT KEY : System Description .....29  
INTELLIGENT KEY : Component Parts Location...31  
INTELLIGENT KEY : Component Description .....32

#### **WARNING FUNCTION .....34**

System Description .....34  
Component Parts Location .....38

#### **KEY REMINDER FUNCTION .....40**

System Description .....40  
Component Parts Location .....41

#### **HAZARD AND BUZZER REMINDER FUNCTION .....43**

System Diagram .....43  
System Description .....43  
Component Parts Location .....44  
Component Description .....46

#### **HOMELINK UNIVERSAL TRANSCEIVER .....47**

Component Description .....	47	<b>INTELLIGENT KEY UNIT .....</b>	<b>64</b>
<b>DIAGNOSIS SYSTEM (BCM) .....</b>	<b>48</b>	INTELLIGENT KEY UNIT : Diagnosis Procedure...	64
<b>COMMON ITEM .....</b>	<b>48</b>	<b>BCM (BODY CONTROL MODULE) .....</b>	<b>64</b>
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM) .....	48	BCM (BODY CONTROL MODULE) : Diagnosis Procedure .....	64
<b>DOOR LOCK .....</b>	<b>48</b>	<b>BACK DOOR .....</b>	<b>65</b>
DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK) .....	48	BACK DOOR : Diagnosis Procedure .....	65
<b>MULTIREMOTE ENT .....</b>	<b>49</b>	<b>DOOR SWITCH .....</b>	<b>67</b>
MULTIREMOTE ENT : CONSULT-III Function (BCM - MULTIREMOTE ENT) .....	49	Description .....	67
<b>INTELLIGENT KEY .....</b>	<b>51</b>	Component Function Check .....	67
INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) .....	51	Diagnosis Procedure .....	67
<b>DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT) .....</b>	<b>52</b>	<b>DOOR LOCK AND UNLOCK SWITCH .....</b>	<b>70</b>
CONSULT-III Function (INTELLIGENT KEY) .....	52	<b>DRIVER SIDE .....</b>	<b>70</b>
<b>COMPONENT DIAGNOSIS .....</b>	<b>54</b>	DRIVER SIDE : Description .....	70
<b>U1000 CAN COMM CIRCUIT .....</b>	<b>54</b>	DRIVER SIDE : Component Function Check .....	70
Description .....	54	DRIVER SIDE : Diagnosis Procedure .....	70
DTC Logic .....	54	<b>PASSENGER SIDE .....</b>	<b>72</b>
Diagnosis Procedure .....	54	PASSENGER SIDE : Description .....	72
<b>U1010 CONTROL UNIT (CAN) .....</b>	<b>55</b>	PASSENGER SIDE : Component Function Check .....	72
DTC Logic .....	55	PASSENGER SIDE : Diagnosis Procedure .....	72
Diagnosis Procedure .....	55	<b>KEY CYLINDER SWITCH .....</b>	<b>75</b>
Special Repair Requirement .....	55	Description .....	75
<b>INSIDE KEY ANTENNA 1 (REAR OF CEN- TER CONSOLE) .....</b>	<b>56</b>	Component Function Check .....	75
Description .....	56	Diagnosis Procedure .....	75
Component Function Check .....	56	<b>FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR) .....</b>	<b>77</b>
Diagnosis Procedure .....	56	Description .....	77
<b>INSIDE KEY ANTENNA 2 (LUGGAGE COM- PARTMENT) .....</b>	<b>58</b>	Component Function Check .....	77
Description .....	58	Diagnosis Procedure .....	77
Component Function Check .....	58	Component Inspection .....	78
Diagnosis Procedure .....	58	<b>DOOR REQUEST SWITCH .....</b>	<b>79</b>
<b>INSIDE KEY ANTENNA 3 (FRONT OF CEN- TER CONSOLE) .....</b>	<b>60</b>	Description .....	79
Description .....	60	Component Function Check .....	79
Component Function Check .....	60	Diagnosis Procedure .....	79
Diagnosis Procedure .....	60	Component Inspection .....	80
<b>INSIDE KEY ANTENNA 4 (OVERHEAD CON- SOLE AREA) .....</b>	<b>62</b>	<b>DOOR LOCK ACTUATOR .....</b>	<b>82</b>
Description .....	62	<b>DRIVER SIDE .....</b>	<b>82</b>
Component Function Check .....	62	DRIVER SIDE : Description .....	82
Diagnosis Procedure .....	62	DRIVER SIDE : Component Function Check .....	82
<b>POWER SUPPLY AND GROUND CIRCUIT ....</b>	<b>64</b>	DRIVER SIDE : Diagnosis Procedure .....	82
		<b>PASSENGER SIDE .....</b>	<b>83</b>
		PASSENGER SIDE : Description .....	83
		PASSENGER SIDE : Component Function Check .....	83
		PASSENGER SIDE : Diagnosis Procedure .....	83
		<b>REAR LH .....</b>	<b>84</b>
		REAR LH : Description .....	84
		REAR LH : Component Function Check .....	84

REAR LH : Diagnosis Procedure .....	84	Component Function Check .....	107
REAR RH .....	85	Diagnosis Procedure .....	107
REAR RH : Description .....	85	<b>HAZARD FUNCTION .....</b>	<b>108</b>
REAR RH : Component Function Check .....	86	Description .....	108
REAR RH : Diagnosis Procedure .....	86	Component Function Check .....	108
<b>BACK DOOR .....</b>	<b>87</b>	Diagnosis Procedure .....	108
BACK DOOR : Description .....	87	<b>KEY SWITCH (INTELLIGENT KEY UNIT IN- PUT) .....</b>	<b>109</b>
<b>GLASS HATCH LOCK ACTUATOR .....</b>	<b>88</b>	Diagnosis Procedure .....	109
Diagnosis Procedure .....	88	<b>KEY SWITCH (BCM INPUT) .....</b>	<b>111</b>
<b>PASSENGER SELECT UNLOCK RELAY .....</b>	<b>89</b>	Diagnosis Procedure .....	111
Description .....	89	<b>IGNITION KNOB SWITCH .....</b>	<b>112</b>
Component Function Check .....	89	Ignition Knob Switch Check .....	112
Diagnosis Procedure .....	89	<b>HEADLAMP FUNCTION .....</b>	<b>114</b>
<b>INTELLIGENT KEY WARNING BUZZER .....</b>	<b>91</b>	Diagnosis Procedure .....	114
Description .....	91	<b>MAP LAMP AND IGNITION KEYHOLE ILLU- MINATION FUNCTION .....</b>	<b>115</b>
Component Function Check .....	91	Diagnosis Procedure .....	115
Diagnosis Procedure .....	91	<b>KEYFOB ID SET UP WITH CONSULT-III .....</b>	<b>116</b>
Component Inspection .....	92	ID Code Entry Procedure .....	116
<b>OUTSIDE KEY ANTENNA .....</b>	<b>93</b>	<b>KEYFOB ID SET UP WITHOUT CONSULT-III .....</b>	<b>117</b>
Description .....	93	ID Code Entry Procedure .....	117
Component Function Check .....	93	<b>AUTOMATIC BACK DOOR SELF-DIAGNO- SIS PROCEDURE .....</b>	<b>119</b>
Diagnosis Procedure .....	93	Self-Diagnosis Procedure .....	119
<b>STEERING LOCK UNIT .....</b>	<b>95</b>	<b>POWER LIFTGATE SWITCH FUNCTION .....</b>	<b>121</b>
Diagnosis Procedure .....	95	Diagnosis Procedure .....	121
<b>A/T SHIFT SELECTOR (PARK POSITION SWITCH) .....</b>	<b>97</b>	<b>GLASS HATCH SWITCH .....</b>	<b>123</b>
Diagnosis Procedure .....	97	Diagnosis Procedure .....	123
<b>REMOTE KEYLESS ENTRY RECEIVER .....</b>	<b>99</b>	<b>GLASS HATCH AJAR SWITCH .....</b>	<b>125</b>
Description .....	99	Diagnosis Procedure .....	125
Component Function Check .....	99	<b>BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM .....</b>	<b>127</b>
Diagnosis Procedure .....	99	Diagnosis Procedure .....	127
<b>INTELLIGENT KEY BATTERY AND FUNC- TION .....</b>	<b>102</b>	<b>BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM .....</b>	<b>128</b>
Description .....	102	Diagnosis Procedure .....	128
Component Function Check .....	102	<b>PINCH STRIP SYSTEM .....</b>	<b>129</b>
Diagnosis Procedure .....	102	Diagnosis Procedure .....	129
Component Inspection .....	102	<b>BACK DOOR WARNING CHIME SYSTEM ....</b>	<b>130</b>
Special Repair Requirement .....	103	Diagnosis Procedure .....	130
<b>HORN FUNCTION .....</b>	<b>104</b>	<b>HALF-LATCH SWITCH SYSTEM .....</b>	<b>131</b>
Description .....	104	Diagnosis Procedure .....	131
Component Function Check .....	104	<b>BACK DOOR OPEN SWITCH SYSTEM .....</b>	<b>132</b>
Diagnosis Procedure .....	104	Diagnosis Procedure .....	132
<b>COMBINATION METER DISPLAY FUNC- TION .....</b>	<b>106</b>		
Description .....	106		
Component Function Check .....	106		
Diagnosis Procedure .....	106		
<b>WARNING CHIME FUNCTION .....</b>	<b>107</b>		
Description .....	107		

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

<b>BACK DOOR CLOSE SWITCH SYSTEM .....</b>	<b>133</b>	INTELLIGENT KEY : Symptom Table .....	202
Diagnosis Procedure .....	133	<b>BACK DOOR OPENER FUNCTION .....</b>	<b>204</b>
<b>BACK DOOR SWITCH .....</b>	<b>134</b>	<b>BACK DOOR OPENER SWITCH .....</b>	<b>204</b>
Diagnosis Procedure .....	134	BACK DOOR OPENER SWITCH : Symptom Table .....	204
<b>CINCH LATCH MOTOR SYSTEM .....</b>	<b>135</b>	<b>BACK DOOR SWITCH .....</b>	<b>204</b>
Diagnosis Procedure .....	135	BACK DOOR SWITCH : Symptom Table .....	205
<b>INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL .....</b>	<b>136</b>	<b>INTELLIGENT KEY .....</b>	<b>205</b>
Description .....	136	INTELLIGENT KEY : Symptom Table .....	205
Diagnosis Procedure .....	136	<b>WARNING FUNCTION SYMPTOMS .....</b>	<b>206</b>
<b>INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL .....</b>	<b>137</b>	Symptom Table .....	206
Description .....	137	<b>KEY REMINDER FUNCTION SYMPTOMS ....</b>	<b>209</b>
Diagnosis Procedure .....	137	Symptom Table .....	209
<b>HOMELINK UNIVERSAL TRANSCEIVER ....</b>	<b>138</b>	<b>HAZARD FUNCTION .....</b>	<b>210</b>
Wiring Diagram .....	138	Symptom Table .....	210
Description .....	139	<b>HORN FUNCTION .....</b>	<b>211</b>
Component Function Check .....	140	Symptom Table .....	211
Diagnosis Procedure .....	140	<b>HOMELINK UNIVERSAL TRANSCEIVER ....</b>	<b>212</b>
<b>ECU DIAGNOSIS .....</b>	<b>142</b>	Symptom Table .....	212
<b>BCM (BODY CONTROL MODULE) .....</b>	<b>142</b>	<b>SQUEAK AND RATTLE TROUBLE DIAGNOSES .....</b>	<b>213</b>
Reference Value .....	142	Work Flow .....	213
Terminal Layout .....	144	Inspection Procedure .....	215
Physical Values .....	144	Diagnostic Worksheet .....	217
Wiring Diagram — POWER DOOR LOCK SYSTEM — .....	150	<b>PRECAUTION .....</b>	<b>219</b>
Fail Safe .....	162	<b>PRECAUTIONS .....</b>	<b>219</b>
DTC Inspection Priority Chart .....	163	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" .....	219
DTC Index .....	163	Precaution Necessary for Steering Wheel Rotation After Battery Disconnect .....	219
<b>INTELLIGENT KEY UNIT .....</b>	<b>165</b>	Precaution for work .....	220
Reference Value - Intelligent Key Unit .....	165	<b>PREPARATION .....</b>	<b>221</b>
Reference Value - Steering Lock Solenoid .....	168	<b>PREPARATION .....</b>	<b>221</b>
Wiring Diagram — INTELLIGENT KEY SYSTEM — .....	169	Special Service Tool .....	221
Fail Safe .....	186	Commercial Service Tool .....	222
<b>BACK DOOR CONTROL UNIT .....</b>	<b>187</b>	<b>ON-VEHICLE REPAIR .....</b>	<b>223</b>
Reference Value .....	187	<b>HOOD .....</b>	<b>223</b>
Wiring Diagram—AUTOMATIC BACK DOOR SYSTEM— .....	189	Fitting Adjustment .....	223
Fail Safe .....	199	Removal and Installation of Hood Assembly .....	224
<b>SYMPTOM DIAGNOSIS .....</b>	<b>200</b>	Removal and Installation of Hood Lock Control ...	225
<b>INTELLIGENT KEY SYSTEM SYMPTOMS ...</b>	<b>200</b>	Hood Lock Control Inspection .....	226
Symptom Table .....	200	<b>DOOR .....</b>	<b>228</b>
<b>DOOR LOCK FUNCTION SYMPTOMS .....</b>	<b>201</b>	Fitting Adjustment .....	228
<b>DOOR LOCK AND UNLOCK SWITCH .....</b>	<b>201</b>	Removal and Installation .....	229
DOOR LOCK AND UNLOCK SWITCH : Symptom Table .....	201		
<b>INTELLIGENT KEY .....</b>	<b>202</b>		

<b>FRONT DOOR LOCK</b> .....	<b>232</b>	Component Structure .....	235	
Component Structure .....	232	Removal and Installation .....	235	A
Removal and Installation .....	232			
Disassembly and Assembly .....	234	<b>BACK DOOR LOCK</b> .....	<b>236</b>	
<b>REAR DOOR LOCK</b> .....	<b>235</b>	Power Back Door Opener .....	236	B
		Door Lock Assembly .....	237	

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

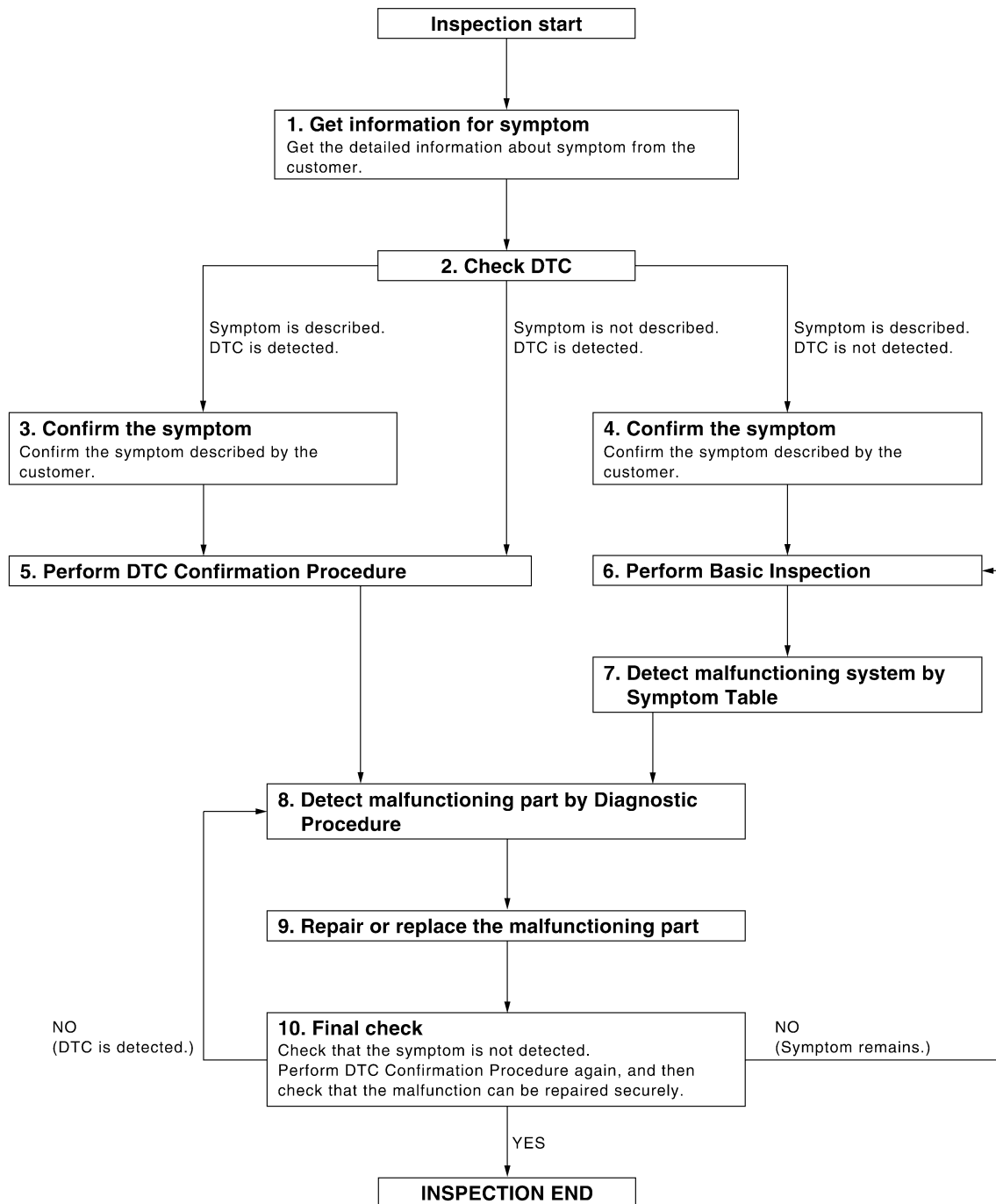
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000001538903

OVERALL SEQUENCE



ALKIA0246GB

DETAILED FLOW

# 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 [DLK-163. "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-38. "Intermittent Incident"](#).

## 6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

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

>> GO TO 9.

### 9. FINAL CHECK

---

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

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

#### Does the symptom reappear?

YES (DTC is detected)>>GO TO 7.

YES (Symptom remains)>>GO TO 6.

NO >> Inspection end



## INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[WITH INTELLIGENT KEY SYSTEM]

### INSPECTION AND ADJUSTMENT

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:000000004944487

The automatic back door system must be initialized anytime the battery or the automatic back door control unit has been disconnected.

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:000000004944488

#### 1. INITIALIZATION

1. Close back door.
2. Open the back door with automatic open operation.

##### **NOTE:**

Do not stop the automatic operation until back door is fully open.

>> Work end.

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000001538904

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

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000001538905

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

DLK

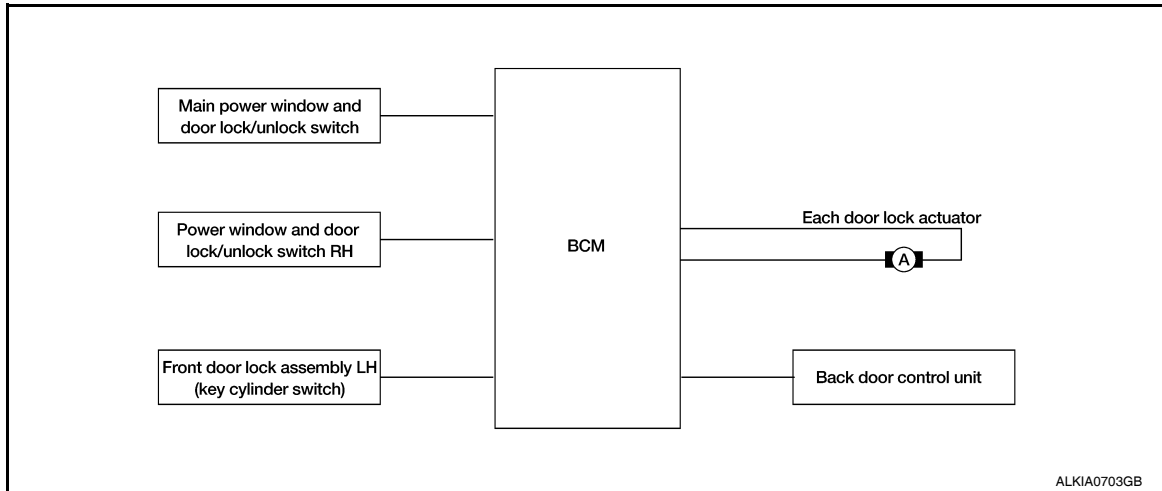
## FUNCTION DIAGNOSIS

### DOOR LOCK FUNCTION

#### DOOR LOCK AND UNLOCK SWITCH

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

INFOID:000000001538906



ALKIA0703GB

#### DOOR LOCK AND UNLOCK SWITCH : System Description

INFOID:000000001538907

Switch	Input/output signal to BCM	BCM function	Actuator
Main power window and door lock/unlock switch	Door lock/unlock signal	Door lock/unlock control	Door lock actuator
Power window and door lock/unlock switch			
Door key cylinder switch			

#### DOOR LOCK FUNCTION

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

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

Functions Available by Operating the Key Cylinder Switch on Driver Door

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

Selective Unlock Operation

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

Select unlock operation mode can be changed using DOOR LOCK-UNLOCK SET mode in "WORK SUPPORT". Refer to [DLK-48, "DOOR LOCK : CONSULT-III Function \(BCM - DOOR LOCK\)"](#).

Key Reminder System

Refer to [DLK-40, "System Description"](#).

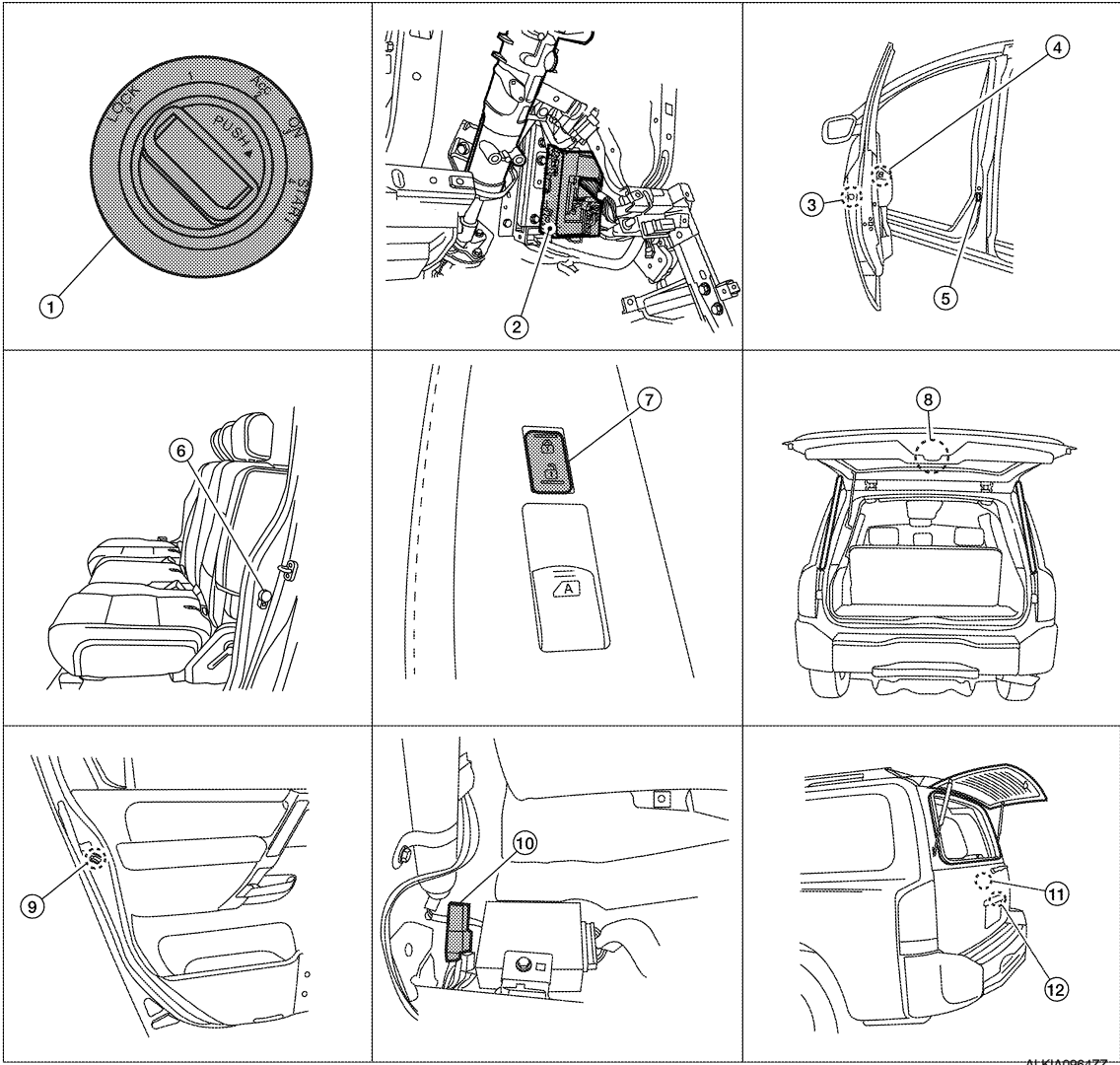
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH : Component Parts Location

INFOID:000000001538908



- |   |  |  |
|---|--|--|
| 1. Key switch and ignition knob switch M12                                      | 2. BCM M18, M19, M20<br>(view with instrument panel removed) | 3. Front door lock assembly LH (key cylinder switch) D14<br>Front door lock actuator RH D114 |
| 4. Main power window and door lock/unlock switch D7, D8                         | 5. Front door switch<br>LH B8<br>RH B108                     | 6. Rear door switch<br>LH B18<br>RH B116   |
| 7. Power window and door lock/unlock switch RH D105                             | 8. Back door latch (door ajar switch) D503                   | 9. Rear door lock actuator<br>LH D205<br>RH D305   |
| 10. Passenger select unlock relay M7<br>(view with instrument panel LH removed) | 11. Glass hatch lock actuator D711                           | 12. Glass hatch switch D706  |

## DOOR LOCK AND UNLOCK SWITCH : Component Description

INFOID:000000001538909

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 >

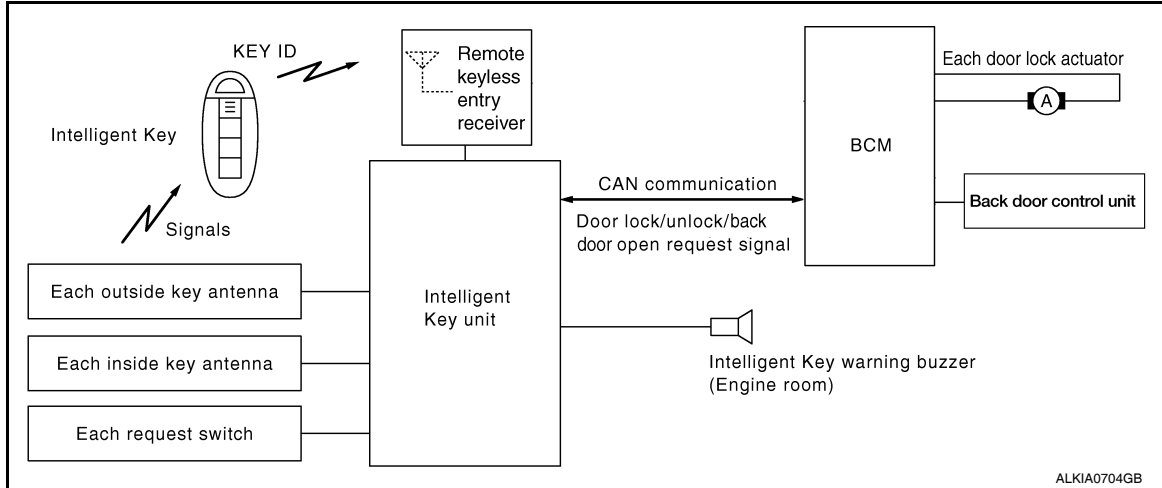
[WITH INTELLIGENT KEY SYSTEM]

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

INFOID:000000001538910



### DOOR REQUEST SWITCH : System Description

INFOID:000000001538911

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.

# DOOR LOCK FUNCTION

## < FUNCTION DIAGNOSIS >

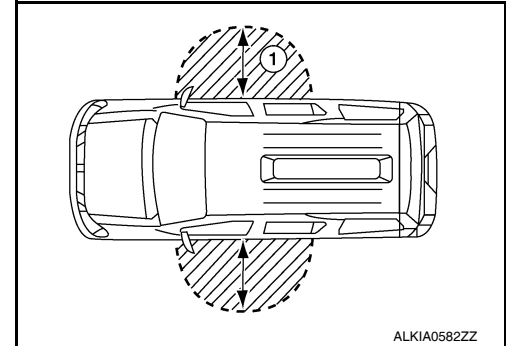
## [WITH INTELLIGENT KEY SYSTEM]

Each request switch operation	Operation condition
Lock operation	<ul style="list-style-type: none"> <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	<ul style="list-style-type: none"> <li>Intelligent Key is outside the vehicle</li> <li>Intelligent Key is within outside key antenna detection area *</li> </ul>

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

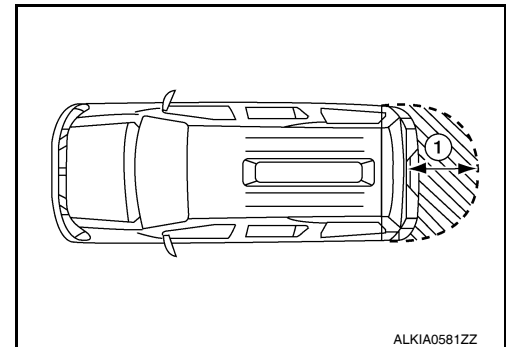
### OUTSIDE KEY ANTENNA DETECTION AREA

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



### OUTSIDE KEY ANTENNA DETECTION AREA

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



### SELECTIVE UNLOCK FUNCTION

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

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

### HAZARD AND BUZZER REMINDER FUNCTION

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

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

BCM flashes hazard warning lamps as a reminder.

Operating function of hazard warning lamps and buzzer reminder

Operation	Hazard warning lamps flash	Intelligent Key warning buzzer sounds
Unlock	Once	Once
Lock	Twice	Twice
Back door open	—	Four times

### How to change hazard and buzzer reminder mode

Refer to [DLK-51. "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)".](#)

### AUTO DOOR LOCK 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 [DLK-51, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

## ROOM LAMP OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for up to 30 seconds maximum) by receiving UNLOCK signal from door request switch. For detailed description, refer to [DLK-10, "DOOR LOCK AND UNLOCK SWITCH : System Description"](#).

## LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

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

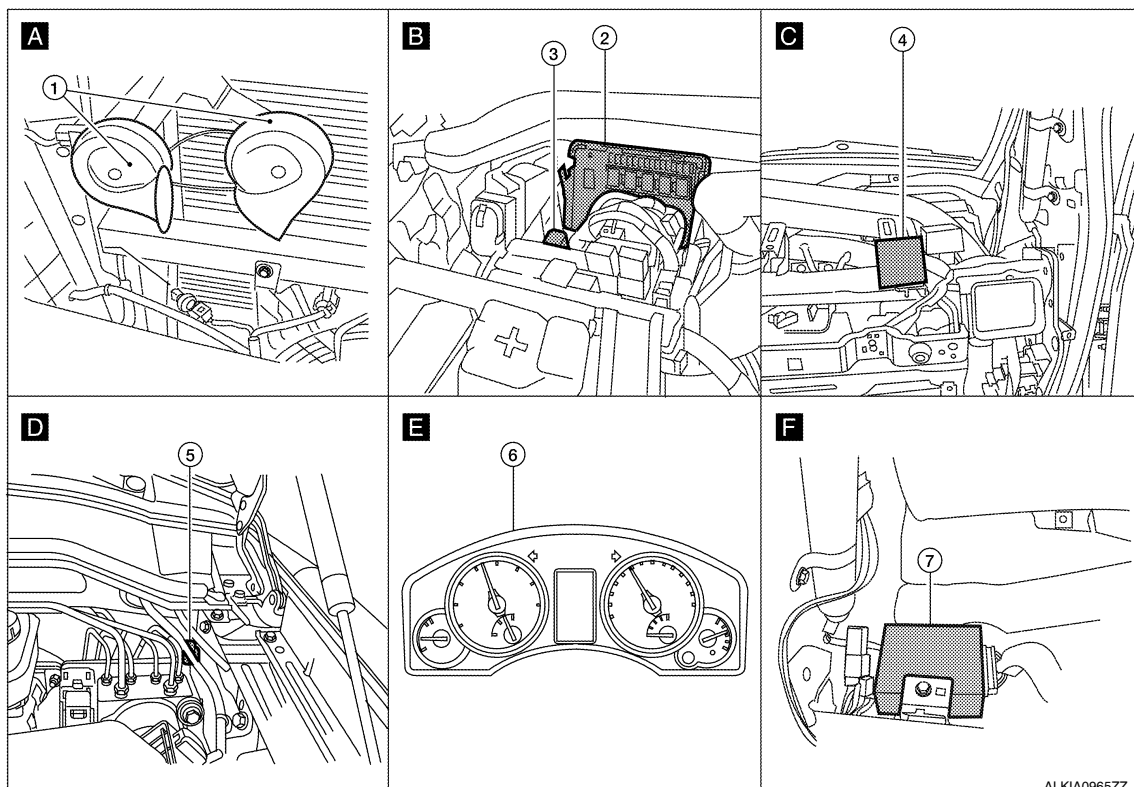
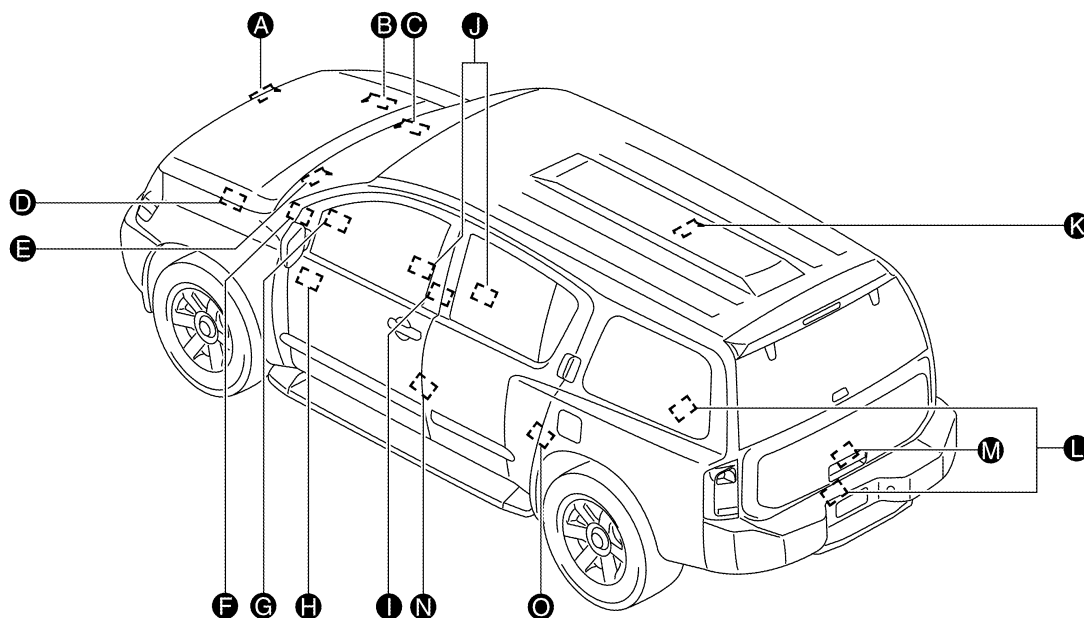
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH : Component Parts Location

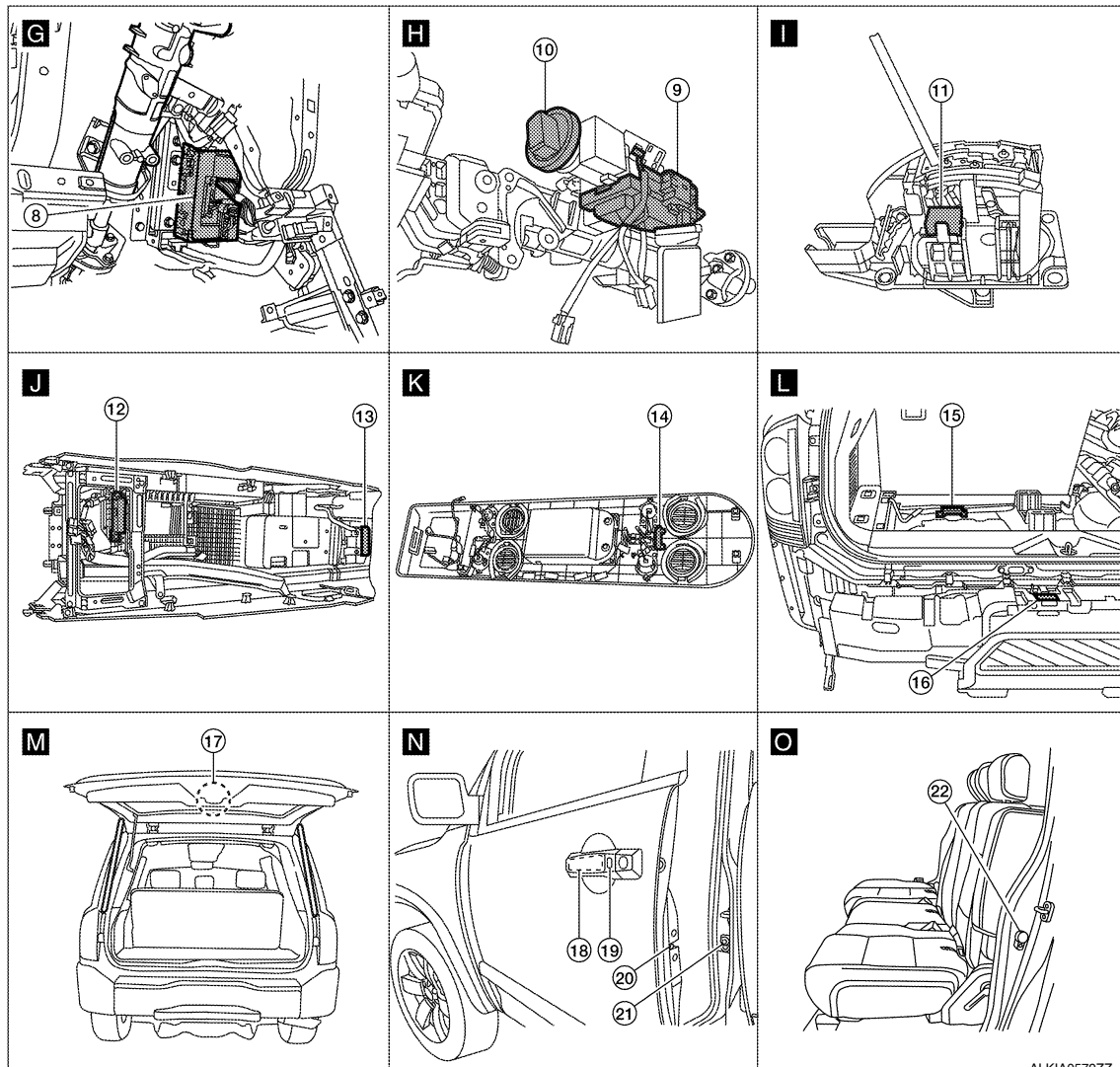
INFOID:000000001538912



# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



ALKIA0579ZZ

- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |



# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH : Component Description

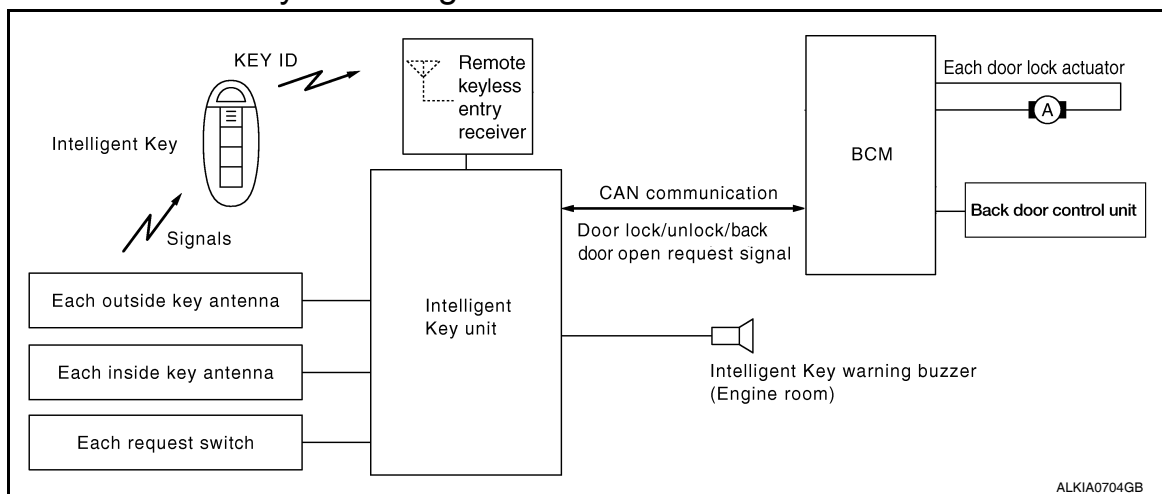
INFOID:000000001538913

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

## INTELLIGENT KEY

### INTELLIGENT KEY : System Diagram

INFOID:000000001538914



### INTELLIGENT KEY : System Description

INFOID:000000001538915

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 as well as open the back door.

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

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

#### OPERATION CONDITION

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

#### OPERATION AREA

- Operating Range

## DOOR LOCK FUNCTION

### < FUNCTION DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

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

#### SELECTIVE UNLOCK FUNCTION

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

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

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

When a liftgate signal is transmitted from Intelligent Key for more than 0.5 second, the back door operates to the full open position. After opening, another signal will cause the back door to close.

#### HAZARD AND HORN REMINDER FUNCTION

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

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

Operating function of hazard and horn reminder

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

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

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

##### With CONSULT-III

Refer to [DLK-51, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

##### Without CONSULT-III

Refer to Owner's Manual for instructions.

#### AUTO DOOR LOCK FUNCTION

##### Auto Door Lock Function

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

- Door switch is ON (door is opened)
- Door is locked
- Ignition switch is ON
- Key switch is ON (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-48, "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-51, "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.

# DOOR LOCK FUNCTION

## < FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

While retained power operation activate, Keyless power window down (open) function cannot be operated. Keyless power window down operation mode can be changed by PW DOWN SET mode in "WORK SUPPORT". Refer to [DLK-51, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

### ROOM LAMP ILLUMINATION OPERATION

When the following conditions are met:

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

Intelligent Key system turns on interior lamp (for 30 seconds) by receiving UNLOCK signal from Intelligent Key. For detailed description, refer to [DLK-17, "INTELLIGENT KEY : System Description"](#).

### LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

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

DLK

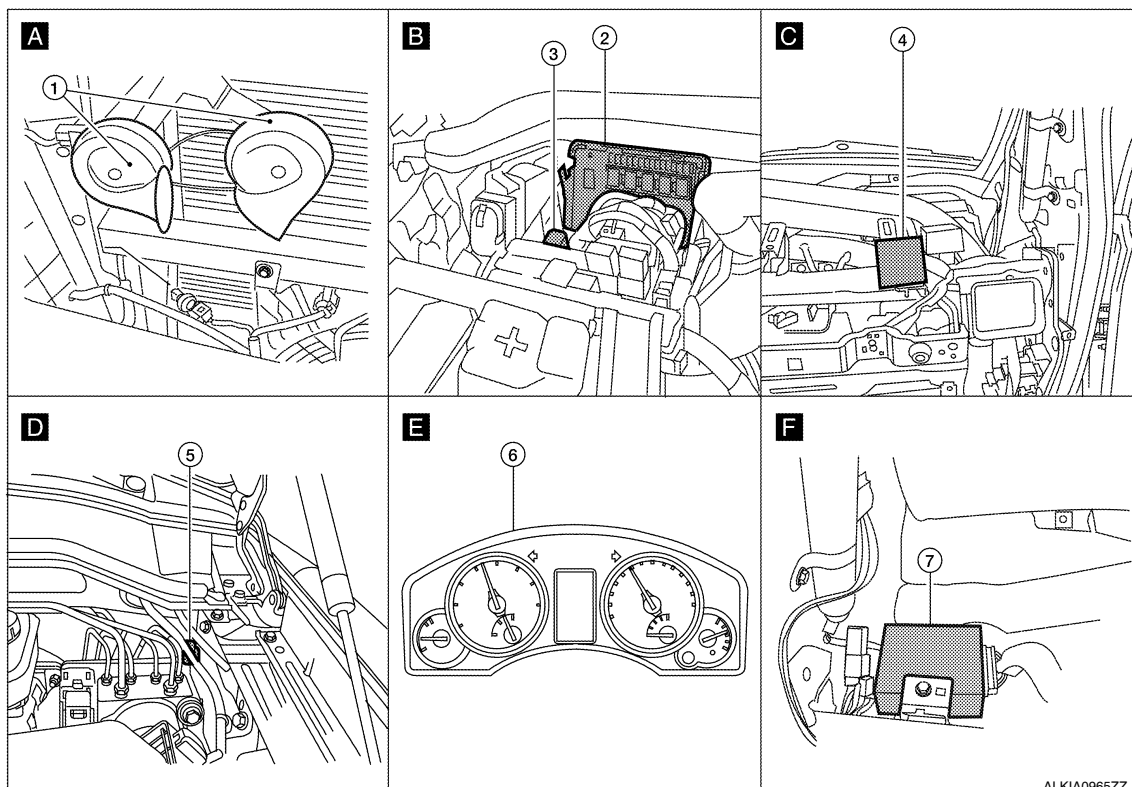
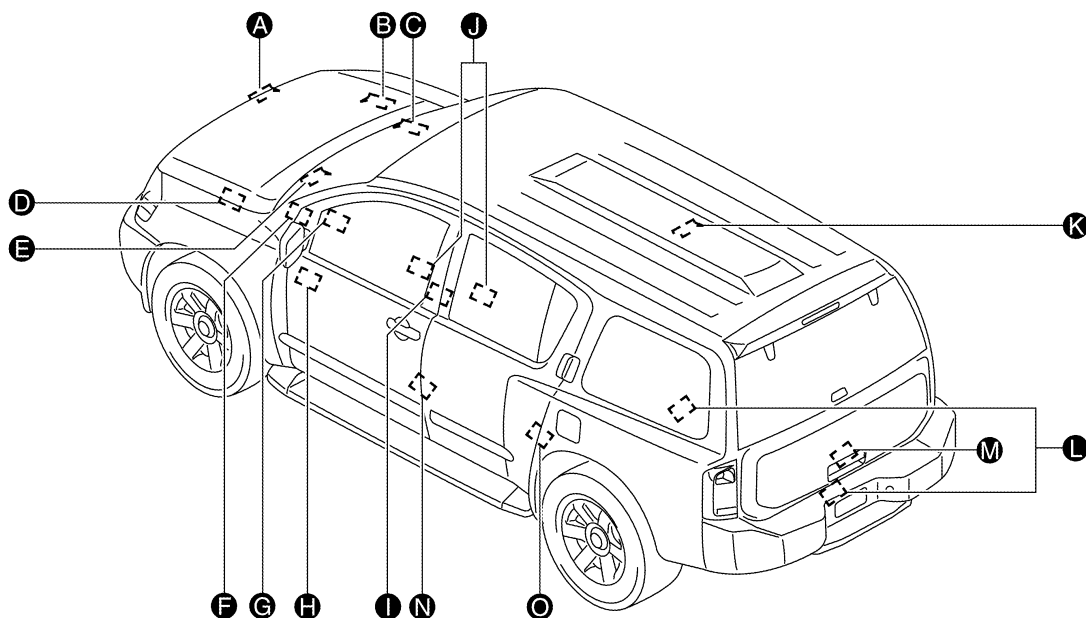
# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY : Component Parts Location

INFOID:000000004884054

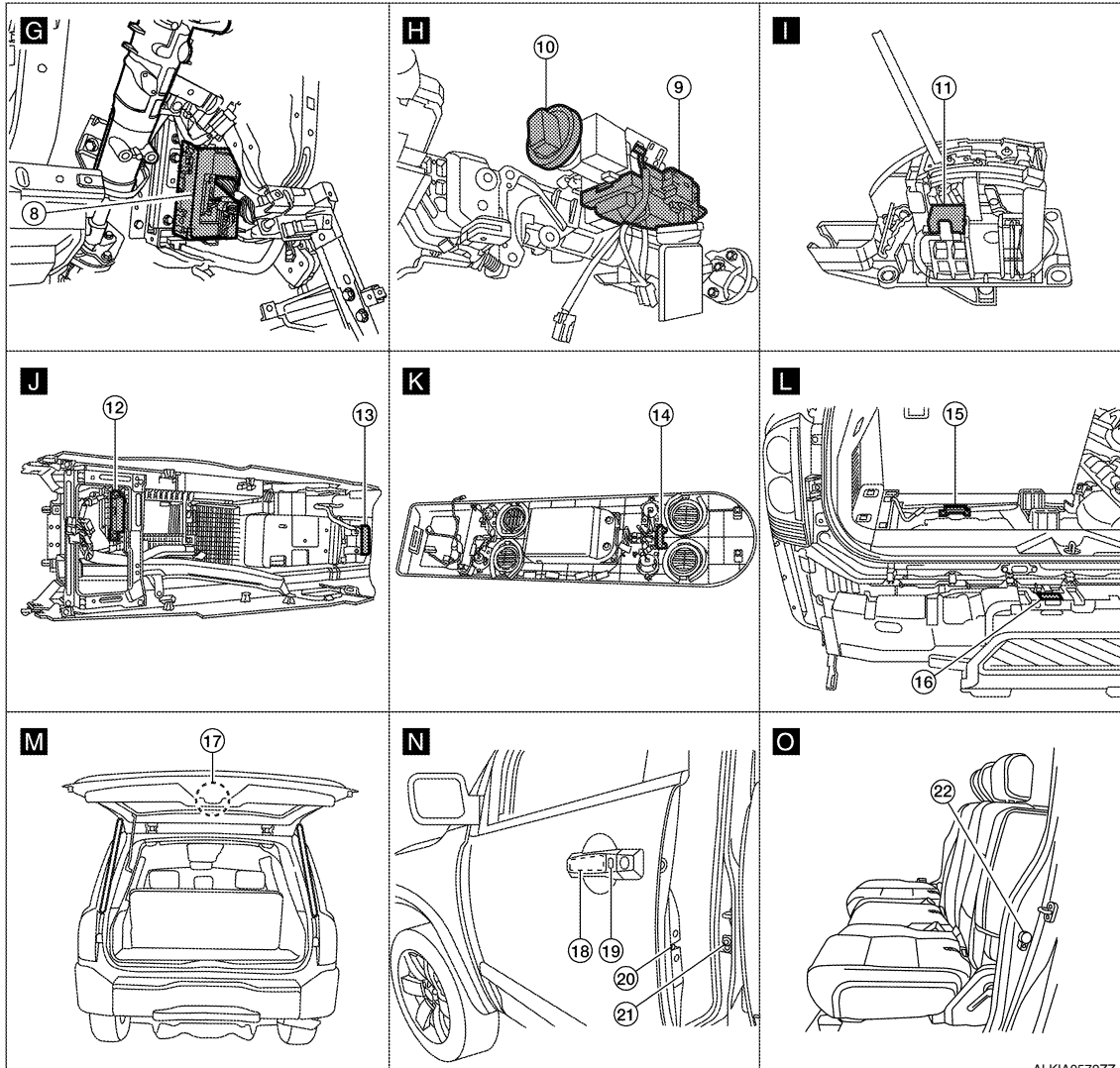


ALKIA0965ZZ

# DOOR LOCK FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

## INTELLIGENT KEY : Component Description

INFOID:000000001538917

## 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.

# BACK DOOR OPENER FUNCTION

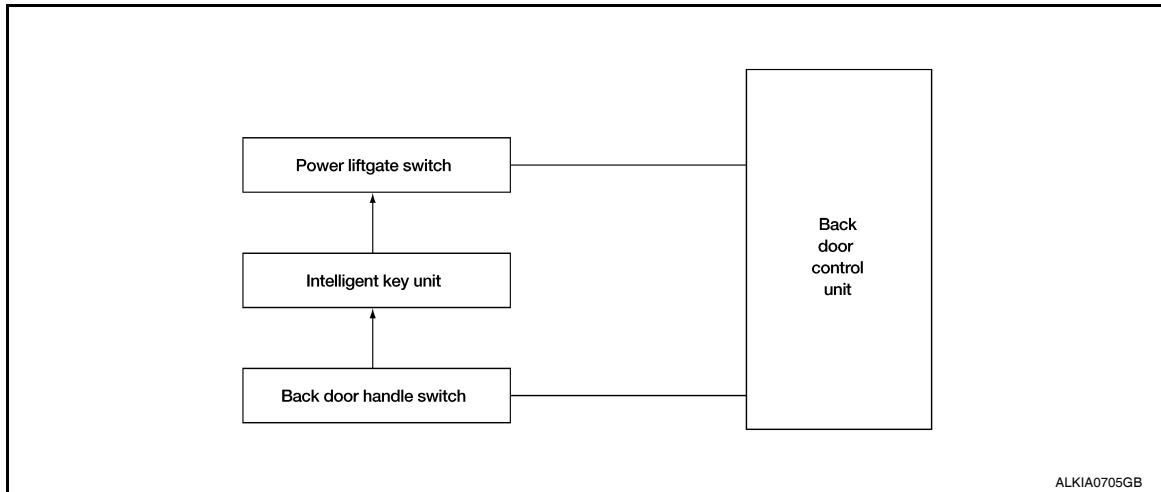
< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER FUNCTION

### BACK DOOR OPENER SWITCH

#### BACK DOOR OPENER SWITCH : System Diagram



#### BACK DOOR OPENER SWITCH : System Description

INFOID:000000001538919

#### BACK DOOR OPENER OPERATION

##### NOTE:

The automatic back door system must be initialized by fully closing the back door anytime the battery power is lost to the back door control unit. Refer to [DLK-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

The automatic back door system consists of a one piece unit that combines the back door control unit along with the back door motor, back door clutch and the back door encoder. The back door latch contains a lock function that can control the two functions of automatic back door latch closure and electrical opener with a single motor when you close the back door to the halfway-state.

- Back door auto closure

When the back door is closed to the halfway state (half-latch) position, the motor automatically drives to rotate the latch lever and pull it in from half latched to full latched.

- Power back door

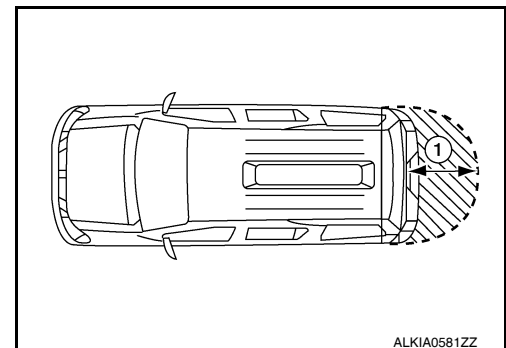
With the back door closed, if you press the power liftgate switch or press the keyfob button, or pull the back door handle with the back door unlocked, the back door latch motor drives the open the locking plate and releases the latch. The back door motor then raises the door to the full open position.

With the back door fully open, if you press the power liftgate switch, keyfob button or the back door close switch, the back door motor closes the door to the half-latch state. The back door latch motor then drives the latch to the full close position.

At the onset of each power open or power close application, the hazard lamps will flash 3 times and the warning chime will sound 3 dings lasting a total of 2 seconds.

#### OUTSIDE KEY ANTENNA DETECTION AREA

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



#### OPERATION DESCRIPTION

# BACK DOOR OPENER FUNCTION

## < FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

### Power Liftgate Switch Operation (Fully Closed → Fully Open Operation)

- When the power liftgate switch is pressed, back door control unit terminal 23 receives the signal.
- The back door control unit checks the A/T shift selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Remote Keyless Entry Operation (Fully Closed → Fully Open Operation)

- When the keyfob button is pressed for at least 0.5 seconds, back door control unit terminal 21 receives the signal.
- The back door control unit checks the A/T shift selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed through terminal 17 and battery voltage is present through terminal 3.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Back Door Handle Switch Operation (Fully Closed → Fully Open Operation)

- When the back door handle is pulled, back door control unit terminal 26 receives the signal.
- The back door control unit checks that the back door is unlocked and checks the A/T shift selector lever (P) position through terminal 18, vehicle speed through terminal 21, ignition status through terminal 7, glass hatch is closed, battery voltage and back door close switch position through terminal 13.
- When the back door control unit receives the signal, if all auto back door operating enable conditions are met, it sends a 5 volt signal through terminal 6 and grounds terminal 9 to sound the warning chime, sends a signal to the BCM through terminal 4 to flash the hazard lamps and unlocks the back door latch through terminal 12.
- The back door control unit supplies power to the magnetic clutch and the back door motor and moves the back door in the open direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)
- When the back door is opened to the full-open position, the full-open position is detected by the encoder, and the back door control unit switches the back door motor OFF and the magnetic clutch is pulsed and then turned OFF.
- The back door is held in the fully open position by the gas stays.

### Power Liftgate Switch Operation (Fully Open → Fully Closed Operation)

- When the power liftgate switch is pressed, the back door control unit terminal 23 receives the signal.
- The back door control unit checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps.
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.)



# BACK DOOR OPENER FUNCTION

## < FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22. A
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed. B

### Remote Keyless Entry Operation (Fully Open → Fully Closed Operation)

- When the remote keyless entry switch is pressed for at least 0.5 seconds, the back door control unit terminal 21 receives the signal. C
- The back door control unit checks door position through the rotary encoder.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps. D
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.) E
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22. F
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed. G

### Back Door Close Switch Operation (Fully Open → Fully Closed Operation)

- When the back door close switch is pressed, the back door control unit terminal 8 receives the signal. H
- The back door control unit checks back door close switch (terminal 13) status and door position (must be fully opened), through rotary encoder and battery voltage.
- When the back door control unit receives the signal, if the auto back door operating enable conditions are met, it sends a signal through terminal 6 and grounds terminal 9 to sound the warning chime and sends a signal to the BCM through terminal 4 to flash the hazard lamps. I
- The back door control unit supplies power to the magnetic clutch and the back door motor and move the back door in the close direction. (At this time, it also executes speed control, input reverse, and anti-pinch detection control.) J
- When the back door reaches the half-latch state, the half-latch switch detects this and the signal is sent to the back door control unit terminal 22. DLK
- When the back door control unit receives the half latch switch signal, it switches OFF the back door motor and the magnetic clutch and operates the cinch latch motor.
- When the back door latch operates and full close is detected through terminal 14 of the back door control unit, the cinch latch motor reverses to the neutral position and the back door auto closure operation ends and the door is fully closed. L

### Reversal

The door will reverse direction during power open or close operation if the automatic door main switch, keyfob or back door close switch is operated. A chime will sound to announce the reversal. M

### Anti-Pinch Function

- During auto operation, if an object is detected in the door's path, a warning chime sounds and the back door operates in the reverse direction to prevent pinching. N
- During auto close operation, if an object is detected by the pinch strips in the door's path, a warning chime sounds and the back door operates in the open direction until it is fully open. O

### Gas Stay Check

- During each power open operation, the back door control unit monitors motor current draw to determine if the gas stays are functioning properly. P
- If a malfunction of the gas stays is detected, the back door control unit will close the back door while sounding the warning chime. The back door cannot be opened using the switches until the gas stay malfunction is repaired.

### Warning Functions

- The hazard warning lamps flash and a warning chime is sounded according to the back door operating state, operations, and conditions.

# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Auto Back Door Operation Enable Conditions

Operation	Power liftgate switch		Remote keyless entry		Back door handle switch		Back door close switch
Operating direction	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully closed → open	Fully open → closed	Fully open → closed
Close switch	CANCEL or NEUTRAL				NEUTRAL		NEUTRAL
Vehicle stop condition	A/T shift selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T shift selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	A/T shift selector lever in P or N range and vehicle speed less than 2 km/h or ignition switch in OFF position	—	—
Battery voltage	Approx. 11V or more						
Back door lock status	—	—	—	—	Unlocked	—	—
Glass hatch	Closed						

## Control When Operating Enable Conditions Not Met During Power Open/Close

Items	Operation condition	Not met case	Control
A/T shift selector lever P position	P or N position with ignition ON or any position with ignition OFF	Other	Continue power open or close, but sounds warning chime.
Back door close switch	NEUTRAL	CANCEL	Cancels power open/close operation or door will release to manual mode.
Voltage drop	11V or more	$11 > V > 9$	
		$9 > V > \text{reset voltage}$	
		Reset voltage $> V$	No power function available
Handle switch	Normal (GND)	Error (OPEN)	No operation. Cancel power open/close release to manual.
Glass hatch	Closed	OFF	Cancels power door open operation, door will release to manual mode.

## Control When Operating Enable Conditions No Longer Met

Description	Operation	Control
Back door close switch turned to CANCEL	Warning chime active → Shift to manual mode after full open or close operation is complete (Recovery to power mode when main switch turned OFF or door fully closed)	→ Shift to manual mode
A/T shift selector lever P or N position with ignition switch ON	Warning chime active and one-way operation continuous (Warning chime inactive and door fully open or fully closed or operating conditions recovered)	Full open: power close operation allowed Full close: operating conditions not met → no power open function.
Voltage drop 11 - 9V	One-way operation continued (equivalent to the case of starting voltage ← 11V for handle operation with warning chime active)	Not allowed
Voltage drop less than 9V (Microcomputer reset voltage - clutch hold voltage)	<ul style="list-style-type: none"> <li>Motor stopped</li> <li>Clutch may slip</li> <li>Control not possible because microcomputer being reset</li> </ul>	Control not possible because microcomputer being reset

## BACK DOOR OPENER FUNCTION

### < FUNCTION DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

#### Warning Chime Active Conditions

The warning chime uses two types of audio warnings, a friendly chime and a warning chime. The friendly chime consists of dings lasting 0.66 seconds each immediately followed by the next ding. The warning chime consists of beeps lasting 0.33 seconds with a pause of 0.33 seconds between each beep.

Operation status	Operation or conditions	Warning chime pattern
When auto operation starts	Power liftgate switch operation	Friendly chime 2 seconds, 3 dings
	Remote keyless entry operation	
	Back door handle switch operation	
	Back door close switch operation	
When reverse operation starts	When reverse request is detected from power liftgate switch, remote keyless entry or back door close switch	Friendly chime 1.3 seconds, 2 dings
	When obstacle is detected	Warning chime 2 seconds, 3 beeps
Operating at low voltage	While opening or closing	Warning chime 2 seconds, 3 beeps
A/T shift selector lever not in P position	Back door close operation	Friendly chime Continuously dings
	Back door open operation	Warning chime Continuously beeps (until close operation is started)

#### Reverse Conditions

Type	Overload reverse
Operation covered	Both directions
Detection method	Operation speed and motor current change direction
	Pinch strips during back door close operation
Non-reversed area	<ul style="list-style-type: none"> <li>For about 0.5 seconds immediately after drive motor operation starts</li> <li>Between full open and approx. 7° from full open</li> <li>Closure operation area (half switch - close switch)</li> </ul>
Number of times reverse allowed	One reversal is allowed (if a second obstacle is detected during a power open or close operation, the door reverts to manual mode).

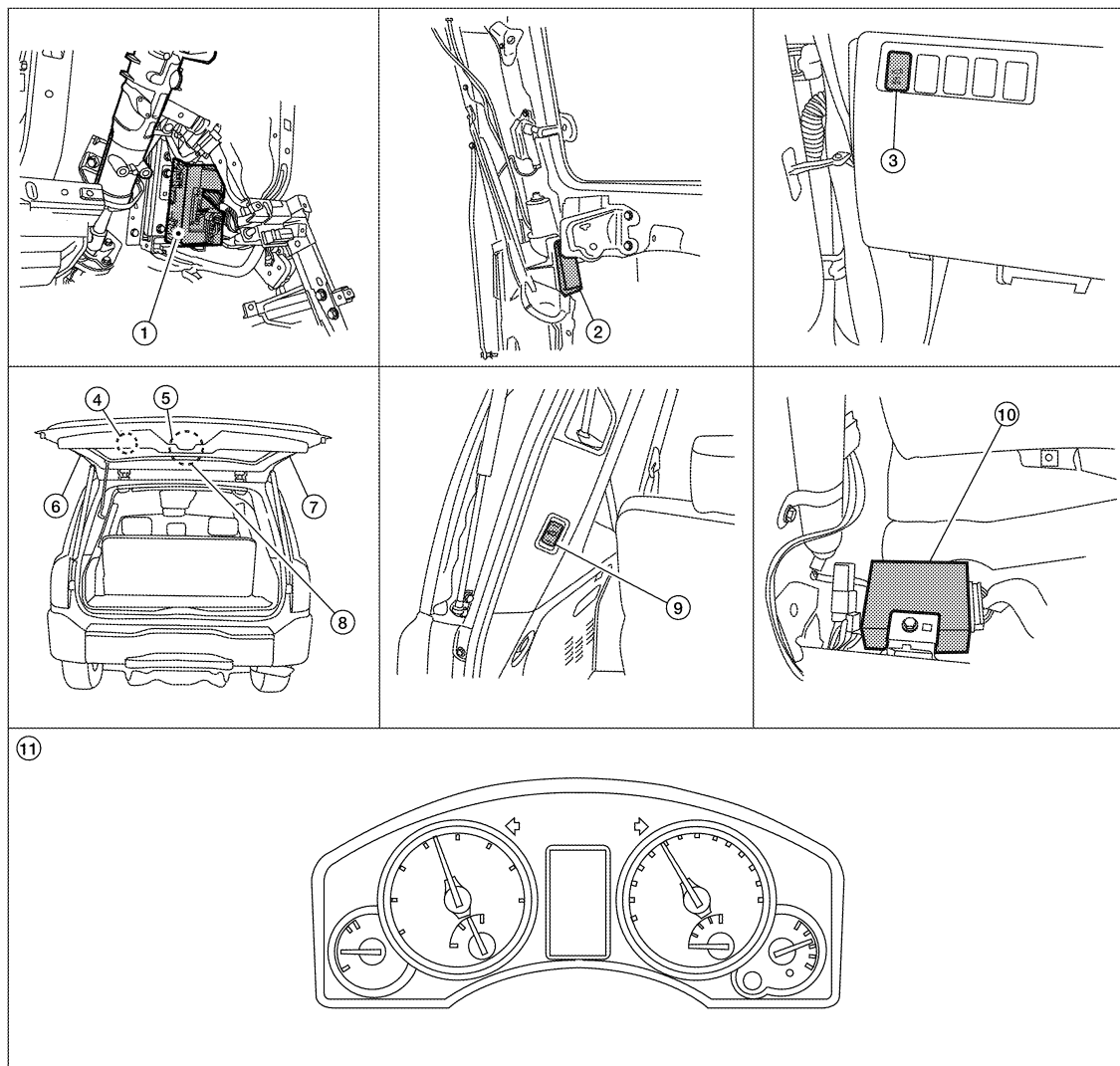
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER SWITCH : Component Parts Location

INFOID:000000001538920



ALKIA0966ZZ

- |   |   |                               |
|---|---|-------------------------------|
| 1. BCM M18, M19, M20<br>(view with instrument panel LH removed)         | 2. Back door control unit B55<br>(view with right rear panel removed) | 3. Power liftgate switch M92  |
| 4. Back door warning chime D514   | 5. Back door latch D503<br>Back door handle switch D706               | 6. Pinch strip LH D517        |
| 7. Pinch strip RH D715  | 8. Glass hatch ajar switch D707                                       | 9. Back door close switch B63 |
| 10. Intelligent Key unit M70<br>(view with instrument panel RH removed) | 11. Combination meter M24   |                               |

## BACK DOOR OPENER SWITCH : Component Description

INFOID:000000001538921

Item	Function
Power liftgate switch	Transmits liftgate open operation signal to back door control unit.
Back door control unit	Transmits liftgate open operation to liftgate motor.
Back door close switch	Transmits back door close signal to back door control unit.
Back door handle switch	Transmits back door open signal to back door control unit.
Pinch strip (LH, RH)	While closing, reverses door direction to full open position when an obstacle is in the way.
Back door warning chime	Announces opening and closing of back door.

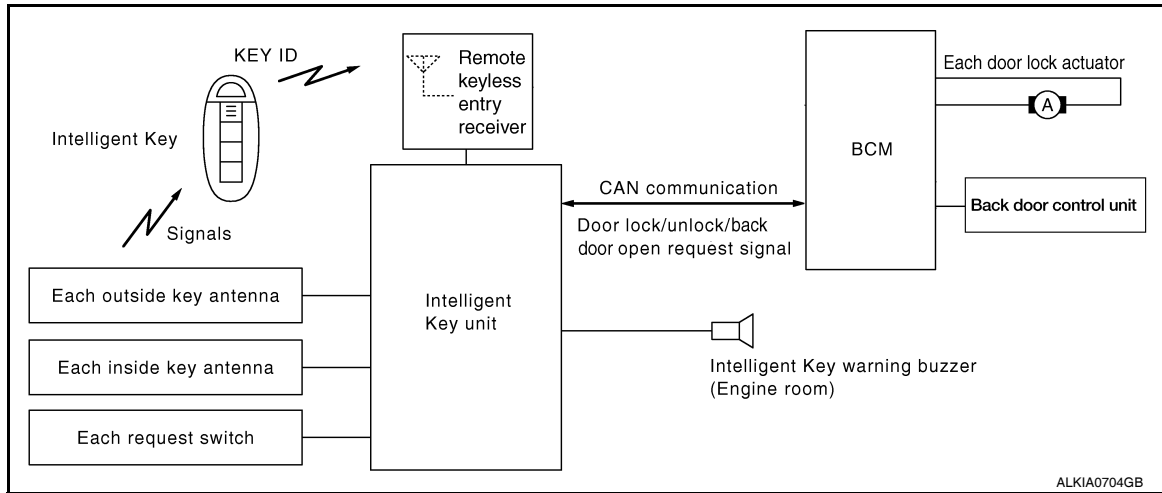
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY

### INTELLIGENT KEY : System Diagram



### INTELLIGENT KEY : System Description

INFOID:000000001538923

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

#### OPERATION DESCRIPTION/BACK DOOR OPEN FUNCTION

- When back door button of the Intelligent Key is pressed, the back door open signal is transmitted from the Intelligent Key to the back door control unit via remote keyless entry receiver and the Intelligent Key unit.
- When back door control unit receives the back door open request signal, it operates the back door motor and opens the liftgate.

#### OPERATION CONDITION

Remote controller operation	Operation condition	Operation
Back door open	• Press and hold the back door open button for 0.5 second or more	Back door opens

#### OPERATION AREA

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

#### HAZARD AND HORN REMINDER FUNCTION

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

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

Operating function of hazard and horn reminder

	C mode			S mode		
	Lock	Unlock	Back door open	Lock	Unlock	Back door open
Intelligent Key operation	Twice	Once	—	Twice	—	—
Hazard warning lamp flash	Once	—	—	—	—	—
Horn sound	—	—	—	—	—	—

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

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

##### With CONSULT-III

Refer to [DLK-51, "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)".](#)

##### Without CONSULT-III

Refer to Owner's Manual for instructions.

#### LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Remote keyless entry functions	Intelligent Key	Ignition key	Back door latch	Back door warning chime	Intelligent Key warning buzzer	CAN communication system	Back door control unit	Combination meter	Hazard warning lamps	Horns	IPDM E/R
Back door open function by remote control button	×	×	×	×		×	×				
Hazard and horn reminder function	×				×	×	×	×	×	×	×

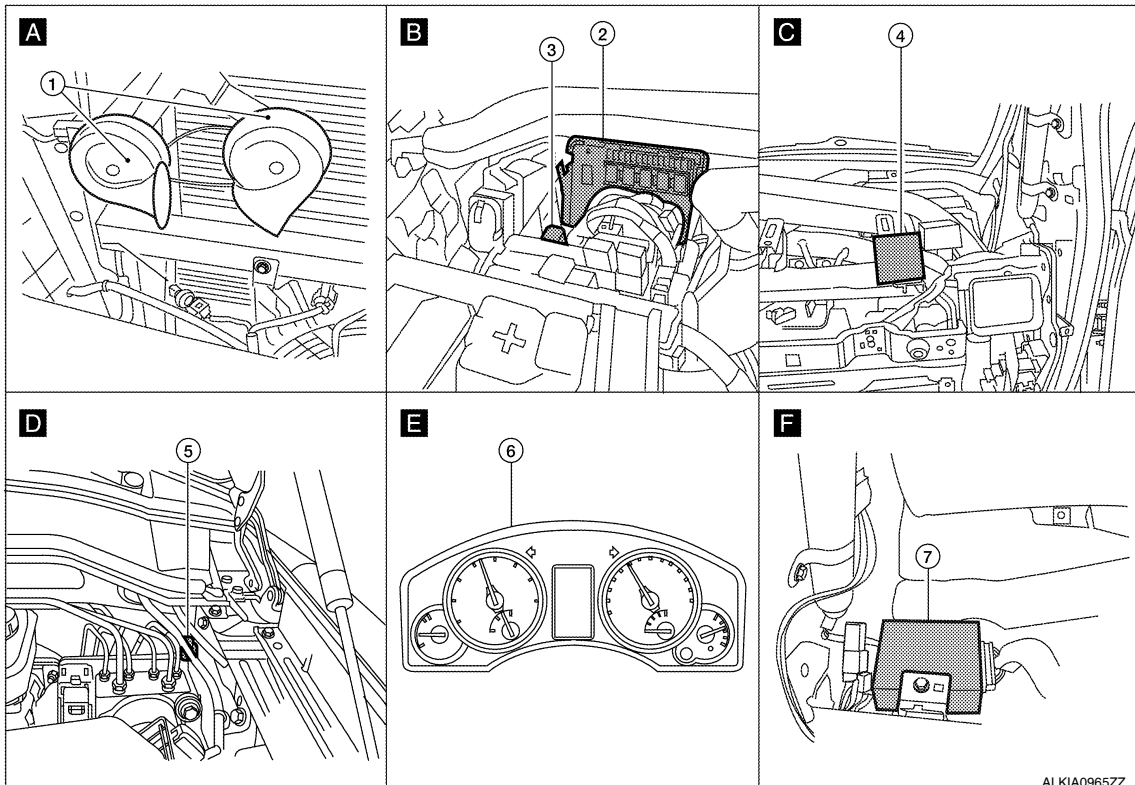
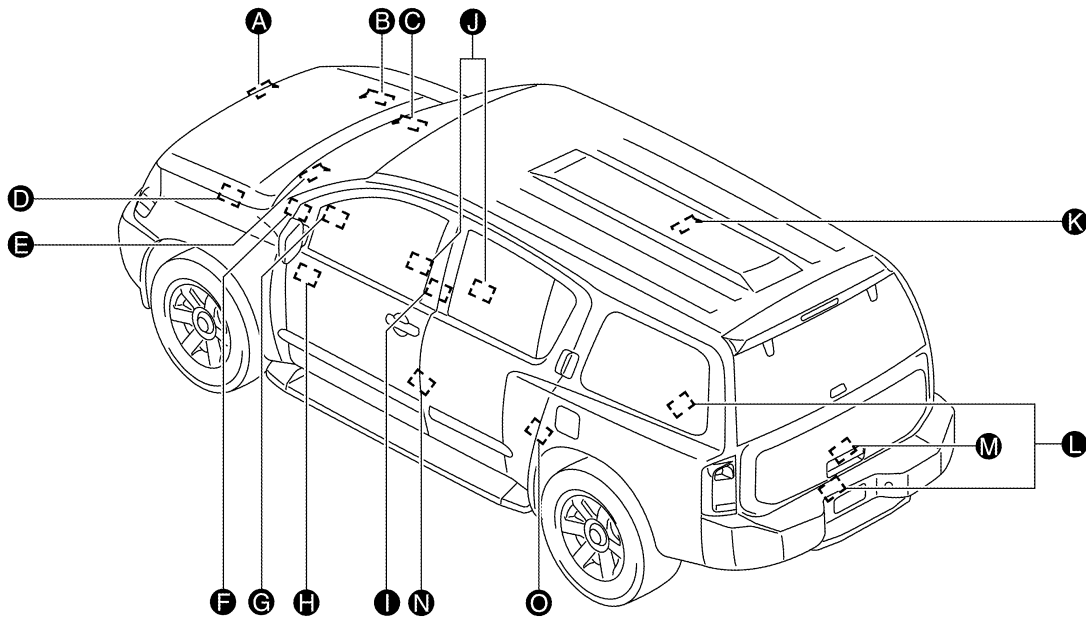
# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY : Component Parts Location

INFOID:000000004884057

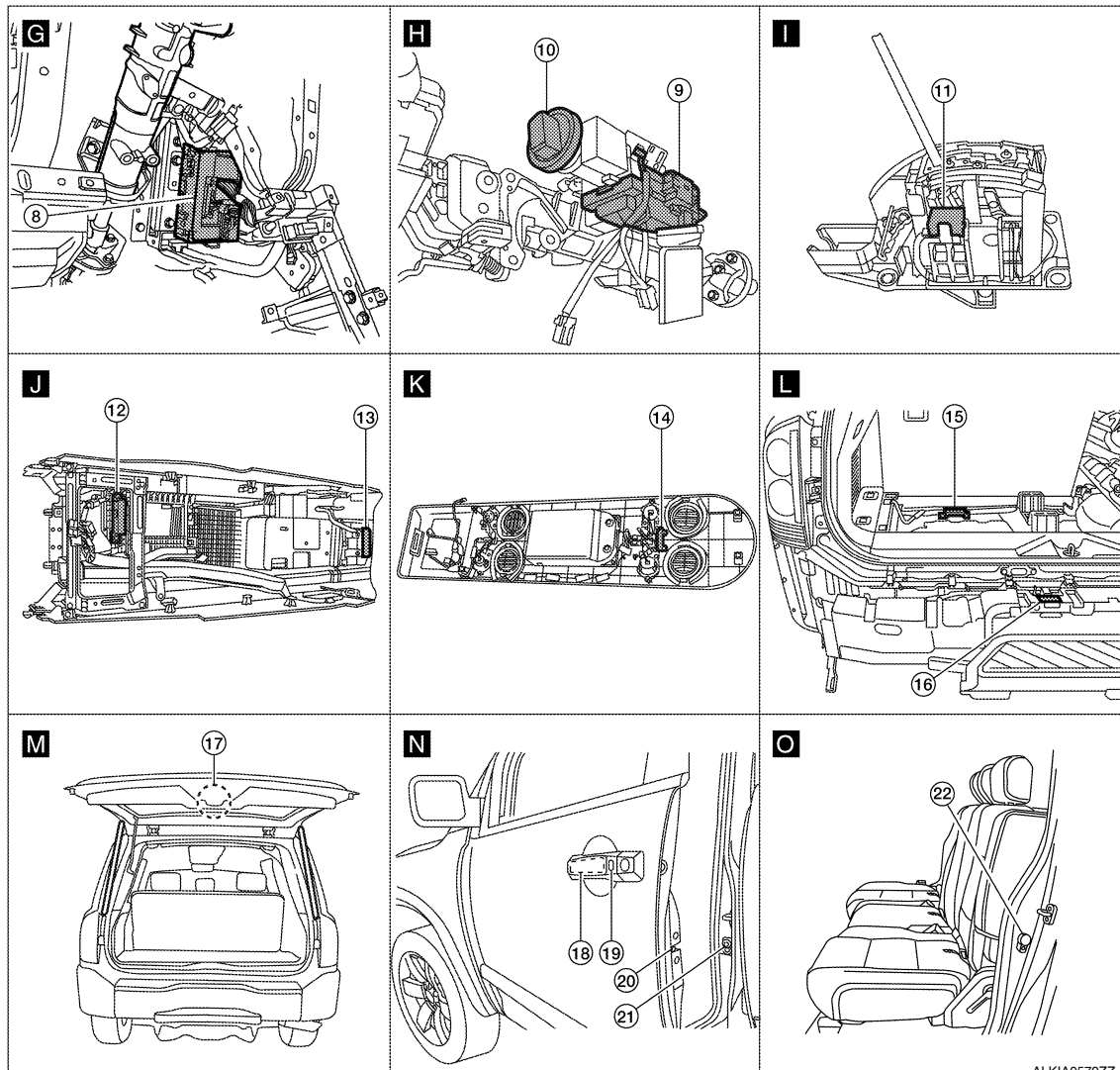


ALKIA0965ZZ

# BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



ALKIA0579ZZ

- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

## INTELLIGENT KEY : Component Description

INFOID:0000000001538925



## BACK DOOR OPENER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Function
Remote keyless entry receiver	Receives back door open 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 back door control unit.
Back door control unit	Receives button operation from Intelligent Key unit and operates the back door.
Intelligent Key warning buzzer	Warns the user of the lock/unlock condition and inappropriate operations with a buzzer sound.

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING FUNCTION

### System Description

INFOID:000000001538926

### OPERATION DESCRIPTION

The warning functions are as follows and are given to the user as warning information and warnings using combinations of Intelligent Key warning buzzer, KEY warning lamp and combination meter display in combination meter.

- Intelligent Key system malfunction
- OFF position warning
- P position warning
- Take away warning
- Door lock operation warning
- Key warning
- Intelligent Key insert information
- Engine start information
- Steering lock information
- Intelligent key low battery warning
- Key ID warning

### OPERATION CONDITION

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

Warning/Information functions		Operation procedure
Intelligent Key system malfunction		When a malfunction is detected on BCM, warning message will display.
OFF position warning	For internal	<ul style="list-style-type: none"> <li>• Ignition switch: ACC position.</li> <li>• Door switch (driver side): ON (Door is open).</li> </ul>
	For external	<p>OFF position warning (For internal) is in active mode, driver side door has been closed.</p> <p><b>NOTE:</b> OFF position (For external) active only when each of the sequence has occurred as below: P position warning → ACC warning → OFF position warning (For internal) → OFF position warning (For internal)</p>
P position warning		<ul style="list-style-type: none"> <li>• Shift position: Except P position</li> <li>• Engine is running to stopped (Ignition switch is ON to OFF)</li> </ul>
Take away warning	Door is open to close	<ul style="list-style-type: none"> <li>• Ignition switch: Except LOCK position.</li> <li>• Door switch: ON to OFF (Door is open to close).</li> <li>• Intelligent Key can not be detected inside the vehicle.</li> </ul>
	Door is open	<ul style="list-style-type: none"> <li>• Door switch: ON (Door is open)</li> <li>• Key ID verification every 5 seconds when registered Intelligent Key can not be detected inside the vehicle.</li> </ul>
	Take away through window	<ul style="list-style-type: none"> <li>• Engine is running.</li> <li>• Key ID verification every 30 seconds when registered Intelligent Key can not be detected inside the vehicle.</li> <li>• After vehicle speed verification, the registered Intelligent Key can not be detected inside the vehicle.</li> </ul>
Door lock operation warning	Request switch operation	<p>When request switch is pushed (lock operation) under the following conditions.</p> <ul style="list-style-type: none"> <li>• Door switch: ON (Any door is open).</li> <li>• Intelligent Key is inside vehicle.</li> </ul>
	Intelligent Key button operation	<p>When Intelligent Key button is pushed (lock operation) under the following conditions.</p> <ul style="list-style-type: none"> <li>• Door switch: ON (Any door is open).</li> <li>• Intelligent key is inside vehicle.</li> </ul>
Key warning		<ul style="list-style-type: none"> <li>• Ignition switch is OFF position.</li> <li>• Driver side door switch: ON (Driver side door is open).</li> <li>• Keyfob is pressed inside the vehicle.</li> </ul>
Intelligent Key insert information		<ul style="list-style-type: none"> <li>• Door switch: ON to OFF (Door is open to close).</li> <li>• Ignition switch: OFF to ON position.</li> <li>• Intelligent Key can not be detected inside the vehicle.</li> </ul>

# WARNING FUNCTION

< FUNCTION DIAGNOSIS >




[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions		Operation procedure
Engine start information	Ignition switch is ON position	<ul style="list-style-type: none"> <li>Ignition switch: ON position.</li> <li>Shift position: P position</li> <li>Engine is stopped</li> </ul>
	Ignition switch is except ON position	<ul style="list-style-type: none"> <li>Ignition switch: Except ON position.</li> <li>Shift position: P position</li> <li>Intelligent Key can be detected inside the vehicle.</li> </ul>
Steering lock information		When steering lock can not be released after ignition switch is turned ON.
Intelligent Key low battery warning		When Intelligent Key has low battery, it is detected by BCM after ignition switch is turned ON.
Key ID warning		When registered intelligent Key cannot be detected inside the vehicle after ignition switch is turned ON.

## WARNING METHOD

The following table shows the alarm or warning methods with chime.

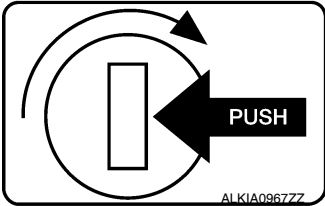
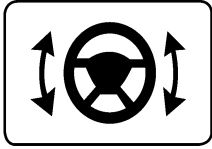
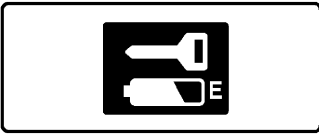
Combination meter shows information display when the warning conditions are met.

Warning/Information functions		Combination meter display	Warning chime	
			Combination meter buzzer	Intelligent Key warning buzzer
Intelligent Key system malfunction		—	—	—
OFF position warning	For internal	—	Activate	—
	For external	—	—	Activate
P position warning		 <small>JMKIA0037GB</small>	Activate	—
Take away warning	Door is open to close	 <small>JMKIA0036GB</small>	Activate	Activate
	Door is open		—	—
	Take away through window		Activate	—
Door lock operation warning	Request switch operation	—	—	Activate
	Intelligent Key operation	—	—	Activate
Key ID warning		 <small>JMKIA0036GB</small>	—	—

# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Warning/Information functions	Combination meter display	Warning chime	
		Combination meter buzzer	Intelligent Key warning buzzer
Engine start information		—	—
Steering lock information		—	—
Intelligent Key low battery warning		—	—

## LIST OF OPERATION RELATED PARTS

Parts marked with × are the parts related to operation.

Warning function		Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	"KEY" warning lamp
Intelligent Key system malfunction			×								×				×
OFF position warning	For internal		×		×					×	×				
	For external		×		×				×		×				
P position warning			×	×						×	×		×	×	
Take away warning	Door is open or close	×	×		×		×		×	×	×	×	×		
	Door is open	×	×		×		×				×	×	×		
	Take away through window	×	×				×			×	×		×		
	Intelligent Key is removed from vehicle	×	×				×				×		×		
Door lock operation warning		×	×		×	×	×	×	×		×	×			
Key ID warning		×	×	×			×				×	×	×		

# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Warning function		Intelligent Key	Intelligent Key unit	Ignition switch	Door switch	Door request switch	Inside key antenna	Outside key antenna	Intelligent Key warning buzzer	Combination meter warning buzzer	CAN communication system	BCM	Combination meter display	Park position switch	"KEY" warning lamp
Key warning		x	x		x					x	x	x	x		
Intelligent Key insert information		x	x	x	x		x				x	x	x		
Engine start information	Ignition switch is ON position	x	x	x			x				x	x	x	x	
	Ignition switch is except ON position	x	x	x			x				x	x	x		
Steering lock information			x	x							x		x		
Intelligent Key low battery warning		x	x				x				x		x		

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

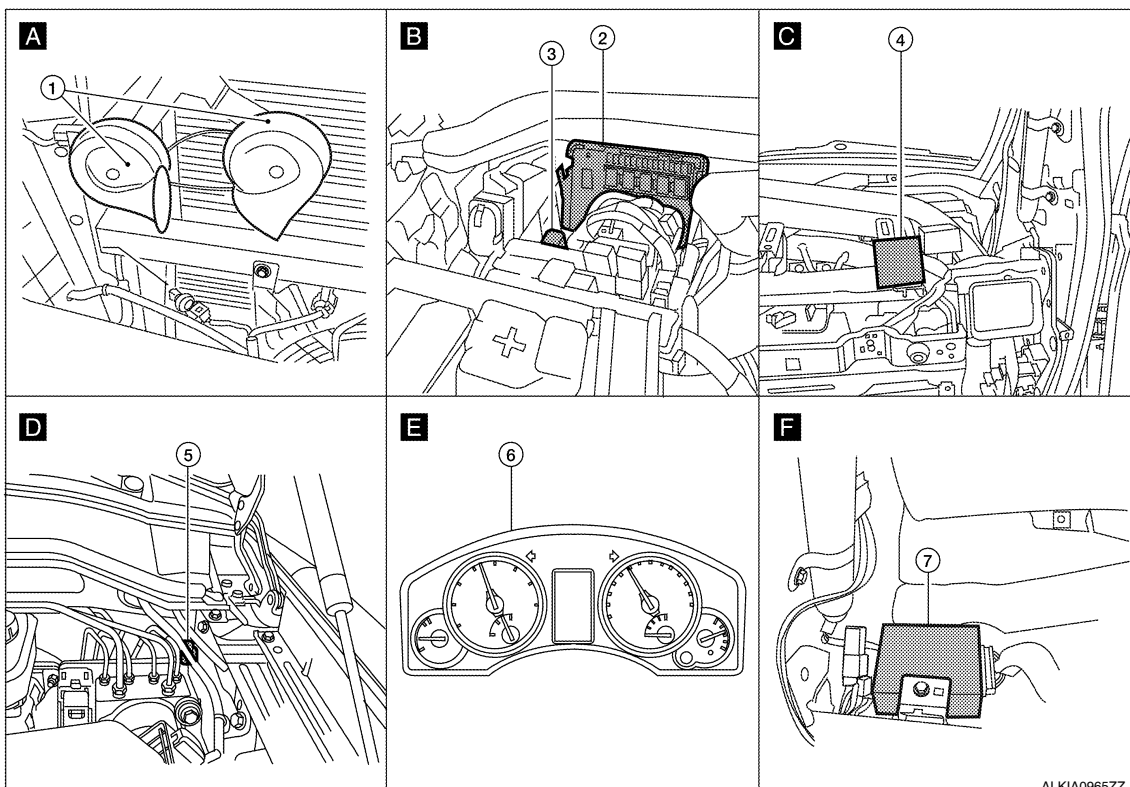
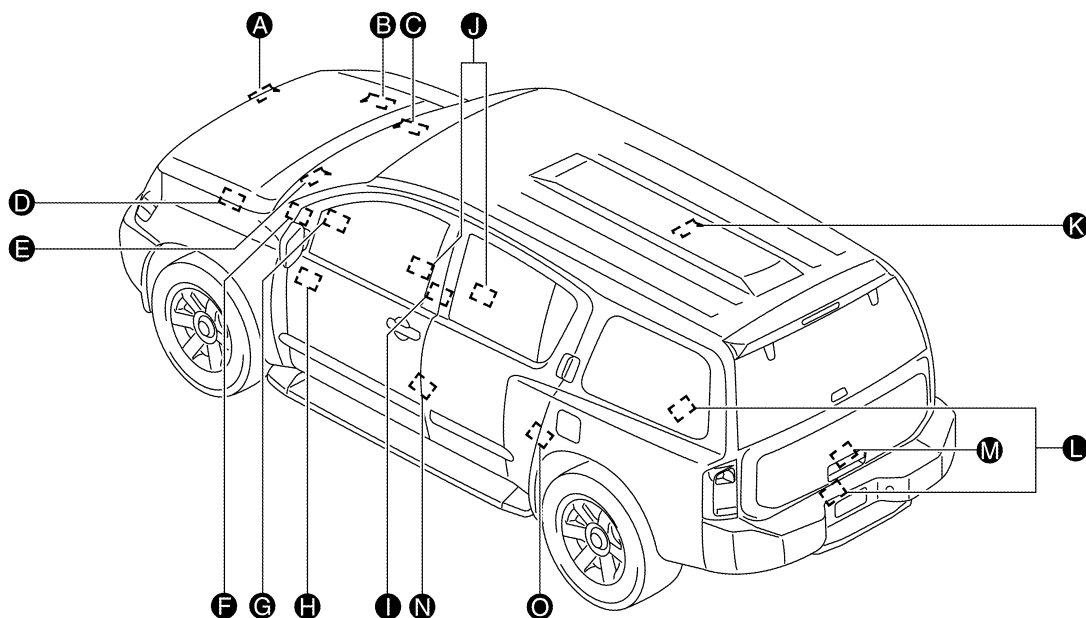
# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Parts Location

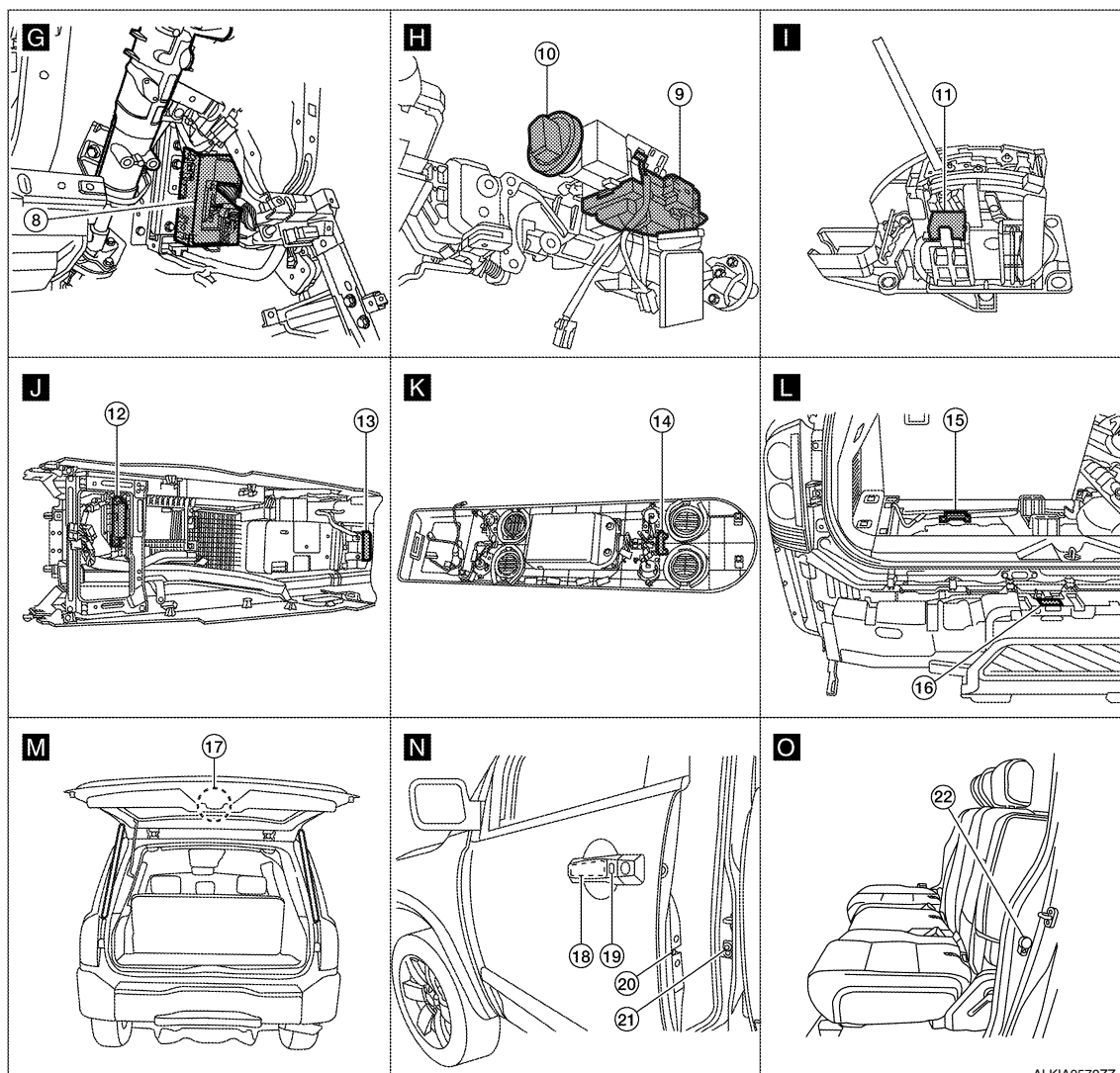
INFOID:000000004884058



# WARNING FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

## KEY REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

### KEY REMINDER FUNCTION

#### System Description

INFOID:000000001538928

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 <ul style="list-style-type: none"><li>• Door lock operation is performed</li><li>• Driver side door is opened</li><li>• Driver side door is in unlock state</li></ul>	All doors unlock
Door is open or closed	Right after all doors are closed under the following conditions <ul style="list-style-type: none"><li>• Intelligent Key is inside the vehicle</li><li>• Any door is opened</li><li>• All doors are locked by door lock and unlock switch or door lock knob</li></ul>	<ul style="list-style-type: none"><li>• All doors unlock</li><li>• Sounds Intelligent Key warning buzzer</li></ul>
Back door is closed	Right after back door is closed under the following conditions <ul style="list-style-type: none"><li>• Intelligent Key is inside luggage compartment</li><li>• All doors are closed</li><li>• All doors are locked</li></ul>	<ul style="list-style-type: none"><li>• Back door open</li><li>• Sounds Intelligent Key warning buzzer</li></ul>

\*: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 back door 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



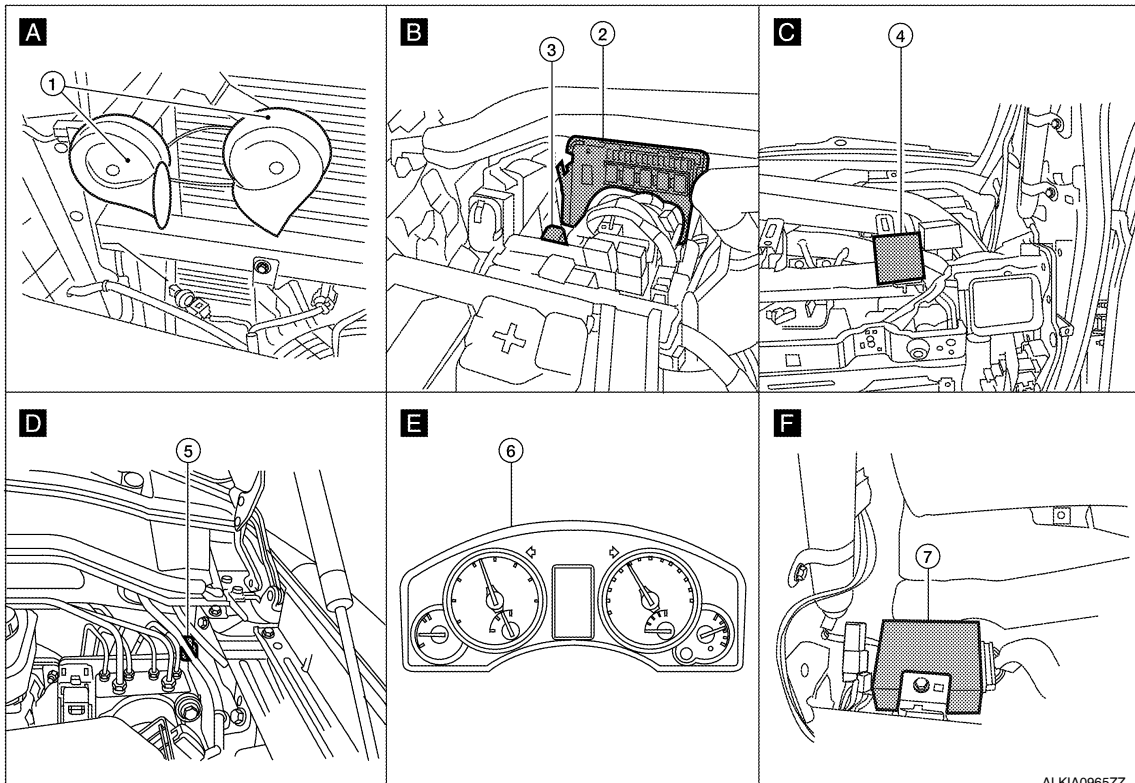
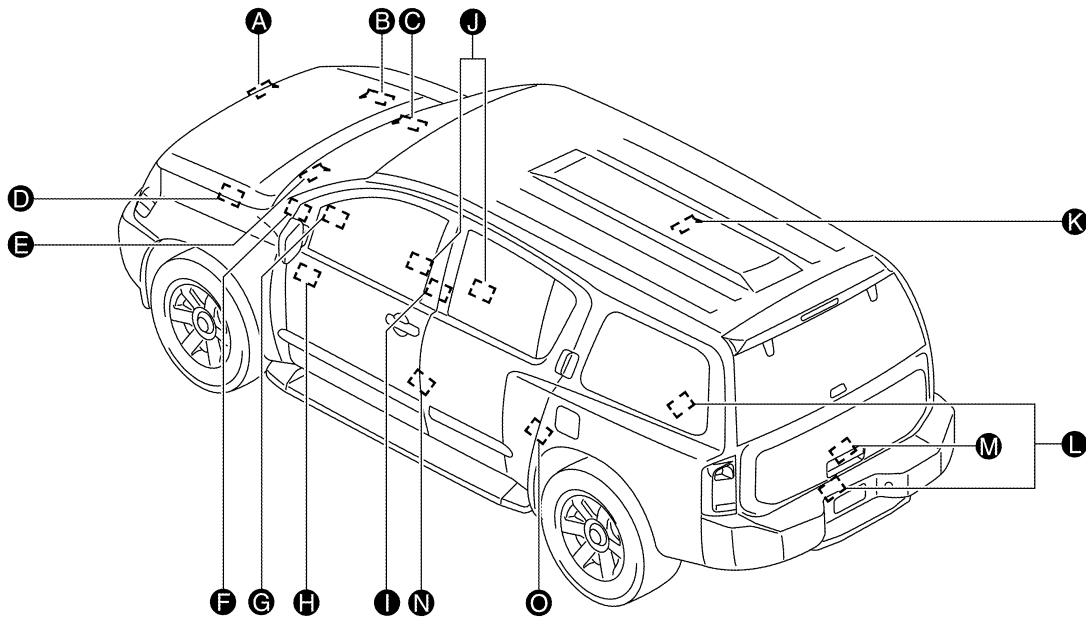
# KEY REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Parts Location

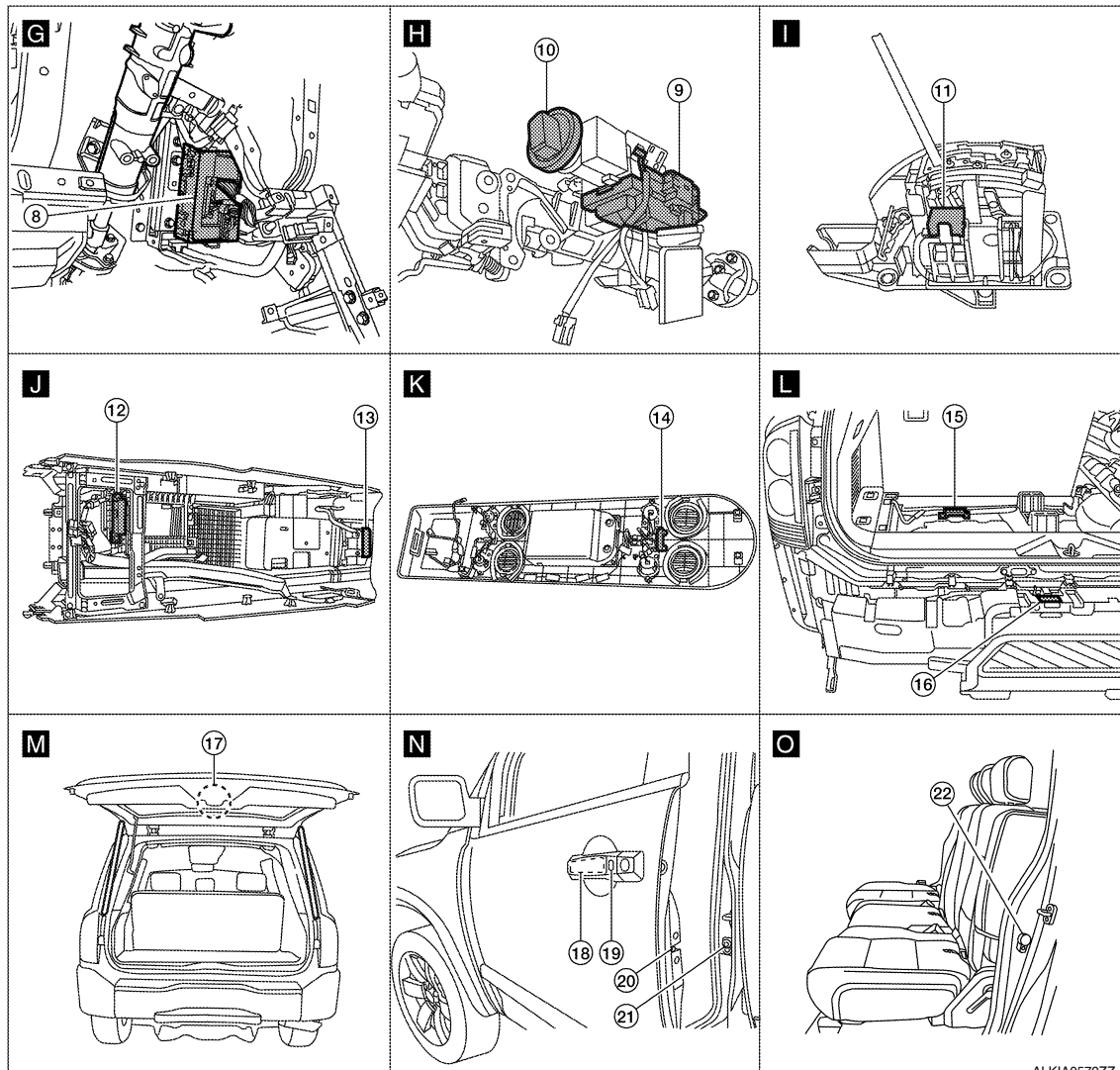
INFOID:000000004884059



# KEY REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



ALKIA0579ZZ

- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

# HAZARD AND BUZZER REMINDER FUNCTION

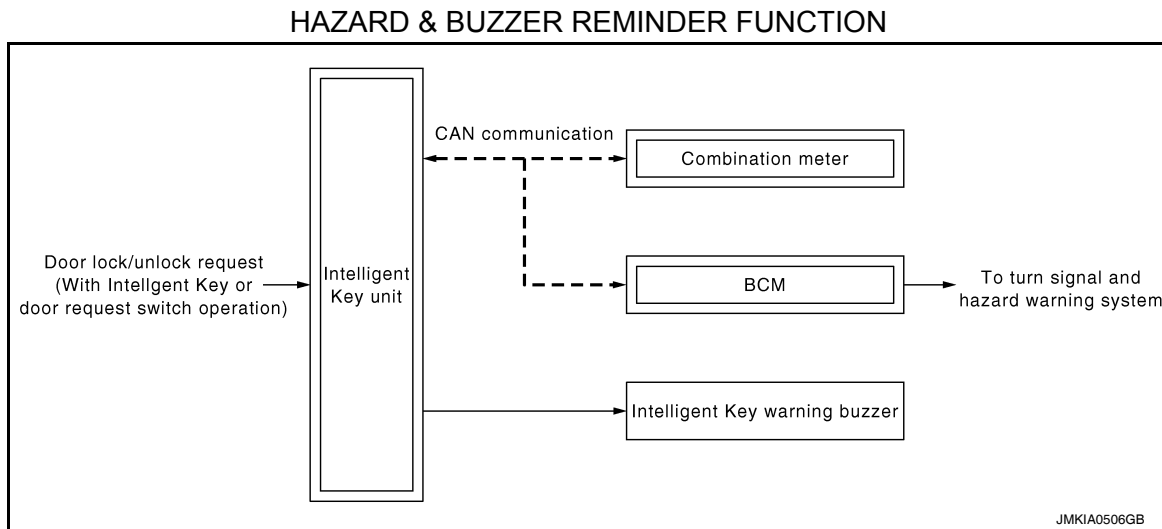
< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HAZARD AND BUZZER REMINDER FUNCTION

### System Diagram

INFOID:000000001538930



### System Description

INFOID:000000001538931

#### HAZARD AND BUZZER REMINDER FUNCTION

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

#### NOTE:

Hazard and buzzer reminder function mode can be changed with CONSULT-III. Refer to [DLK-52, "CONSULT-III Function \(INTELLIGENT KEY\)"](#).

DLK

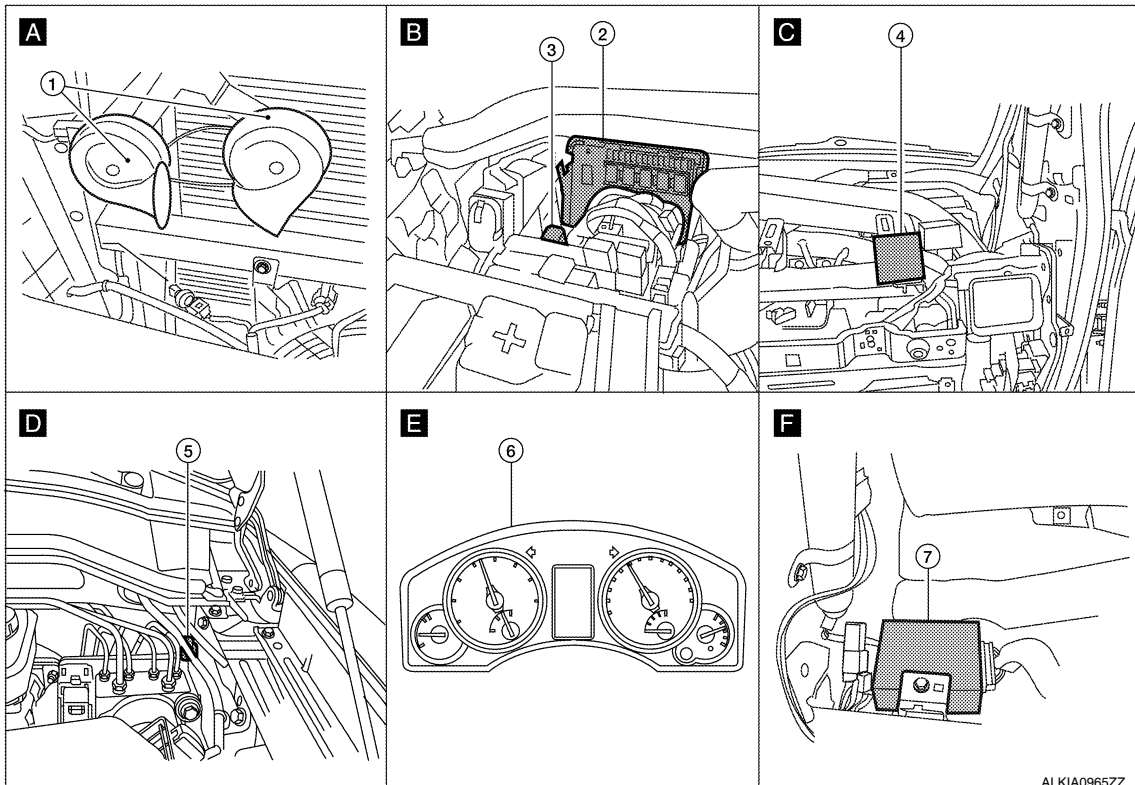
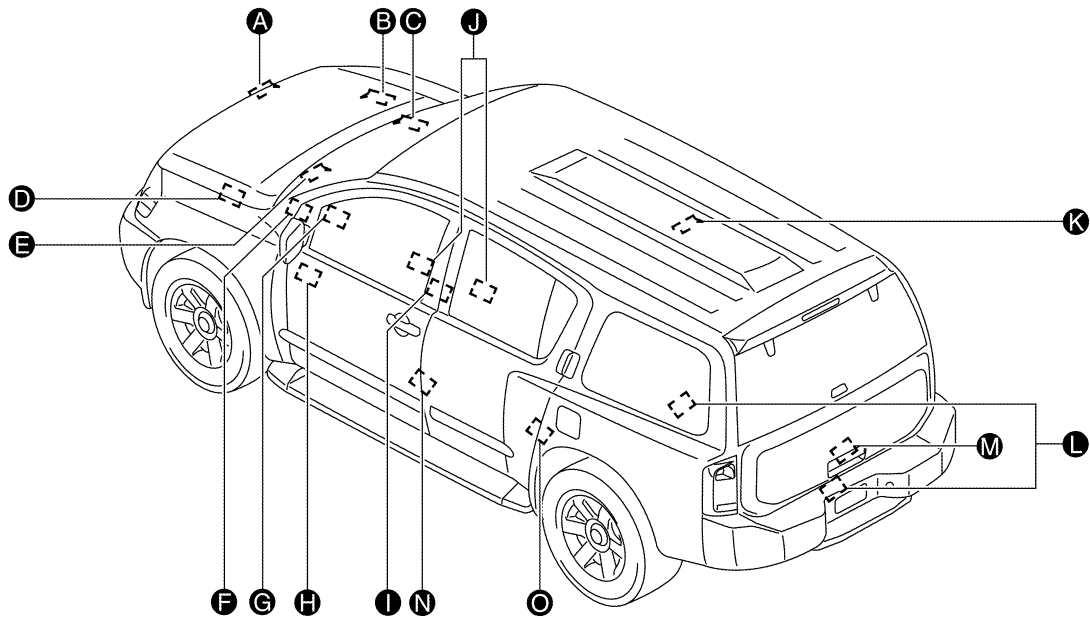
# HAZARD AND BUZZER REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Parts Location

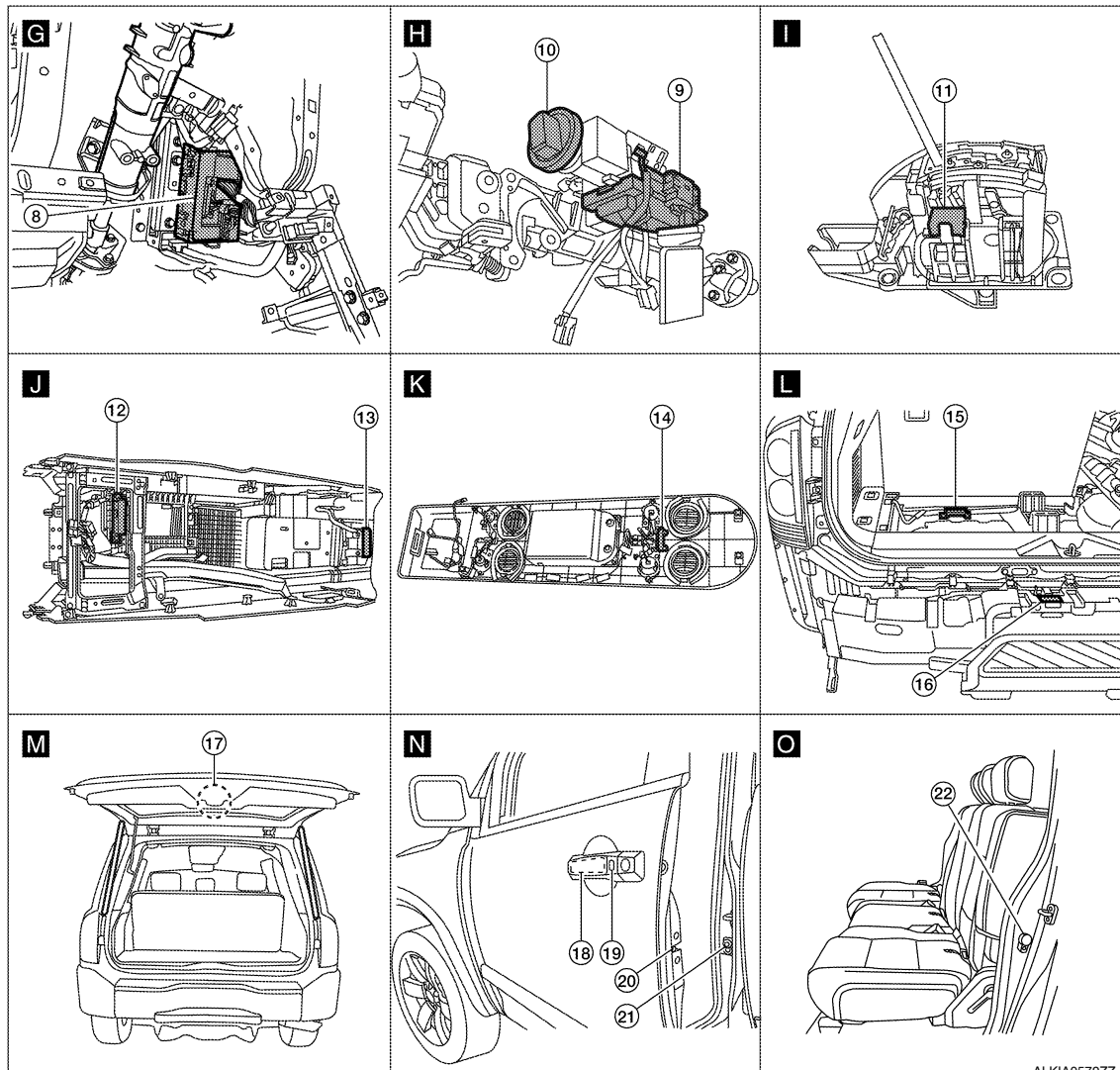
INFOID:000000004884060



# HAZARD AND BUZZER REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



- |   |   |   |
|---|---|---|
| 1. Horn E3<br>(view with hood open)   | 2. IPDM E/R E122, E124<br>(view with cover removed)   | 3. Horn relay H-1   |
| 4. Remote keyless entry receiver M25<br>(view with instrument panel RH removed) | 5. Intelligent key warning buzzer E25   | 6. Combination meter M23, M24   |
| 7. Intelligent Key unit M70<br>(view with instrument panel LH removed)          | 8. BCM M18, M19, M20<br>(view with instrument panel LH removed)                               | 9. Steering lock solenoid M15<br>(view with steering column removed)                          |
| 10. Key switch and ignition knob switch M12                                     | 11. A/T shift selector (park position switch) M203<br>(view with center console removed)      | 12. Inside key antenna 3 (front of center console) M210<br>(view with center console removed) |
| 13. Inside key antenna 1 (rear of center console) M209                          | 14. Inside key antenna 4 (overhead console area) R210<br>(view with overhead console removed) | 15. Inside key antenna 2 (luggage compartment) B76<br>(view with rear carpet removed)         |
| 16. Rear bumper antenna C7<br>(view with rear bumper removed)                   | 17. Back door latch D503  | 18. Front outside antenna LH D15<br>Front outside antenna RH D115                             |
| 19. Front door request switch LH D16<br>Front door request switch RH D116       | 20. Front door lock assembly LH (door unlock sensor) D14                                      | 21. Front door switch LH B8<br>RH B108  |
| 22. Rear door switch LH B18<br>RH B116  |   |   |

## HAZARD AND BUZZER REMINDER FUNCTION

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

### Component Description

INFOID:000000001538933

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:000000001538934

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

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DIAGNOSIS SYSTEM (BCM)

### COMMON ITEM

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

INFOID:000000004884062

#### 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 <a href="#">BCS-50. "DTC Index"</a> .
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 style="list-style-type: none"><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	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
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	PANIC ALARM			×

#### DOOR LOCK

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

INFOID:000000004884063

#### WORK SUPPORT



# DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Work Item	Description
DOOR LOCK-UNLOCK SET	<ul style="list-style-type: none"><li>• ON</li><li>• OFF</li></ul>
ANTI-LOCK OUT SET	<ul style="list-style-type: none"><li>• ON</li><li>• OFF</li></ul>

## 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
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

## ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLOCK/DR UNLOCK/OTHER UNLOCK].
TRUNK/BACK DOOR	This test is able to check trunk/back door lock operation [LOCK (SET)/UNLOCK (RELEASE)].

## MULTIREMOTE ENT

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

INFOID:000000004884064

## WORK SUPPORT

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

# DIAGNOSIS SYSTEM (BCM)

## < FUNCTION DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

Test Item	Description
PANIC ALRM SET	Panic alarm operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.
PW DOWN SET	Keyless power window down (open) operation mode can be changed in this mode. The operation mode will be changed when "CHANG SETT" on CONSULT-III screen is touched.

### Hazard and horn reminder mode

	MODE 1 (C mode)		MODE 2 (S mode)		MODE 3		MODE 4		MODE 5		MODE 6	
Keyfob operation	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock	Lock	Unlock
Hazard warning lamp flash	Twice	Once	Twice	—	—	—	Twice	Once	Twice	—	—	Once
Horn sound	Once	—	—	—	—	—	—	—	Once	—	Once	—

### Auto locking function mode

	MODE 1	MODE 2	MODE 3
Auto locking function	5 minutes	Nothing	1 minute

### Panic alarm operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	1.5 seconds

### Back door open operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	0.5 seconds	Nothing	0.5 seconds

### Keyless power window down operation mode

	MODE 1	MODE 2	MODE 3
Keyfob operation	3 seconds	Nothing	5 seconds

## DATA MONITOR

Monitored Item	Description
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.
DOOR SW-RR	Indicates [ON/OFF] condition of rear door switch RH.
DOOR SW-RL	Indicates [ON/OFF] condition of rear door switch LH.
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
KEY ON SW	Indicates [ON/OFF] condition of key switch.
ACC ON SW	Indicates [ON/OFF] condition of ignition switch in ACC position.
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

## DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Test Item	Description
FLASHER	This test is able to check right and left hazard reminder operation. The right hazard lamp turns on when "RH" on CONSULT-III screen is touched and the left hazard lamp turns on when "LH" on CONSULT-III screen is touched.
POWER WINDOW DOWN	This test is able to check power window down operation. The windows are lowered when "ON" on CONSULT-III screen is touched.
HORN	This test is able to check panic alarm and horn reminder operations. The alarm activate for 0.5 seconds after "ON" on CONSULT-III screen is touched.
DOOR LOCK	This test is able to check door lock operation. The doors lock and unlock based on the item on CONSULT-III screen touched.

### INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) INFOID:000000004884065

### DATA MONITOR

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

DLK

# DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

### CONSULT-III Function (INTELLIGENT KEY)

INFOID:000000001538939

#### APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by Intelligent Key unit.
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from 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.

#### WORK SUPPORT

Support item	Description	Selection item	Condition
CONFIRM KEY FOB ID	It can check whether Intelligent Key ID code is registered or not.	—	—
TAKE OUT FROM WINDOW WARN	Take away warning chime (from window) mode can be changed.	ON	Active
		OFF	Inactive
LOW BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed.	ON	Active
		OFF	Inactive
KEYLESS FUNCTION	Door lock function with Intelligent Key can be changed.	ON	Active
		OFF	Inactive
ANSWER BACK FUNCTION	Buzzer reminder operation can be changed.	ON	Active
		OFF	Inactive
SELECTIVE UNLOCK FUNCTION	Anti-hijack mode can be changed.	ON	Active
		OFF	Inactive
HAZARD ANSWER BACK	Hazard reminder operation mode can be changed.	Refer to <a href="#">DLK-43</a> .	
ANSWER BACK WITH I-KEY LOCK	Buzzer reminder operation (lock operation) mode by each door request switch can be changed.	BUZZER	Active
		OFF	Inactive
ANSWER BACK WITH I-KEY UNLOCK	Buzzer reminder operation (unlock operation) mode by each door request switch can be changed.	BUZZER	Active
		OFF	Inactive
AUTO RELOCK TIMER	Auto door lock operation mode can be changed.	OFF	Inactive
		2 min	Active
LOCK/UNLOCK BY I-KEY	Door lock function by door request switch can be changed.	ON	Active
		OFF	Inactive

#### SELF-DIAG RESULT

Refer to [DLK-163, "DTC Index"](#).

#### DATA MONITOR

Monitor Item	Condition
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).

# DIAGNOSIS SYSTEM (INTELLIGENT KEY UNIT)

< FUNCTION DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition
AS REQ SW	Indicates [ON (pressed)/OFF (released)] condition of door request switch (passenger side).
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.
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.
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.
VEHICLE SPEED	Displays the vehicle speed signal received from combination meter by numerical value [km/h].

## ACTIVE TEST

Test item	Description
DOOR LOCK/UNLOCK	<p>This test is able to check door lock/unlock operation.</p> <ul style="list-style-type: none"> <li>ALL UNLK: All door lock actuators are unlocked.</li> <li>DR UNLK: Door lock actuator (driver side) is unlocked.</li> <li>AS UNLK: Door lock actuator (passenger side) is unlocked.</li> <li>BK UNLK: This item is indicated, but inactive.</li> <li>LOCK: All door lock actuator is locked.</li> </ul>
ANTENNA	<p>This test is able to check Intelligent Key antenna operation.</p> <p>When the following condition are met, hazard warning lamps flash.</p> <ul style="list-style-type: none"> <li>ROOM ANT1: Inside key antenna (front of center console) detects Intelligent Key, when "ROOM ANT1" is selected.</li> <li>ROOM ANT2: Inside key antenna (rear luggage area) detects Intelligent Key, when "ROOM ANT2" is selected.</li> <li>ROOM ANT3: Inside key antenna (rear of center console) detects Intelligent Key, when "ROOM ANT3" is selected.</li> <li>ROOM ANT4: Inside key antenna (roof console) detects Intelligent Key, when "ROOM ANT4" is selected.</li> <li>DRIVER ANT: Outside key antenna (driver side) detects Intelligent Key, when "DRIVER ANT" is selected.</li> <li>ASSIST ANT: Outside key antenna (passenger side) detects Intelligent Key, when "ASSIST ANT" is selected.</li> <li>BK DOOR ANT: Outside key antenna (rear bumper) detects Intelligent Key, when "BK DOOR ANT" is selected.</li> </ul>
OUTSIDE BUZZER	<p>This test is able to check Intelligent Key warning buzzer operation.</p> <ul style="list-style-type: none"> <li>ON</li> <li>OFF</li> </ul>
INSIDE BUZZER	<p>This test is able to check warning chime in combination meter operation.</p> <ul style="list-style-type: none"> <li>TAKE OUT: Take away warning chime sounds.</li> <li>KNOB: Ignition knob switch warning chime sounds.</li> <li>KEY: Key warning chime sounds.</li> <li>OFF</li> </ul>

## COMPONENT DIAGNOSIS

### U1000 CAN COMM CIRCUIT

#### Description

INFOID:0000000001538940

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-44, "CAN Communication Signal Chart"](#).

#### DTC Logic

INFOID:0000000001538941

#### 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. <ul style="list-style-type: none"> <li>• Transmission</li> <li>• Receiving (ECM)</li> <li>• Receiving (VDC/TCS/ABS)</li> <li>• Receiving (METER/M&amp;A)</li> <li>• Receiving (TCM)</li> <li>• Receiving (MULTI AV)</li> <li>• Receiving (IPDM E/R)</li> </ul>

#### Diagnosis Procedure

INFOID:0000000001538942

#### 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-14, "Trouble Diagnosis Flow Chart"](#).  
NO >> Refer to [GI-38, "Intermittent Incident"](#).

# U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## U1010 CONTROL UNIT (CAN)

### DTC Logic

INFOID:0000000001538943

### 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:0000000001538944

#### 1.REPLACE BCM

When DTC [U1010] is detected, replace BCM.

>> Replace BCM. Refer to [BCS-55. "Removal and Installation"](#).

### Special Repair Requirement

INFOID:0000000001538945

#### 1.REQUIRED WORK WHEN REPLACING BCM

The BCM must be initialized when replaced. Refer to [BCS-3. "CONFIGURATION : Description"](#) for BCM configuration.

Initialize NVIS by CONSULT-III. For the details of initialization refer to CONSULT-III operation manual.

>> Work end.

DLK

# INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

### Description

INFOID:000000001538946

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001538947

#### 1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 1".
3. When Intelligent Key is inside key antenna (rear of center console) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 1	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 1 (rear of center console)</li> <li>• Between Intelligent Key unit and inside key antenna 1 (rear of center console)</li> </ul>

##### Is the inspection result normal?

YES >> Inside key antenna 1 (rear of center console) is OK.

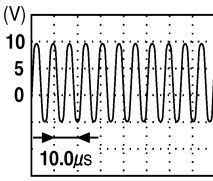
NO >> Refer to [DLK-56, "Diagnosis Procedure"](#).

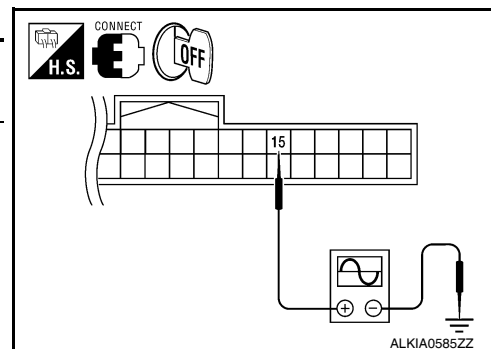
### Diagnosis Procedure

INFOID:000000001538948

#### 1.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	15	Ground	Ignition switch is pushed.	 <p>PIIB7441E</p>



##### Is the inspection result normal?

YES >> Inside key antenna 1 (rear of center console) is OK.

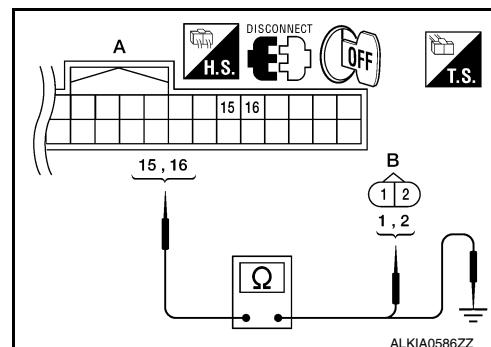
NO >> GO TO 2

#### 2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 1 (rear of center console) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 15, 16 and inside key antenna 1 (rear of center console) harness connector (B) M209 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 1 (rear of center console) connector	Terminals	Continuity
A: M70	15	B: M209	1	Yes
	16		2	

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 15, 16 and ground.





# INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	15	Ground	No
		16		

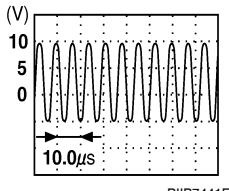
Is the inspection result normal?

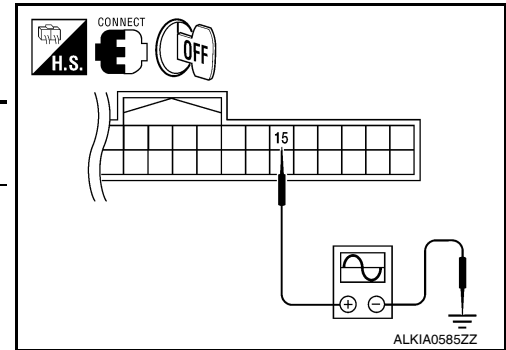
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 1 (rear of center console).

## 3.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace inside key 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) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	15	Ground	Ignition switch is pushed.	



Is the inspection result normal?

YES >> Replace inside key antenna 1 (rear of center console).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

# INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

### Description

INFOID:000000001538949

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001538950

#### 1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 2".
3. When Intelligent Key is inside key antenna (luggage compartment) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 2	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"> <li>• Inside key antenna 2 (luggage compartment)</li> <li>• Between Intelligent Key unit and inside key antenna 2 (luggage compartment)</li> </ul>

##### Is the inspection result normal?

YES >> Inside key antenna 2 (luggage compartment) is OK.

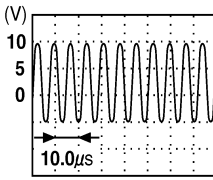
NO >> Refer to [DLK-58, "Diagnosis Procedure"](#).

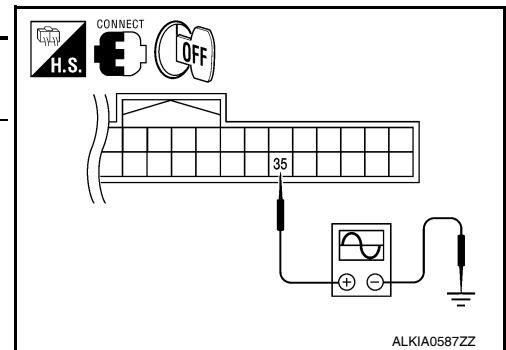
### Diagnosis Procedure

INFOID:000000001538951

#### 1.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	 <p>PIIB7441E</p>



##### Is the inspection result normal?

YES >> Inside key antenna 2 (luggage compartment) is OK.

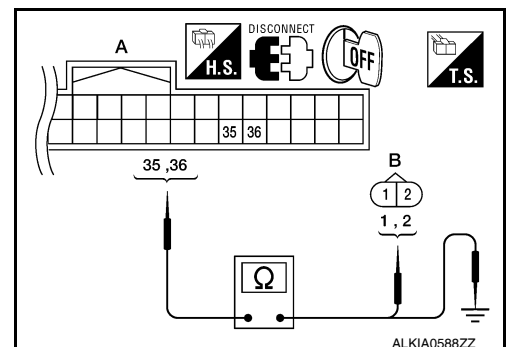
NO >> GO TO 2

#### 2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 2 (luggage compartment) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 35, 36 and inside key antenna 2 (luggage compartment) harness connector (B) B76 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 2 (luggage compartment) connector	Terminals	Continuity
A: M70	35	B: B76	1	Yes
	36		2	

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 35, 36 and ground.



# INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	35	Ground	No
		36		

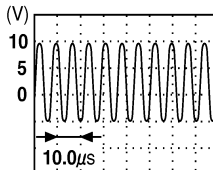
Is the inspection result normal?

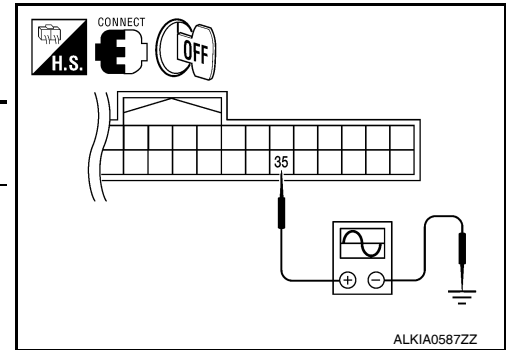
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 2 (luggage compartment).

## 3.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace inside key 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) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	35	Ground	Ignition switch is pushed.	 <p>PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 2 (luggage compartment).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

# INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

### Description

INFOID:000000001538952

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001538953

#### 1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 3".
3. When Intelligent Key is inside key antenna (front of center console) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 3	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"><li>• Inside key antenna 3 (front of center console)</li><li>• Between Intelligent Key unit and inside key antenna 3 (front of center console)</li></ul>

##### Is the inspection result normal?

YES >> Inside key antenna 3 (front of center console) is OK.

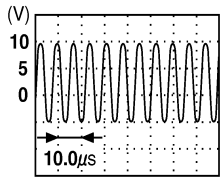
NO >> Refer to [DLK-60, "Diagnosis Procedure"](#).

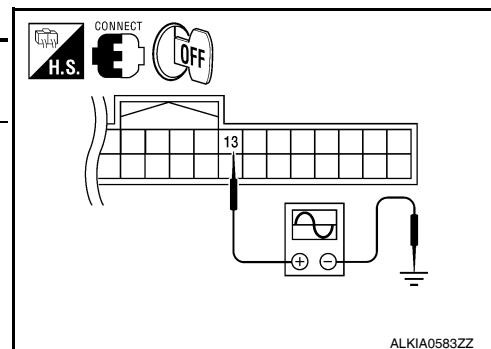
### Diagnosis Procedure

INFOID:000000001538954

#### 1.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	 PIIB7441E



##### Is the inspection result normal?

YES >> Inside key antenna 3 (front of center console) is OK.

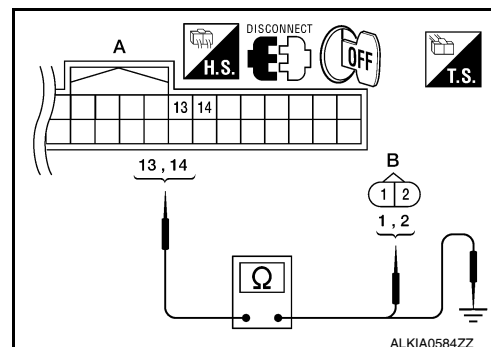
NO >> GO TO 2

#### 2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 3 (front of center console) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 13, 14 and inside key antenna 3 (front of center console) harness connector (B) M210 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 3 (front of center console) connector	Terminals	Continuity
A: M70	13	B: M210	1	Yes
	14		2	

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 13, 14 and ground.



# INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	13	Ground	No
		14		

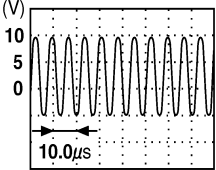
Is the inspection result normal?

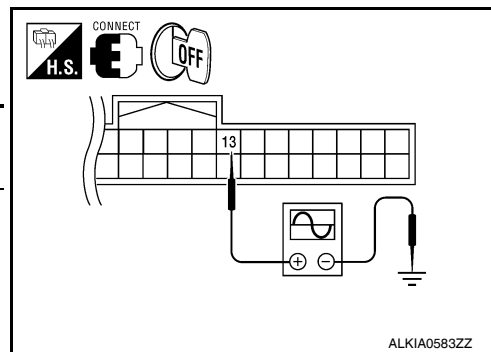
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 3 (front of center console).

## 3.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace inside key 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) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	13	Ground	Ignition switch is pushed.	 <p>PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 3 (front of center console).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

# INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

### Description

INFOID:000000001538955

Detects whether Intelligent Key is inside the vehicle.

### Component Function Check

INFOID:000000001538956

#### 1.CHECK INSIDE KEY ANTENNA INPUT SIGNAL

##### With CONSULT-III

1. Check "ANTENNA" in "Active Test" mode with CONSULT-III.
2. Touch "INSIDE KEY ANTENNA 4".
3. When Intelligent Key is inside key antenna (overhead console area) detection area, hazard lamps flash.

Test Item	Condition	Possible cause
INSIDE KEY ANTENNA 4	An excessive high or low voltage from inside antenna is sent to the Intelligent Key Unit	<ul style="list-style-type: none"><li>• Inside key antenna 4 (overhead console area)</li><li>• Between Intelligent Key unit and inside key antenna 4 (overhead console area)</li></ul>

##### Is the inspection result normal?

YES >> Inside key antenna 4 (overhead console area) is OK.

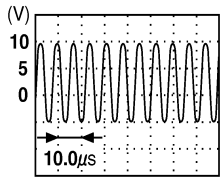
NO >> Refer to [DLK-62, "Diagnosis Procedure"](#).

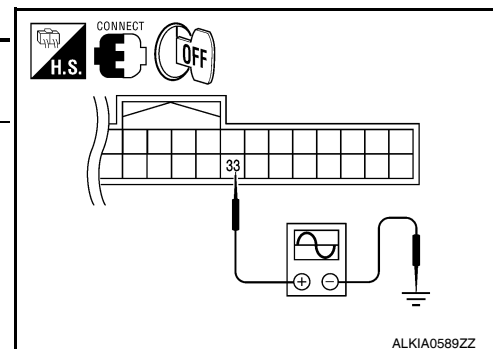
### Diagnosis Procedure

INFOID:000000001538957

#### 1.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

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

Connector	Item	Terminals		Condition	Signal (V) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	 PIIB7441E



##### Is the inspection result normal?

YES >> Inside key antenna 4 (overhead console area) is OK.

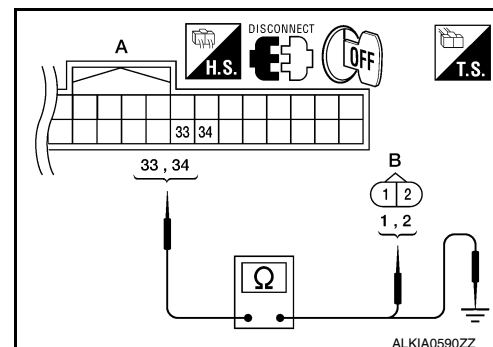
NO >> GO TO 2

#### 2.CHECK INSIDE KEY ANTENNA

1. Disconnect Intelligent Key unit connector and inside key antenna 4 (overhead console area) connectors.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 33, 34 and inside key antenna 4 (overhead console area) harness connector (B) R210 terminals 1, 2.

Intelligent Key unit connector	Terminals	Inside key antenna 4 (overhead console area) connector	Terminals	Continuity
A: M70	33	B: R210	1	Yes
	34		2	

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 33, 34 and ground.



# INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Item	Connector	Terminals		Continuity
Intelligent Key unit	A: M70	33	Ground	No
		34		

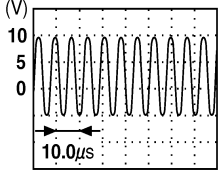
Is the inspection result normal?

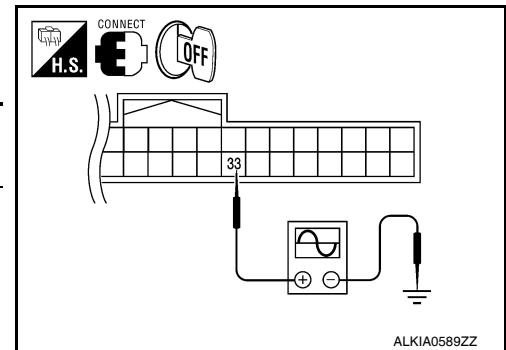
YES >> GO TO 3

NO >> Repair or replace harness between Intelligent Key unit and inside key antenna 4 (overhead console area).

## 3.CHECK INSIDE KEY ANTENNA POWER SUPPLY SIGNAL

1. Replace inside key 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) (Reference value)
		(+)	(-)		
M70	Intelligent Key unit	33	Ground	Ignition switch is pushed.	 <p>PIIB7441E</p>



Is the inspection result normal?

YES >> Replace inside key antenna 4 (overhead console area).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

# 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:000000001538958

#### 1. CHECK POWER SUPPLY CIRCUIT

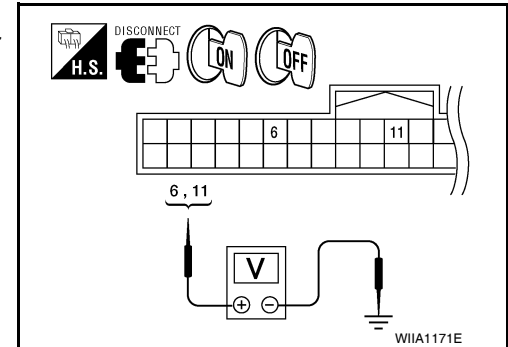
1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M70 terminals 6, 11 and ground.

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

Is the inspection result normal?

YES >> GO TO 2

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



#### 2. CHECK GROUND CIRCUIT

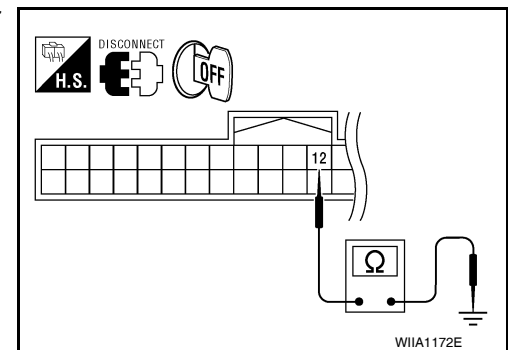
Check continuity between Intelligent Key unit harness connector M70 terminal 12 and ground.

**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:000000004884061

#### 1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	22 (15A)
70		F (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	59 (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



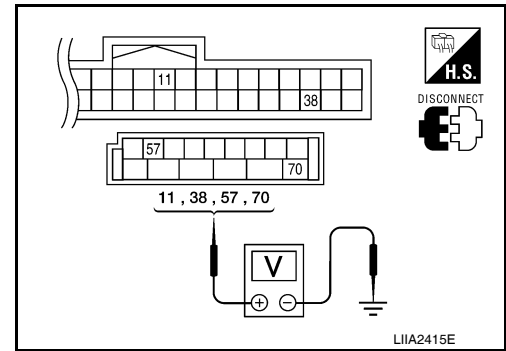
# POWER SUPPLY AND GROUND CIRCUIT

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

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

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



Is the measurement value normal?

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

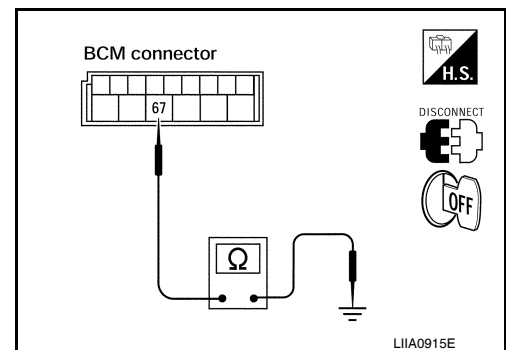
## 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes

Does continuity exist?

- YES >> INSPECTION END  
 NO >> Repair or replace harness.



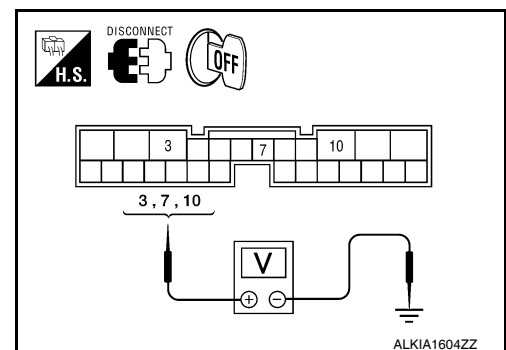
## BACK DOOR

## BACK DOOR : Diagnosis Procedure

### 1. BACK DOOR POWER SUPPLY CIRCUIT INSPECTION

1. Turn ignition switch OFF.
2. Disconnect back door control unit connector.
3. Check voltage between back door control unit connector B55 terminals 3, 7, 10 and ground.

Connector	Terminals		Power source	Condition	Voltage (V) (Approx.)
	(+)	(-)			
B55	3	Ground	Battery power supply	Ignition switch OFF	Battery voltage
	7	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage
	10	Ground	Battery power supply	Ignition switch OFF	Battery voltage



## POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair the back door control unit power supply circuit.

### 2.BACK DOOR GROUND CIRCUIT INSPECTION

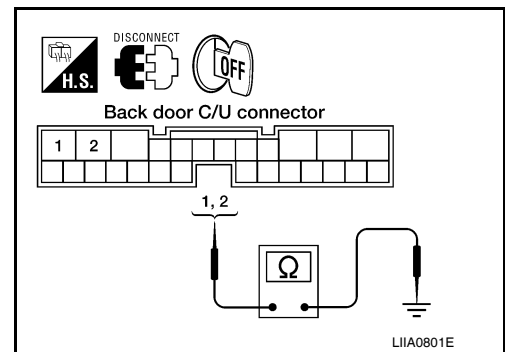
Check continuity between back door control unit connector B55 terminal 1, 2 and ground.

BCM		Ground	Continuity
Connector	Terminal		
B55	1		Yes
	2		Yes

Is the inspection result normal?

YES >> Circuit is OK.

NO >> Repair the harness between the back door control unit and ground.



# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR SWITCH

### Description

INFOID:000000001538961

Detects door open/close condition.

### Component Function Check

INFOID:000000001538962

#### 1.CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [DLK-67, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001538963

#### 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

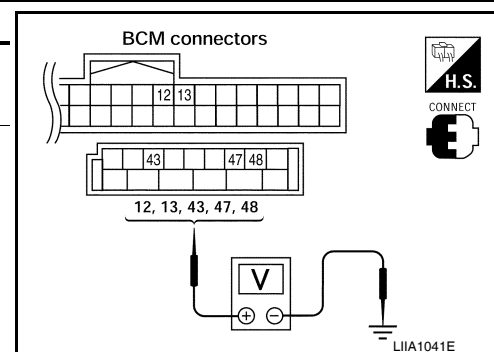
Check voltage between BCM connector M18 or M19 terminals 12, 13, 43, 47, 48 and ground.

# DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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



Is the inspection result normal?

YES >> Door switch circuit is OK.

NO >> GO TO 2

## 2.CHECK DOOR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect door switch and BCM.
- Check continuity between BCM connector (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) D503 terminal 7.

**2 - 47 :Continuity should exist**

**2 - 12 :Continuity should exist**

**2 - 48 :Continuity should exist**

**2 - 13 :Continuity should exist**

**7 - 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) D503 terminal 7 and ground.

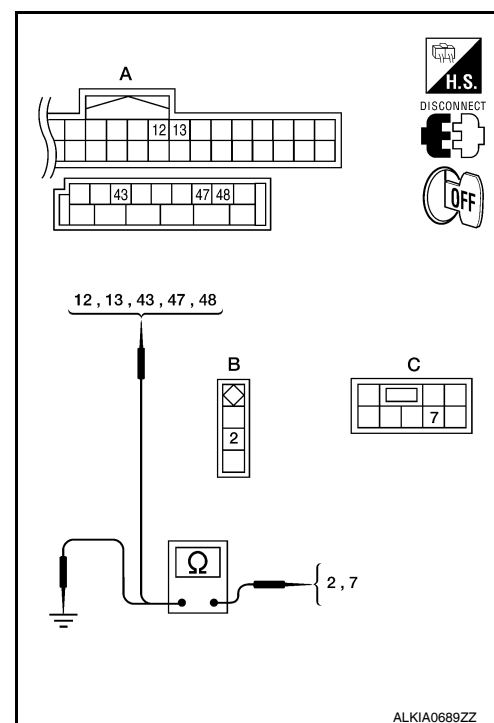
**2 - Ground :Continuity should not exist**

**7 - Ground :Continuity should not exist**

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.



## 3.CHECK DOOR SWITCHES

- Disconnect door switch harness.
- Check continuity between door switch connector terminals.

# DOOR SWITCH

## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Switch	Terminals	Condition	Continuity
A: Door switch (front and rear)	2 – Ground	Open	Yes
		Closed	No
B: Back door switch	7 – Ground	Open	Yes
		Closed	No

### Is the inspection result normal?

- YES >> Door switch circuit is OK.  
 NO >> (Front and rear doors) Replace door switch.  
 NO >> (Back door) GO TO 4

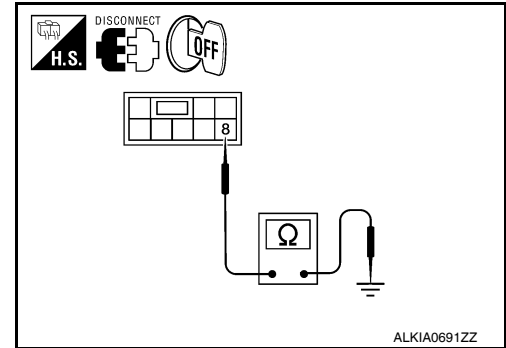
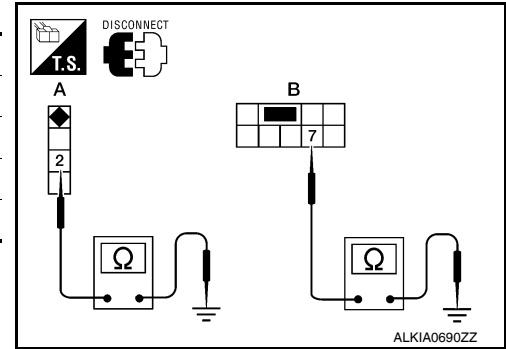
## 4.CHECK BACK DOOR SWITCH CIRCUIT

- Check continuity between door switch connector terminal and ground.

Connector	Terminals	Continuity
Back door switch	8 – Ground	Yes

### Is the inspection result normal?

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



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR LOCK AND UNLOCK SWITCH

### DRIVER SIDE

#### DRIVER SIDE : Description

INFOID:000000001538964

Transmits door lock/unlock operation to BCM.

#### DRIVER SIDE : Component Function Check

INFOID:000000001538965

### 1.CHECK FUNCTION

#### ④With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to [DLK-70, "DRIVER SIDE : Diagnosis Procedure"](#).

#### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001538966

### 1.CHECK DOOR LOCK/UNLOCK SWITCH INPUT SIGNAL

#### ④With 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:

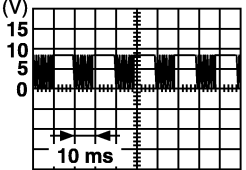
**CDL LOCK SW :ON**

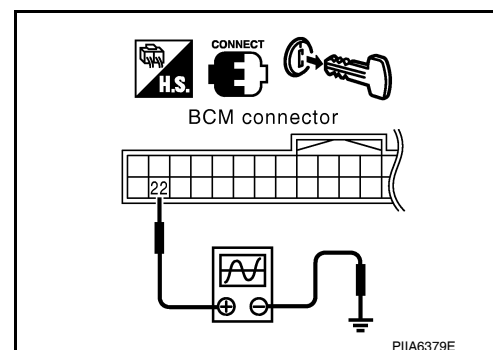
- When main power window and door lock/unlock switch is turned to UNLOCK:

**CDL UNLOCK SW :ON**

#### ④Without CONSULT-III

- 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.

Connector	Terminal		Voltage (V)
	(+)	(-)	
M18	22	Ground	 PIIA1297E



Is the inspection result normal?

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

# DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

NO >> GO TO 2

### 2.CHECK BCM OUTPUT SIGNAL

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

**The front windows should be lowered.**

Is the inspection result normal?

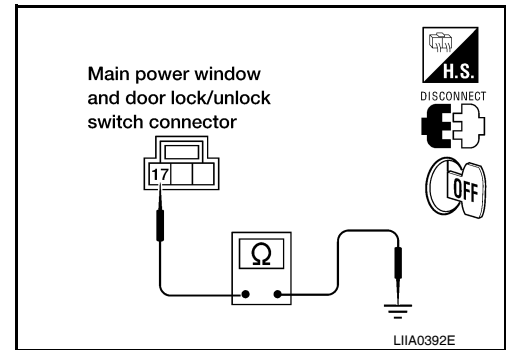
YES >> GO TO 3

NO >> Replace BCM. Refer to [BCS-55. "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?

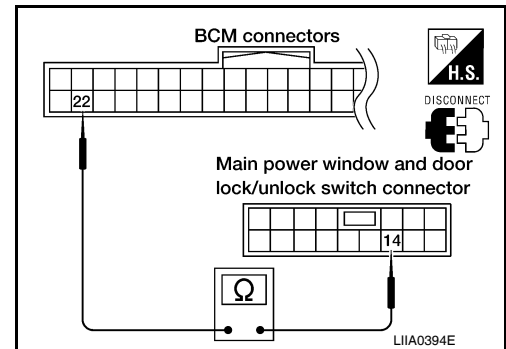
YES >> GO TO 4

NO >> Repair or replace harness.

### 4.CHECK POWER WINDOW SERIAL LINK CIRCUIT

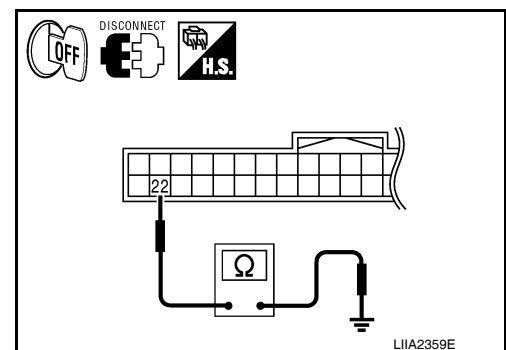
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and main power window and door lock/unlock switch connector D7 terminal 14.

**22 - 14 : Continuity should exist.**



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

**22 - Ground : Continuity should not exist.**



# DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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:0000000001538967

Transmits door lock/unlock operation to BCM.

### PASSENGER SIDE : Component Function Check

INFOID:0000000001538968

#### 1.CHECK FUNCTION

 With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door lock and unlock switch is OK.

NO >> Refer to [DLK-72, "PASSENGER SIDE : Diagnosis Procedure"](#).

## PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000001538969

#### 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:

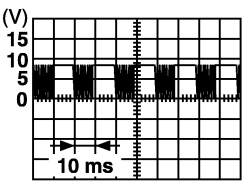
**CDL LOCK SW :ON**

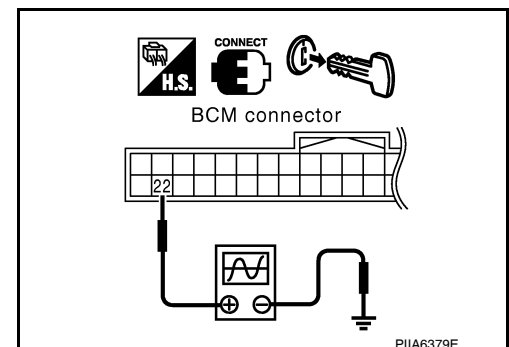
- When power window and door lock/unlock switch RH is turned to UNLOCK:

**CDL UNLOCK SW :ON**

 Without CONSULT-III

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

Connector	Terminal		Voltage (V)
	( + )	( - )	
M18	22	Ground	 PIIA1297E





# DOOR LOCK AND UNLOCK SWITCH

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

### Is the inspection normal?

- YES >> Power window and door lock/unlock switch RH circuit is OK.  
NO >> GO TO 2

## 2.CHECK BCM OUTPUT SIGNAL

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

**The front windows should be lowered.**

### Is the inspection normal?

- YES >> GO TO 3  
NO >> Replace BCM. Refer to [BCS-55, "Removal and Installation"](#).

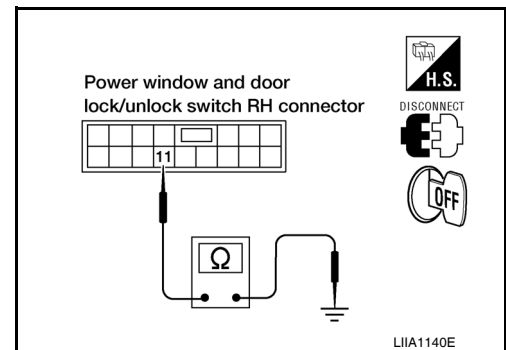
## 3.CHECK DOOR LOCK/UNLOCK SWITCH GROUND HARNESS

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

**11 - Ground : Continuity should exist.**

### Is the inspection normal?

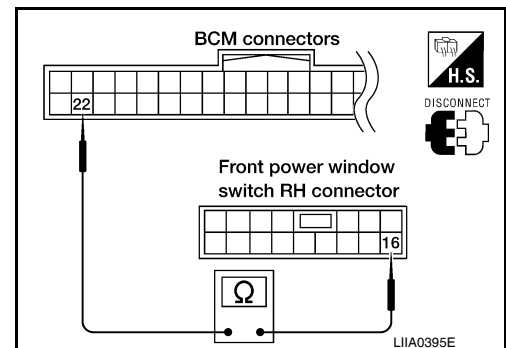
- YES >> GO TO 4  
NO >> Repair or replace harness.



## 4.CHECK POWER WINDOW SERIAL LINK CIRCUIT

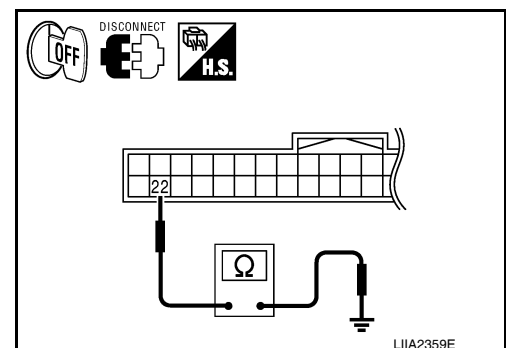
1. Disconnect BCM.
2. Check continuity between BCM connector M18 terminal 22 and power window and door lock/unlock switch RH connector D105 terminal 16.

**22 - 16 : Continuity should exist.**



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

**22 - ground : Continuity should not exist.**



## DOOR LOCK AND UNLOCK SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

---

Is the inspection normal?

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

# KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY CYLINDER SWITCH

### Description

INFOID:000000001538970

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:000000001538971

#### 1.CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to [DLK-75. "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001538972

#### 1.CHECK DOOR KEY CYLINDER SWITCH LH

Ⓜ With CONSULT-III

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

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

**KEY CYL LK-SW : ON**

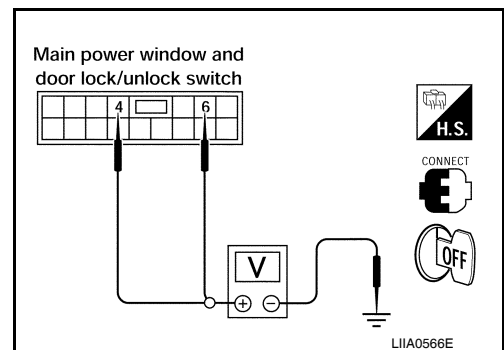
- When key inserted in left front key cylinder is turned to UNLOCK:

**KEY CYL UN-SW : ON**

ⓧ Without CONSULT-III

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

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



Is the inspection result normal?

YES >> Key cylinder switch signal is OK.

NO >> GO TO 2

#### 2.CHECK DOOR KEY CYLINDER SWITCH LH GROUND HARNESS

- Turn ignition switch OFF.
- Disconnect front door lock assembly LH (key cylinder switch).

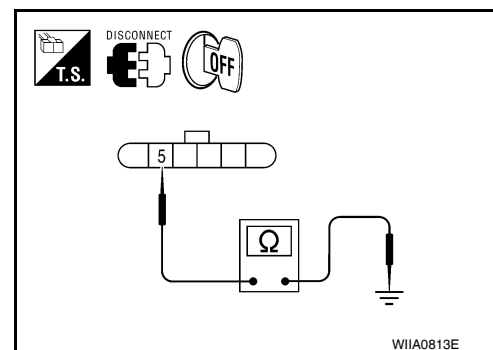
## KEY CYLINDER SWITCH

### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

3. Check continuity between front door lock assembly LH (key cylinder switch) connector (A) D14 terminal 5 and body ground.

Connector	Terminals	Continuity
D14	5 – Ground	Yes



Is the inspection result normal?

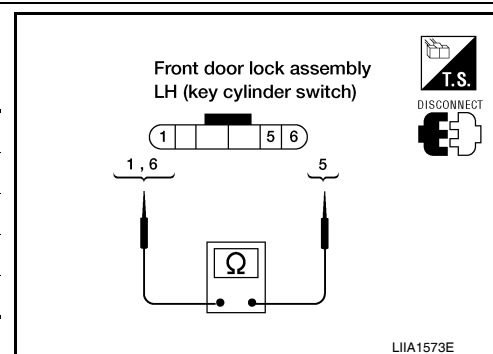
YES >> GO TO 3

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
1 – 5	Key is turned to UNLOCK or neutral.	No
	Key is turned to LOCK.	Yes
5 – 6	Key is turned to LOCK or neutral.	No
	Key is turned to UNLOCK.	Yes



Is the inspection result normal?

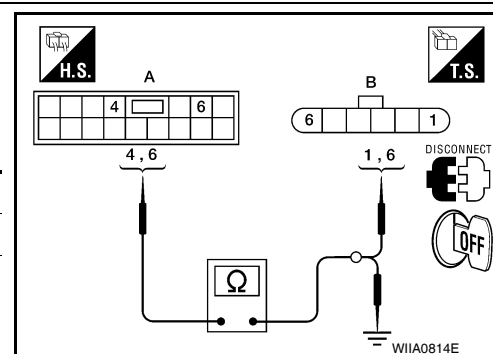
YES >> GO TO 4

NO >> Replace front door lock assembly LH (key cylinder switch). Refer to [DLK-232, "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 1, 6 and body ground.

Connector	Terminals	Connector	Terminals	Continuity
A: Main power window and door lock/unlock switch	4	B: Front door lock assembly LH (key cylinder switch)	1	Yes
	6		6	Yes
	4, 6		Ground	No



Is the inspection result normal?

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

NO >> Repair or replace harness.

# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

### Description

INFOID:000000001538973

Detects door lock condition of driver door.

### Component Function Check

INFOID:000000001538974

#### 1.CHECK FUNCTION

##### With CONSULT-III

Check door unlock sensor in DATA MONITOR mode.

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

Is the inspection result normal?

YES >> Door unlock sensor is OK.

NO >> Refer to [DLK-77, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001538975

#### 1.CHECK UNLOCK SENSOR POWER SUPPLY

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

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	28	Ground	Driver side door lock is locked	5
			Driver side door lock is unlocked	0

Is the inspection result normal?

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

NO >> GO TO 2

#### 2.CHECK UNLOCK SENSOR CIRCUIT

- 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) M70 terminal 28 and front door lock assembly LH (door unlock sensor) harness connector (B) D14 terminal 4.

**28 – 4 : Continuity should exist.**

- Check continuity between Intelligent Key unit harness connector (A) M70 terminal 28 and ground.

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

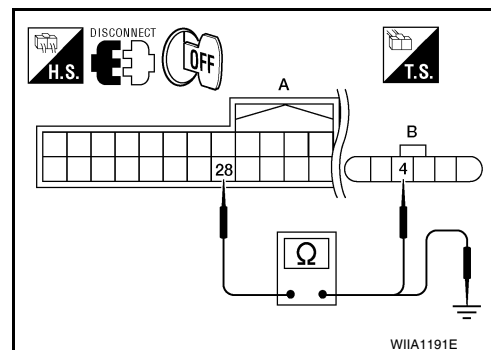
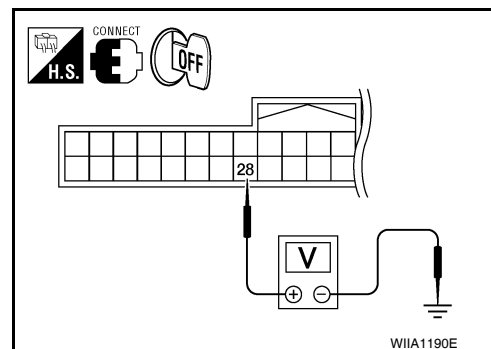
Is the inspection result normal?

YES >> GO TO 3

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

#### 3.CHECK UNLOCK SENSOR GROUND CIRCUIT

Check continuity between front door lock assembly LH (door unlock sensor) harness connector D14 terminal 5 and ground.



# FRONT DOOR LOCK ACTUATOR LH (DOOR UNLOCK SENSOR)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

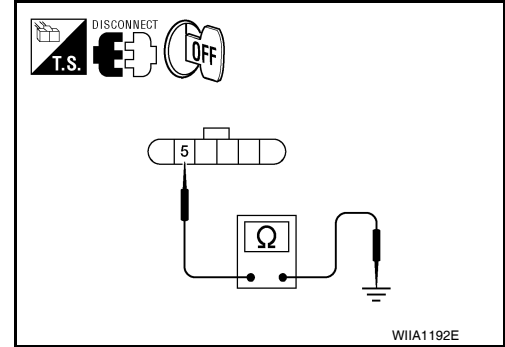
**5 – Ground**

**: 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 M70 terminal 28 and ground.

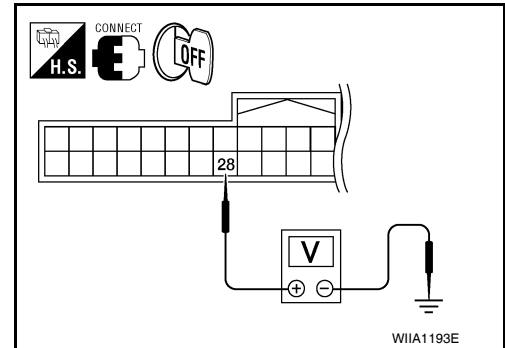
**28 – Ground**

**: Approx. 5V**

Is the inspection result normal?

YES >> Refer to [DLK-78, "Component Inspection"](#).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).



INFOID:000000001538976

## 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	5	Unlock	Yes
		Lock	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front lock assembly LH (door unlock sensor). Refer to [DLK-232, "Removal and Installation"](#).

# DOOR REQUEST SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR REQUEST SWITCH

### Description

INFOID:000000001538977

Transmits lock/unlock operation to Intelligent Key unit.

### Component Function Check

INFOID:000000001538978

#### 1.CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Door request switch is OK.

NO >> Refer to [DLK-79, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001538979

#### 1.CHECK FRONT DOOR REQUEST SWITCH

##### With CONSULT-III

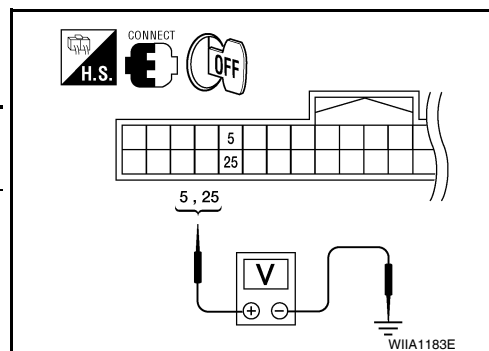
Check front door request switch ("DR REQ SW" or "AS REQ SW") in "DATA MONITOR" mode.

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

##### Without CONSULT-III

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

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



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.
- Disconnect Intelligent Key unit and front door request switch connectors.
- 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 1.

# DOOR REQUEST SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

**Driver side 5 - 1 : Continuity should exist.**  
**Passenger side 25 - 1 : Continuity should exist.**

- 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 2 and ground.

**2 - 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-80, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 5

NO >> Replace front door request switch.

## 5.CHECK FRONT DOOR REQUEST SWITCH SIGNAL

- 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) (Approx.)
		(+)	(-)		
M70	Front door request switch LH	5	Ground	Door request switch is pressed	0 ↓ Battery voltage
	Front door request switch RH	25		Door request switch is released	

Is the inspection result normal?

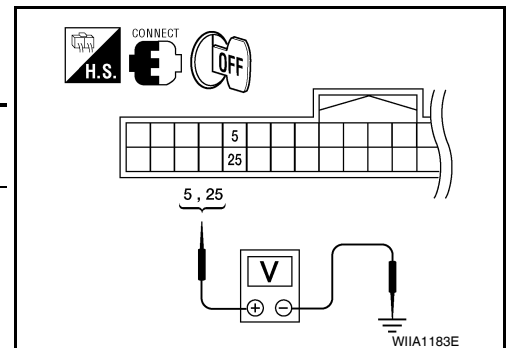
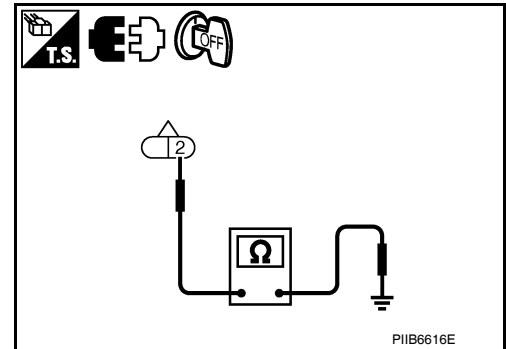
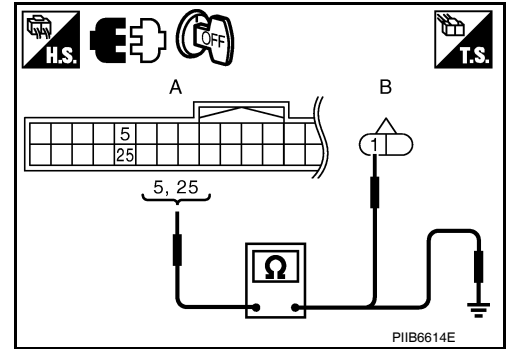
YES >> Refer to [GI-38, "Intermittent Incident"](#).

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

## Component Inspection

### 1.CHECK FRONT DOOR REQUEST SWITCH OPERATION

- Turn ignition switch OFF.



INFOID:000000001538980



DOOR REQUEST SWITCH

< COMPONENT DIAGNOSIS >

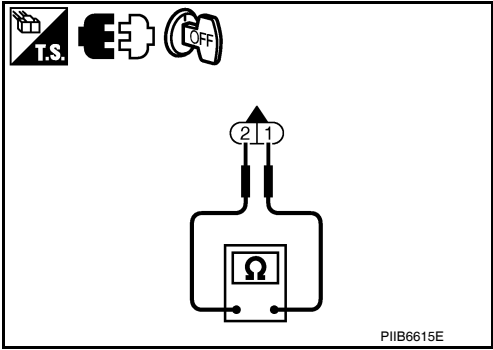
[WITH INTELLIGENT KEY SYSTEM]

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

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

Is the inspection result normal?

- YES >> Inspection End.
- NO >> Replace front door request switch.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## DOOR LOCK ACTUATOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000001538981

Locks/unlocks the door with the signal from BCM.

### DRIVER SIDE : Component Function Check

INFOID:000000001538982

#### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
NO >> Refer to [DLK-82, "DRIVER SIDE : Diagnosis Procedure"](#).

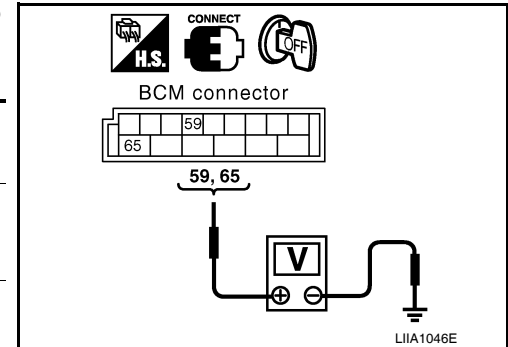
### DRIVER SIDE : Diagnosis Procedure

INFOID:000000001538983

#### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



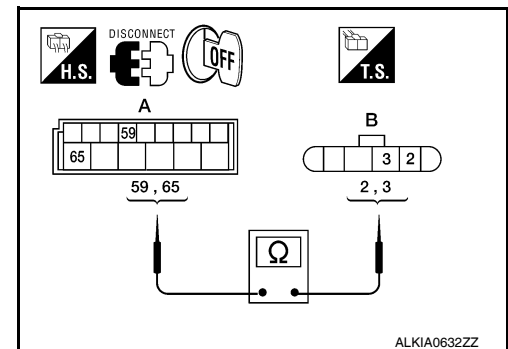
Is the inspection result normal?

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

#### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and front door lock assembly LH (actuator).
2. Check continuity between BCM connector (A) M20 terminals 59, 65 and front door lock assembly LH (actuator) connector (B) D14 terminals 2, 3.

Connector	Terminals	Connector	Terminals	Continuity
M20	59	D14	2	Yes
	65		3	Yes



Is the inspection result normal?

- YES >> Replace front door lock assembly LH (actuator).  
NO >> Repair or replace harness.

#### 3.CHECK DOOR LOCK ACTUATOR HARNESS

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

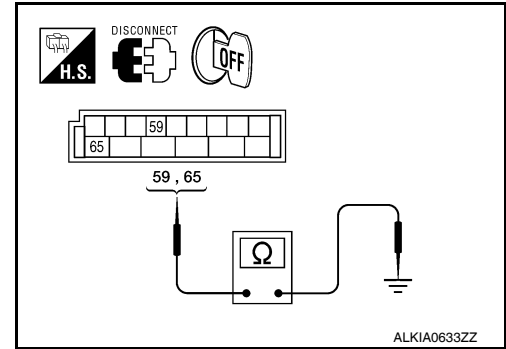
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

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

Connector	Terminals		Continuity
M20	59	Ground	No
	65		No



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-55, "Removal and Installation"](#).

NO >> Repair or replace harness.

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000001538984

Locks/unlocks the door with the signal from BCM.

### PASSENGER SIDE : Component Function Check

INFOID:000000001538985

#### 1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> Door lock actuator is OK.

NO >> Refer to [DLK-83, "PASSENGER SIDE : Diagnosis Procedure"](#).

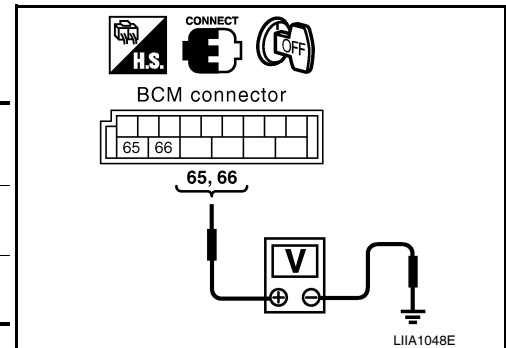
### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000001538986

#### 1.CHECK FRONT DOOR LOCK ACTUATOR RH SIGNAL

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

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



Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 3

#### 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and front door lock actuator RH.

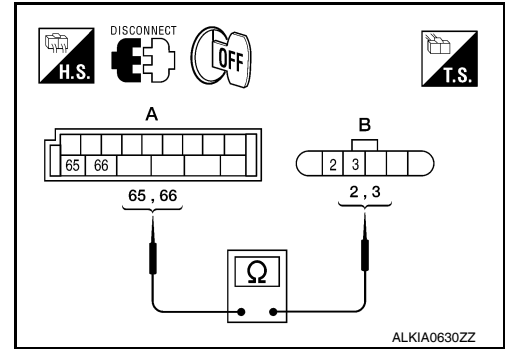
# DOOR LOCK ACTUATOR

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

2. Check continuity between BCM connector (A) M20 terminals 65, 66 and front door lock actuator RH (B) D114 terminals 2, 3.

Terminal		Continuity
65	3	Yes
66	2	Yes



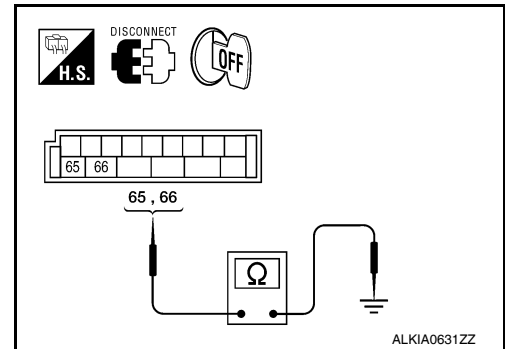
### Is the inspection result normal?

- YES >> Replace front door lock actuator RH. Refer to [DLK-232, "Removal and Installation"](#).  
NO >> Repair or replace harness.

## 3.CHECK DOOR LOCK ACTUATOR HARNESS

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

Terminals		Continuity
65	Ground	No
66		No



### Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-55, "Removal and Installation"](#).  
NO >> Repair or replace harness.

## REAR LH

### REAR LH : Description

INFOID:000000001538987

Locks/unlocks the door with the signal from BCM.

### REAR LH : Component Function Check

INFOID:000000001538988

## 1.CHECK FUNCTION

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

### Is the inspection result normal?

- YES >> Door lock actuator is OK.  
NO >> Refer to [DLK-84, "REAR LH : Diagnosis Procedure"](#).

## REAR LH : Diagnosis Procedure

INFOID:000000001538989

## 1.CHECK DOOR LOCK ACTUATOR SIGNAL

1. Turn ignition switch OFF.

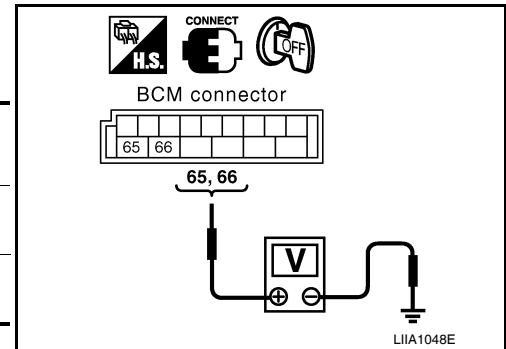
# DOOR LOCK ACTUATOR

## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

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



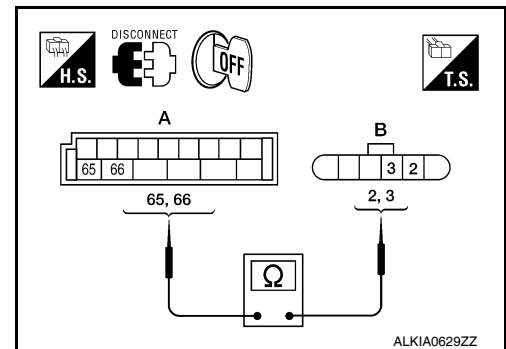
Is the inspection result normal?

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

## 2.CHECK DOOR LOCK ACTUATOR HARNESS

- Disconnect BCM and rear door lock actuator LH.
- Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator LH connector (B) D205 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



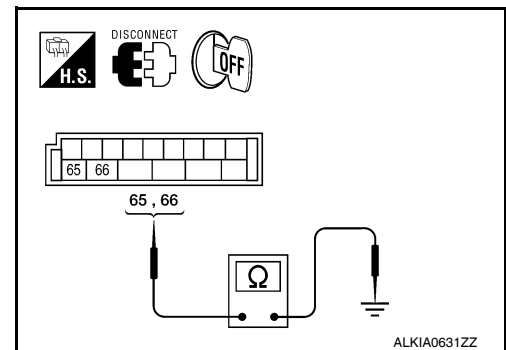
Is the inspection result normal?

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

- YES >> Replace BCM. Refer to [BCS-55, "Removal and Installation"](#).  
NO >> Repair or replace harness or passenger select unlock relay.

## REAR RH

### REAR RH : Description

Locks/unlocks the door with the signal from BCM.

INFOID:000000001538990

# DOOR LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## REAR RH : Component Function Check

INFOID:000000001538991

### 1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> Door lock actuator is OK.  
NO >> Refer to [DLK-86. "REAR RH : Diagnosis Procedure"](#).

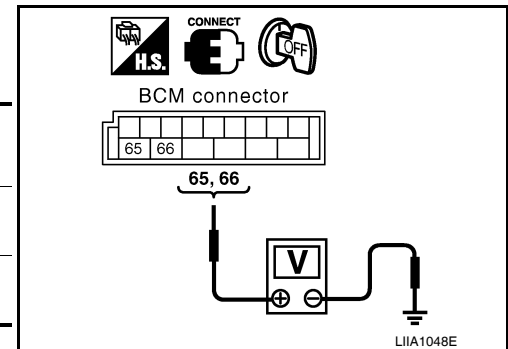
## REAR RH : Diagnosis Procedure

INFOID:000000001538992

### 1.CHECK DOOR LOCK ACTUATOR SIGNAL

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

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



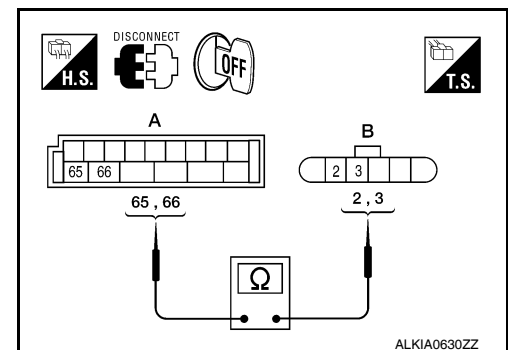
Is the inspection result normal?

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

### 2.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.
2. Check continuity between BCM connector (A) M20 terminals 65, 66 and rear door lock actuator RH connector (B) D305 terminals 2, 3.

Terminals		Continuity
65	3	Yes
66	2	Yes



Is the inspection result normal?

- YES >> Replace rear door lock actuator RH.  
NO >> Repair or replace harness or passenger select unlock relay.

### 3.CHECK DOOR LOCK ACTUATOR HARNESS

1. Disconnect BCM and rear door lock actuator RH.

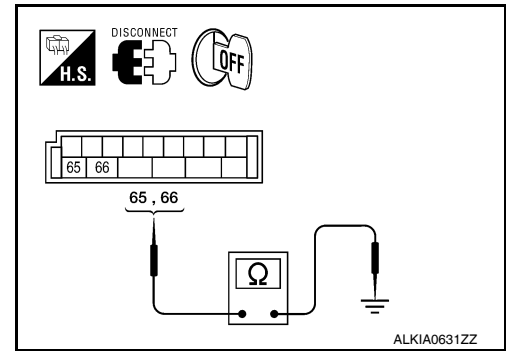
# DOOR LOCK ACTUATOR

## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

Terminals		Continuity
65	Ground	No
66		No



Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-55, "Removal and Installation"](#).

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

## BACK DOOR

### BACK DOOR : Description

INFOID:000000001538993

All vehicles equipped with an automatic back door system are not equipped with a back door actuator. Opening and closing the back door is accomplished through the back door control unit assembly. Refer to [DLK-119, "Self-Diagnosis Procedure"](#).

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# GLASS HATCH LOCK ACTUATOR

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## GLASS HATCH LOCK ACTUATOR

### Diagnosis Procedure

INFOID:000000004333520

#### 1.CHECK GLASS HATCH LOCK ACTUATOR SIGNAL

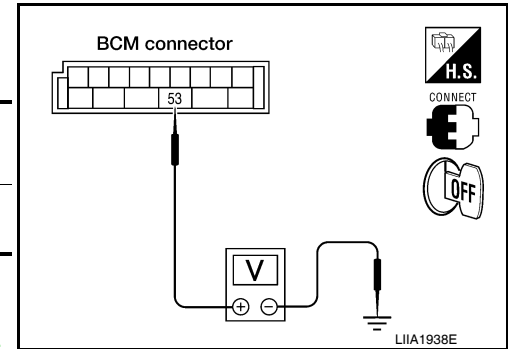
1. Turn ignition switch OFF.
2. Check voltage between BCM connector M19 terminal 53 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M19	53	Ground	Glass hatch switch is turned to depressed	0 → Battery voltage for 300 ms

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace BCM. Refer to [BCS-55. "Removal and Installation"](#).



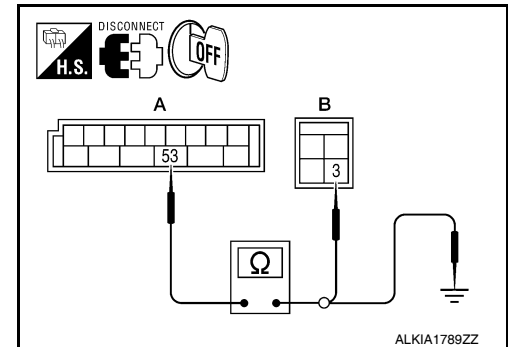
#### 2.CHECK GLASS HATCH LOCK ACTUATOR HARNESS

1. Disconnect BCM and glass hatch lock actuator.
2. Check continuity between BCM connector (A) M19 terminal 53 and glass hatch lock actuator connector (B) D711 terminal 3.

Terminals		Continuity
53	3	Yes

3. Check continuity between BCM connector M19 terminals 53 and ground.

Terminals		Continuity
53	Ground	No



Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3.CHECK GLASS HATCH LOCK ACTUATOR GROUND CIRCUIT

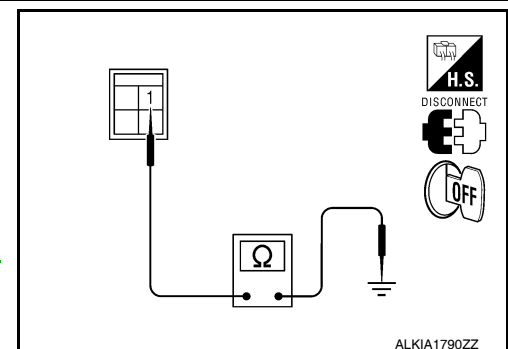
Check continuity between glass hatch lock actuator connector D711 terminal 1 and ground.

Terminals		Continuity
1	Ground	Yes

Is the inspection result normal?

YES >> Replace glass hatch lock actuator. Refer to [DLK-237. "Door Lock Assembly"](#).

NO >> Repair or replace harness.





# PASSENGER SELECT UNLOCK RELAY

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## PASSENGER SELECT UNLOCK RELAY

### Description

INFOID:000000001538994

Controls the operation of both rear door lock actuators.

### Component Function Check

INFOID:000000001538995

#### 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 work normally.

Is the inspection result normal?

- YES >> Passenger select unlock relay is OK.  
NO >> Refer to [DLK-89. "Component Function Check"](#).

### Diagnosis Procedure

INFOID:000000001538996

#### 1.CHECK PASSENGER SELECT UNLOCK RELAY CIRCUIT

##### NOTE:

Passenger select unlock relay must remain connected during this step.

1. Turn ignition switch OFF.
2. Disconnect BCM and inoperative rear door lock actuator.
3. Check continuity between BCM connector (A) M20 terminal 66 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (C) D305 Terminal 2.

**66 - 2 : Continuity should exist.**

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

**66 - Ground : Continuity should not exist.**

Is the inspection result normal?

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

#### 2.CHECK PASSENGER SELECT UNLOCK RELAY INPUT

1. Disconnect passenger select unlock relay.
2. Check continuity between BCM connector (A) M20 terminal 66 and passenger select unlock relay connector (B) M7 terminal 3.

**66 - 3 : Continuity should exist.**

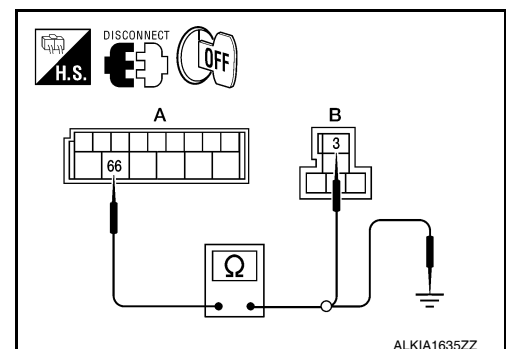
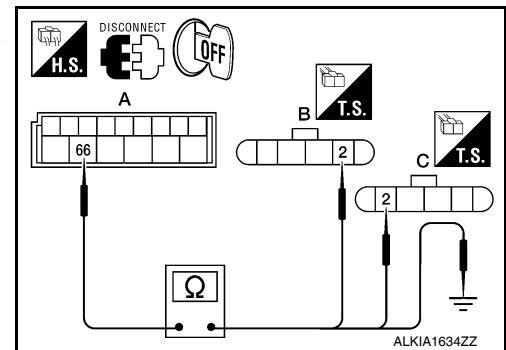
3. Check continuity between BCM connector (A) M20 terminal 66 and body ground.

**66 - Ground : Continuity should not exist.**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace harness between BCM and relay.

#### 3.CHECK PASSENGER SELECT UNLOCK RELAY OUTPUT



# PASSENGER SELECT UNLOCK RELAY

[WITH INTELLIGENT KEY SYSTEM]

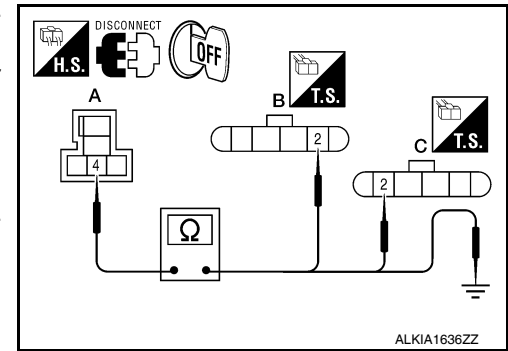
## < COMPONENT DIAGNOSIS >

1. Check continuity between passenger select unlock relay connector (A) M7 terminal 4 and rear door lock actuator LH connector (B) D205 terminal 2 or rear door lock actuator RH connector (C) D305 terminal 2.

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

2. Check continuity between passenger select unlock relay connector (A) M7 terminal 4 and ground.

**4 - Ground : Continuity should not exist.**



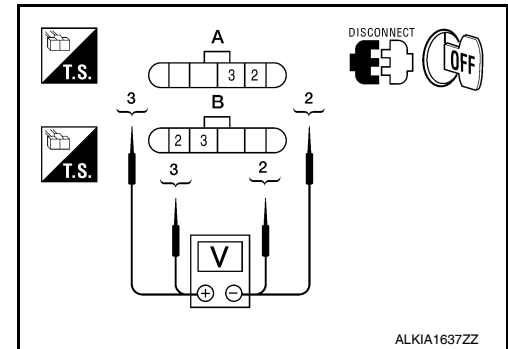
## Is the inspection result normal?

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

## 4.CHECK REAR DOOR LOCK ACTUATOR ASSEMBLY

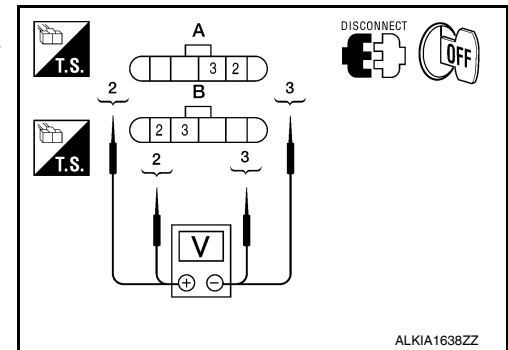
1. Reconnect BCM.
2. Check voltage between rear door lock actuator connector LH (A) D205 terminals 2 and 3 or rear door lock actuator connector RH (B) D305 terminals 2 and 3.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH)	3	2	Main power window and door lock/unlock switch is turned to LOCK	0 → Battery voltage for 300 msec.
B: D305 (RH)	3	2		



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

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
A: D205 (LH)	2	3	Main power window and door lock/unlock switch is turned to UNLOCK	0 → Battery voltage for 300 msec.
B: D305 (RH)	2	3		



## Is the inspection result normal?

- YES >> Replace rear door lock actuator.  
NO >> Repair or replace harness between actuator and splice.

# INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY WARNING BUZZER

### Description

INFOID:000000001538997

Answers back and warns for an inappropriate operation.

### Component Function Check

INFOID:000000001538998

#### 1.CHECK FUNCTION

##### With CONSULT-III

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

Is the inspection result normal?

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

NO >> Refer to [DLK-91, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001538999

#### 1.CHECK INTELLIGENT KEY WARNING BUZZER (ENGINE ROOM) POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key warning buzzer (engine room) connector.
3. Check voltage between Intelligent Key warning buzzer (engine room) harness connector E25 terminal 1 and ground.

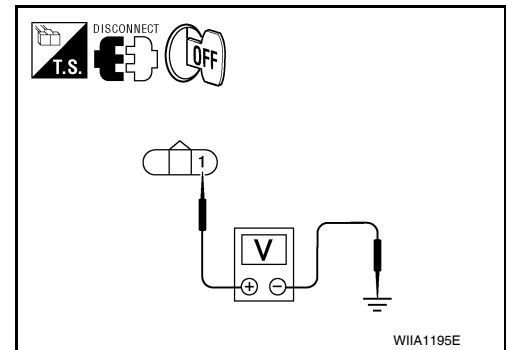
**1 - Ground**

**: Battery voltage**

Is the inspection normal?

YES >> GO TO 2

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



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

1. Disconnect Intelligent Key unit connector.
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 4 and Intelligent Key warning buzzer (engine room) harness connector E25 terminal 3.

**4 - 3**

**: Continuity should exist.**

3. Check continuity between Intelligent Key warning buzzer (engine room) harness connector E25 terminal 3 and ground.

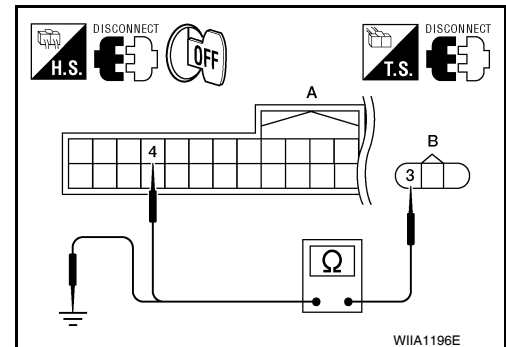
**3 - Ground**

**: 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-92, "Component Inspection"](#).

>> Inspection End.

# INTELLIGENT KEY WARNING BUZZER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Inspection

INFOID:000000001539000

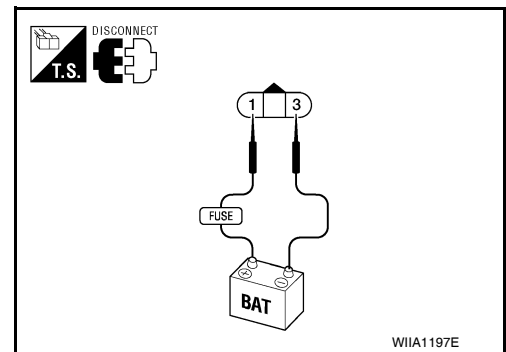
### 1. CHECK INTELLIGENT KEY WARNING BUZZER

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.



# OUTSIDE KEY ANTENNA

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## OUTSIDE KEY ANTENNA

### Description

INFOID:000000001539001

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 the back door and glass hatch switch assembly opening of the back door when the Intelligent Key is present.

### Component Function Check

INFOID:000000001539002

#### 1.CHECK DOOR REQUEST SWITCHES

Check that door request switches operate normally.

Is the inspection result normal?

YES >> GO TO 2

NO >> Inspect door request switches. Refer to [DLK-79, "Component Function Check"](#).

#### 2.CHECK OUTSIDE KEY 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 >> GO TO 3

NO >> Refer to [DLK-93, "Diagnosis Procedure"](#).

#### 3.CHECK REAR ANTENNA FUNCTION

Be sure that Intelligent Key is in rear bumper antenna detection range.

Be sure that back door close switch is not in the "CANCEL" position.

Does power back door open when back door switch is operated?

YES >> Outside key antennas are OK.

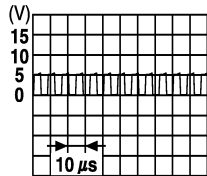
NO >> Refer to [DLK-93, "Diagnosis Procedure"](#).

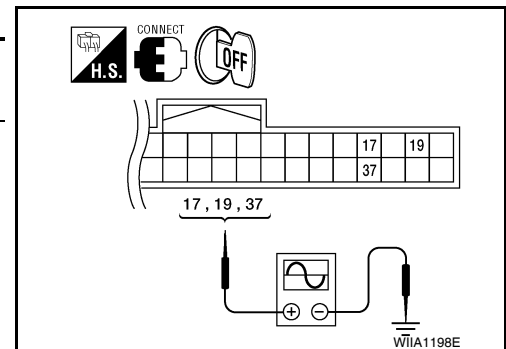
### Diagnosis Procedure

INFOID:000000001539003

#### 1.CHECK OUTSIDE KEY ANTENNA INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check signal between Intelligent Key unit connector M70 terminals 17, 19, 37 and ground with an oscilloscope.

Connector	Item	Terminals		Condition	Signal (Reference value)
		(+)	(-)		
M70	Rear bumper antenna	17	Ground	Request switch is pushed	
	Front outside antenna LH	19			
	Front outside antenna RH	37			



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 >

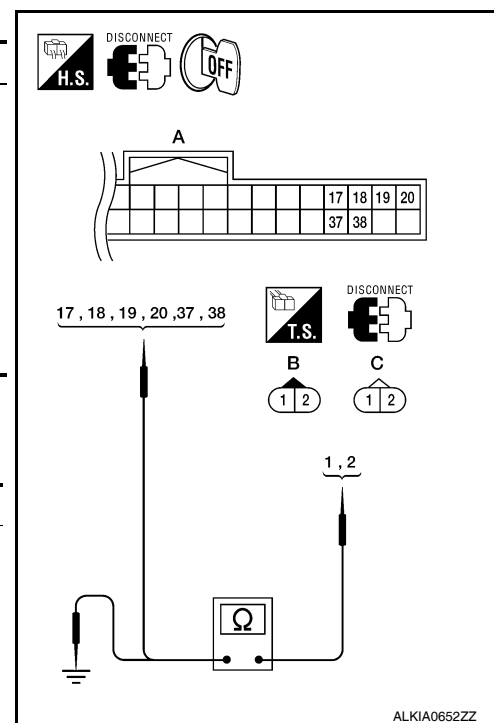
## [WITH INTELLIGENT KEY SYSTEM]

- Check continuity between each outside key antenna harness connector (B) D15 (driver side) or D115 (passenger side), rear bumper antenna connector (C) C7 terminals 1, 2 and Intelligent Key unit harness connector (A) M70 terminals 17, 18, 19, 20, 37, and 38.

Item	Connector	Terminal	Connector	Terminal	Continuity
Rear bumper antenna	C: C7	1	A: M70	17	Yes
		2		18	
Front outside antenna LH	B: D15	1		19	
		2		20	
Front outside antenna RH	B: D115	1		37	
		2		38	

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

Item	Connector	Terminal	Continuity
Rear bumper antenna	C: C7	1	No
		2	
Front outside antenna LH	B: D15	1	
		2	
Front outside antenna RH	B: D115	1	
		2	



Is the inspection result normal?

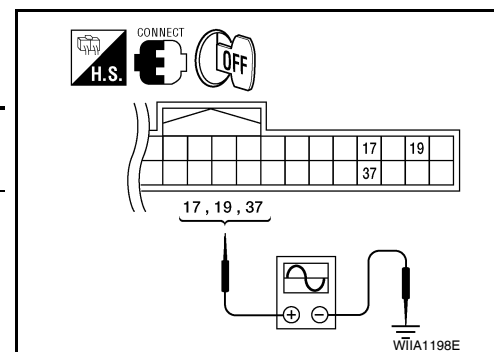
YES >> GO TO 3

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

## 3.CHECK OUTSIDE KEY ANTENNA POWER SUPPLY

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

Connector	Item	Terminals		Condition	Signal (Reference value)
		(+)	(-)		
M70	Rear bumper	17	Ground	Request switch is pushed	
	LH side	19			
	RH side	37			



Is the inspection result normal?

YES >> Replace outside key antenna.

NO >> Replace Intelligent Key unit. Refer to [SEC-116, "Removal and Installation"](#).

# STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## STEERING LOCK UNIT

### Diagnosis Procedure

INFOID:000000001539004

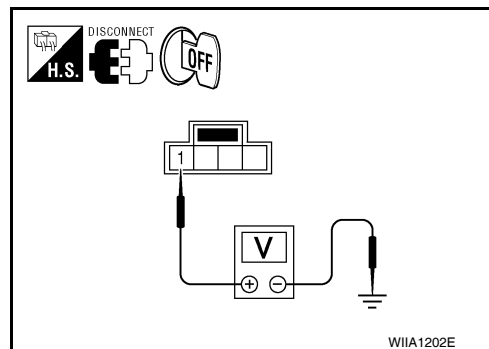
#### 1.CHECK STEERING LOCK SOLENOID POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect steering lock solenoid connector.
3. Check voltage between steering lock solenoid harness connector M15 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.



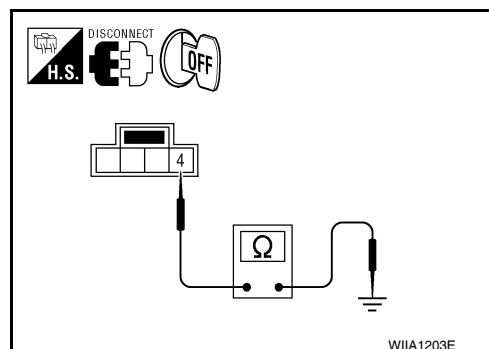
#### 2.CHECK STEERING LOCK SOLENOID GROUND CIRCUIT

Check continuity between steering lock solenoid harness connector M15 terminal 4 and ground.

**4 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair or replace the steering lock solenoid ground circuit.



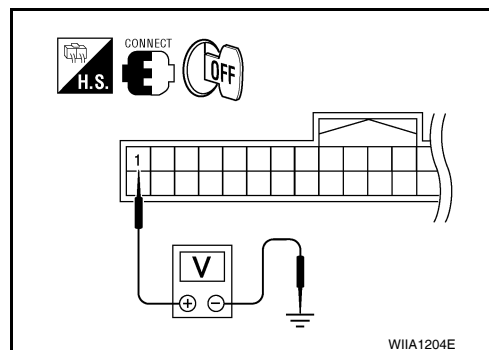
#### 3.CHECK INTELLIGENT KEY UNIT OUTPUT SIGNAL

1. Connect steering lock solenoid connector.
2. Check voltage between Intelligent Key unit harness connector M70 terminal 1 and ground.

**1 - Ground : Approx. 5V**

Is the inspection result normal?

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



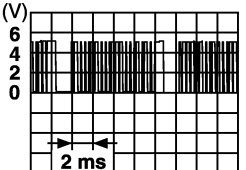
#### 4.CHECK STEERING LOCK COMMUNICATION SIGNAL

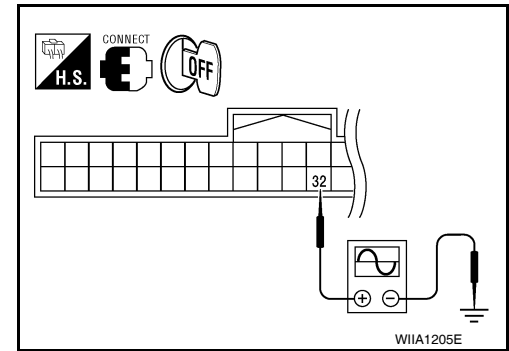
Check signal between Intelligent Key unit connector M70 terminal 32 and ground with oscilloscope.

# STEERING LOCK UNIT

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector	Terminals		Condition	Signal (V) (Reference value)
	(+)	(-)		
M70	32	Ground	Ignition switch is pushed	 SIIA1911J



Is the inspection result normal?

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

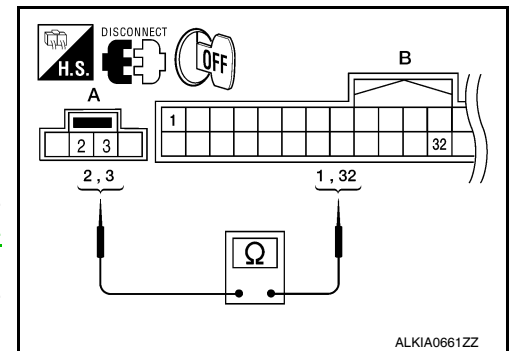
## 5. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR OPEN

- Disconnect Intelligent Key unit and steering lock solenoid connectors.
- Check continuity between Intelligent Key unit harness connector (B) M70 terminals 1, 32 and steering lock solenoid connector (A) M15 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 [SEC-13, "System Description"](#).
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.



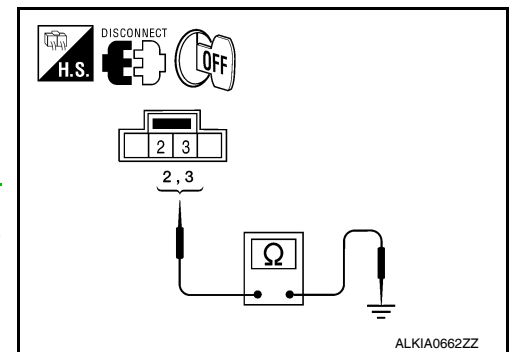
## 6. CHECK STEERING LOCK SOLENOID COMMUNICATION CIRCUIT FOR SHORT

- Disconnect Intelligent Key unit and steering lock solenoid connectors.
- Check continuity between steering lock solenoid connector M15 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 [SEC-116, "Removal and Installation"](#).
- NO >> Repair or replace harness between steering lock solenoid and Intelligent Key unit.





# A/T SHIFT SELECTOR (PARK POSITION SWITCH)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## A/T SHIFT SELECTOR (PARK POSITION SWITCH)

### Diagnosis Procedure

INFOID:000000001539005

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

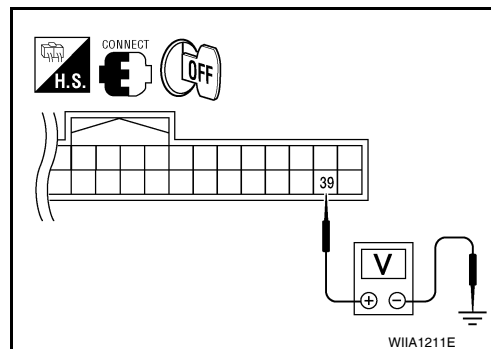
1. Turn ignition switch OFF.
2. While pressing the ignition knob switch, check voltage between Intelligent Key unit harness connector M70 terminal 39 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	39	Ground	A/T shift selector lever is in "P" position	Battery voltage
			Other than above	0

Is the inspection result normal?

YES >> Replace Intelligent Key unit. Refer to [SEC-116](#),  
"Removal and Installation".

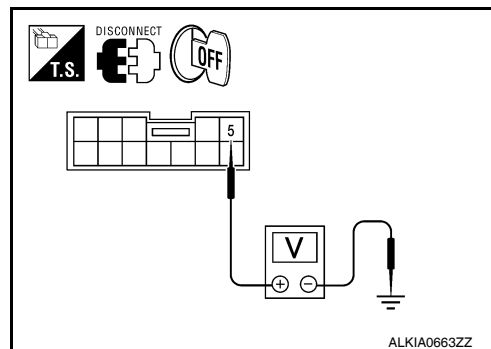
NO >> GO TO 2



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

1. Disconnect A/T shift selector (park position switch) connector.
2. While pressing the ignition knob switch, check voltage between A/T shift selector (park position switch) harness connector M203 terminal 5 and ground.

**5 – 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)

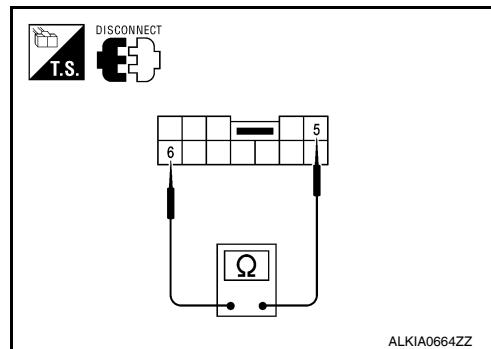
Check continuity between A/T shift selector (park position switch) terminals 5 and 6.

Component	Terminals		Condition	Continuity
A/T shift selector (park position switch)	5	6	A/T shift selector lever is in "P" position	Yes
			Other than above	No

Is the inspection result normal?

YES >> GO TO 4

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



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

1. Disconnect Intelligent Key unit connector.

## A/T SHIFT SELECTOR (PARK POSITION SWITCH)

### < COMPONENT DIAGNOSIS >

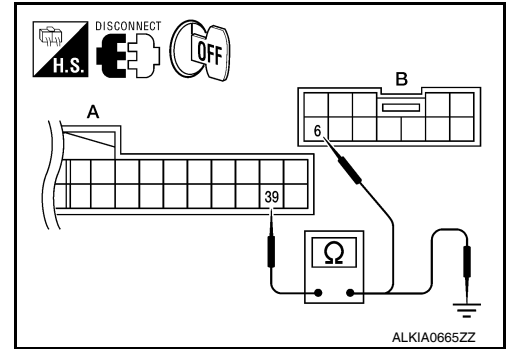
[WITH INTELLIGENT KEY SYSTEM]

2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 39 and A/T shift selector (park position switch) harness connector (B) M203 terminal 6.

**39 – 6 : Continuity should exist.**

3. Check continuity between Intelligent Key unit harness connector (A) M70 terminals 39 and ground.

**39 – Ground : Continuity should not exist.**



### Is the inspection result normal?

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

NO >> Repair or replace harness.

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## REMOTE KEYLESS ENTRY RECEIVER

### Description

INFOID:000000001539006

Receives Intelligent Key operation and transmits to Intelligent Key unit.

### Component Function Check

INFOID:000000001539007

#### 1.CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Remote keyless entry receiver is OK.

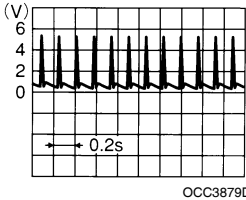
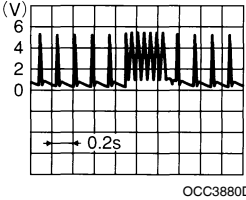
NO >> Refer to [DLK-99, "Diagnosis Procedure"](#).

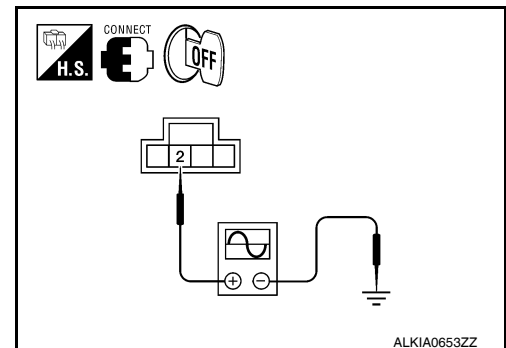
### Diagnosis Procedure

INFOID:000000001539008

#### 1.CHECK REMOTE KEYLESS ENTRY RECEIVER OUTPUT SIGNAL

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

Terminals		Keyfob condition	Signal (Reference value)
(+)	(-)		
Remote keyless entry receiver connector	Terminal		
M25	2	No function	
		Any button is pressed	



Is the inspection result normal?

YES >> GO TO 2

NO >> GO TO 5

#### 2.REMOTE KEYLESS ENTRY RECEIVER VOLTAGE CIRCUIT INSPECTION

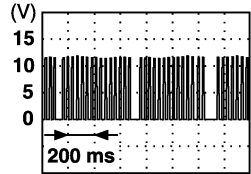
Check voltage between remote keyless entry receiver connector M25 terminal 3 and ground using an oscilloscope.

# REMOTE KEYLESS ENTRY RECEIVER

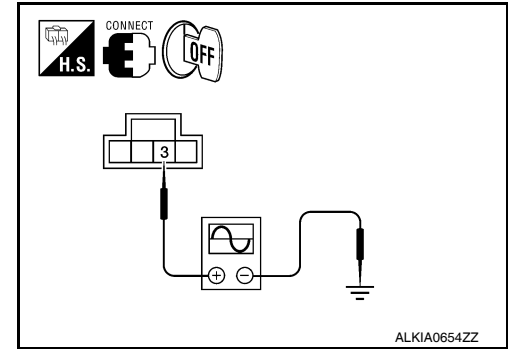
< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminals		Signal (Reference value)
(+)	(-)	
Remote keyless entry receiver connector	Terminal	
M25	3	Ground



PIIA2344E



ALKIA0654ZZ

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 M25 terminal 4 and ground.

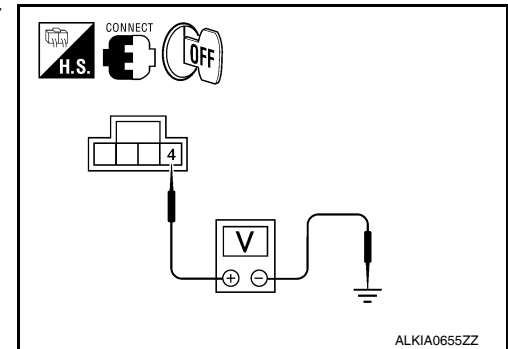
**4 - Ground**

**: Approx. 5 volt.**

Is the inspection result normal?

YES >> GO TO 4

NO >> GO TO 5



ALKIA0655ZZ

## 4. REMOTE KEYLESS ENTRY RECEIVER GROUND CIRCUIT INSPECTION

Check continuity between remote keyless entry receiver connector M25 terminal 1 and ground.

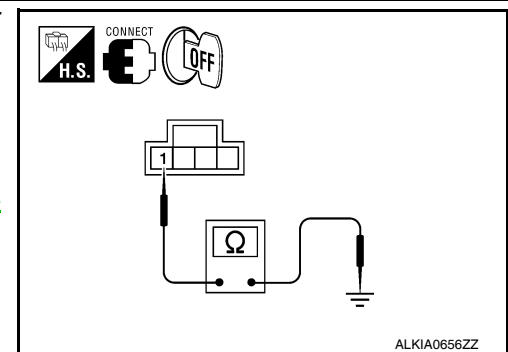
**1 - Ground**

**: Continuity should exist.**

Is the inspection result normal?

YES >> Replace remote keyless entry receiver. Refer to [SEC-116, "Removal and Installation"](#).

NO >> GO TO 5



ALKIA0656ZZ

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

1. Disconnect remote keyless entry receiver and Intelligent Key unit connectors.
2. Check continuity between Intelligent Key unit connector (A) M70 terminals 8, 9, 21, 30 and remote keyless entry receiver connector (B) M25 terminals 1, 2, 3, 4.

**1 - 8**

**: Continuity should exist.**

**2 - 9**

**: Continuity should exist.**

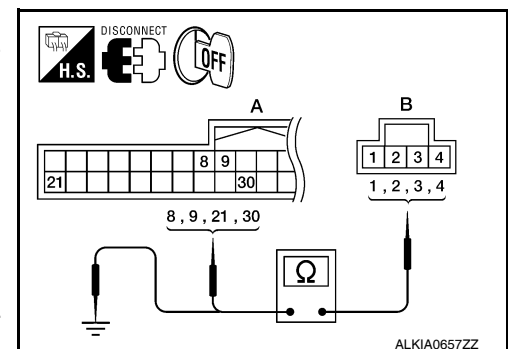
**3 - 21**

**: Continuity should exist.**

**4 - 30**

**: Continuity should exist.**

3. Check continuity between remote keyless entry receiver connector (B) M25 terminals 1, 2, 3, 4 and ground.



ALKIA0657ZZ

# REMOTE KEYLESS ENTRY RECEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

A

B

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.

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

# INTELLIGENT KEY BATTERY AND FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY BATTERY AND FUNCTION

### Description

INFOID:000000001539009

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

- Door lock/unlock
- Back door open

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

### Component Function Check

INFOID:000000001539010

#### 1. CHECK FUNCTION

##### With CONSULT-III

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

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

Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Refer to [DLK-102, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001539011

#### 1. CHECK INTELLIGENT KEY BATTERY

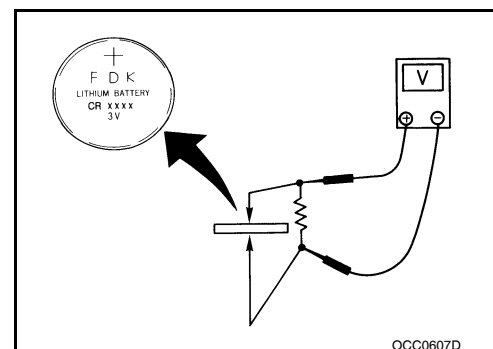
Check by connecting a resistance (approximately 300Ω) so that the current value becomes about 10 mA.

**Standard : Approx. 2.5 - 3.0V**

Is the measurement value within specification?

YES >> GO TO 2

NO >> Replace Intelligent Key battery.



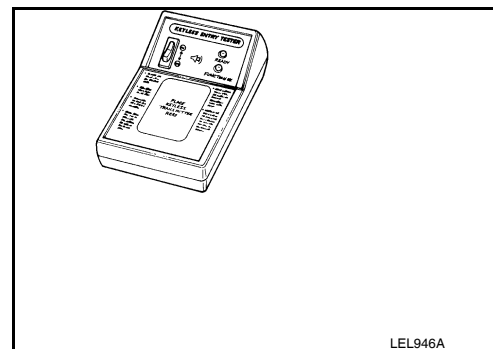
#### 2. CHECK KEYFOB FUNCTION

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

Does the test pass?

YES >> Keyfob is OK.

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



### Component Inspection

INFOID:000000001539012

#### 1. REPLACE INTELLIGENT KEY BATTERY

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

# INTELLIGENT KEY BATTERY AND FUNCTION

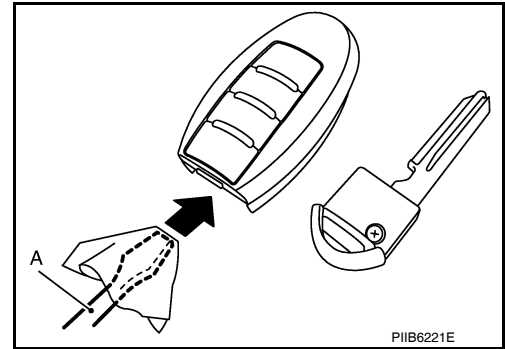
## < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

2. Insert a flat-blade screwdriver (A) wrapped with a cloth into the slit of the corner and twist it to separate the upper part from the lower part.

### CAUTION:

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



3. Replace the battery with new one.
4. Align the tips of the upper and lower parts, and then push them together until it is securely closed.

### CAUTION:

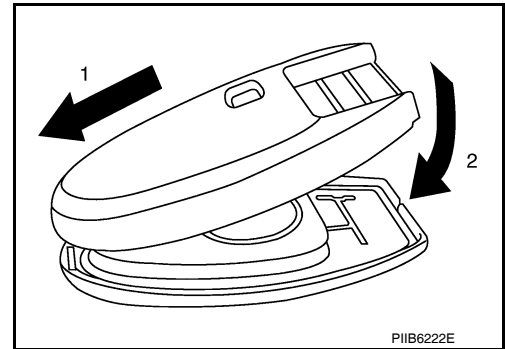
- When replacing battery, keep dirt, grease, and other foreign materials off the electrode contact area.

5. After replacing the battery, check that all Intelligent Key functions work properly.

### Is the inspection result normal?

YES >> Intelligent Key is OK.

NO >> Check remote keyless entry receiver. Refer to [DLK-99](#), "[Component Function Check](#)".



## Special Repair Requirement

Refer to CONSULT-III Operation Manual.

INFOID:000000001539013

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# HORN FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Description

INFOID:000000001539014

Perform answer-back for each operation with horn.

### Component Function Check

INFOID:000000001539015

#### 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 >> Go to [DLK-104, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:000000001539016

#### 1.CHECK HORN FUNCTION

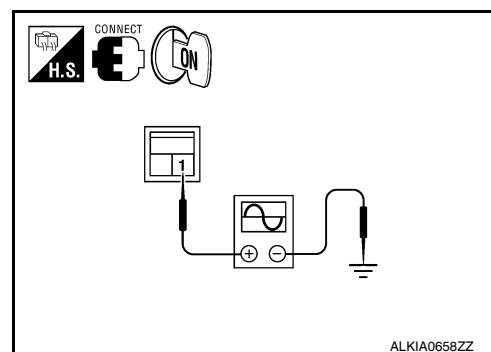
Check horn function with horn switch

Do the horns sound?

- YES >> GO TO 2  
NO >> Go to [HRN-4, "Wiring Diagram"](#).

#### 2.CHECK HORN RELAY POWER SUPPLY

1. Turn ignition switch ON.
2. Perform "ACTIVE TEST", "HORN" with CONSULT-III.
3. Using an oscilloscope or analog voltmeter, check voltage between horn relay harness connector and ground.



Horn relay		Ground	Test item		Voltage (V) (Approx.)
Connector	Terminal				
H-1	1	Ground	HORN	ON	Battery voltage → 0 → Battery voltage
				Other than above	Battery voltage

Is the inspection result normal?

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

#### 3.CHECK HORN RELAY CIRCUIT

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

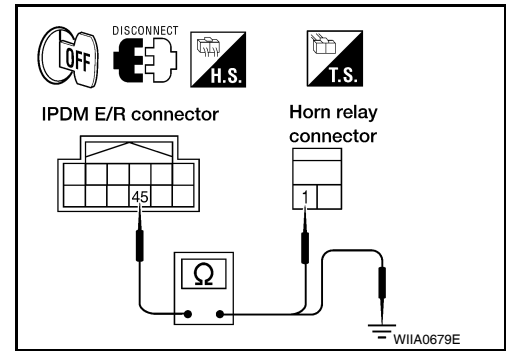


# HORN FUNCTION

## < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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



IPDM E/R		Horn relay		Continuity
Connector	Terminal	Connector	Terminal	
E122	45	H-1	1	Yes

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

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

Is the inspection result normal?

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

## 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-38. "Intermittent Incident"](#).

Is the inspection result normal?

- YES >> Replace IPDM E/R. Refer to [PCS-34. "Removal and Installation of IPDM E/R"](#).  
NO >> Repair or replace the malfunctioning part.

DLK

# COMBINATION METER DISPLAY FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## COMBINATION METER DISPLAY FUNCTION

### Description

INFOID:0000000001539017

Displays each operation method guide and warning for system malfunction.

### Component Function Check

INFOID:0000000001539018

#### 1.CHECK FUNCTION

---

1. Turn ignition switch ON.
2. Open driver door.

Does the open door message appear on the LCD display?

- YES >> Meter information display is OK.  
NO >> Refer to [DLK-106, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000001539019

#### 1.CHECK COMBINATION METER

---

Refer to [MWI-62, "DTC Index"](#).

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Check combination meter. Refer to [MWI-4, "Work Flow"](#).

#### 2.CHECK INTERMITTENT INCIDENT

---

Refer to [GI-38, "Intermittent Incident"](#).

>> Inspection End.

# WARNING CHIME FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING CHIME FUNCTION

### Description

INFOID:0000000001539020

Performs operation method guide and warning with buzzer.

### Component Function Check

INFOID:0000000001539021

#### 1.CHECK FUNCTION

##### With CONSULT-III

1. Check the operation with "INSIDE BUZZER" in the Active Test.
2. Touch "TAKE OUT", "KNOB" or "KEY" on screen.

Is the inspection result normal?

- Yes >> Warning buzzer into combination meter is OK.  
No >> Refer to [DLK-107, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000001539022

#### 1.CHECK METER BUZZER CIRCUIT

The inoperative warning chime is contained inside the combination meter. Replace combination meter. Refer to [MWI-76, "Removal and Installation"](#).

>> Inspection End.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

## HAZARD FUNCTION

### Description

INFOID:0000000001539023

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

### Component Function Check

INFOID:0000000001539024

#### 1.CHECK FUNCTION

Check hazard warning lamp "FLASHER" in ACTIVE TEST.

Is the inspection result normal?

YES >> Hazard warning lamp circuit is OK.

NO >> Refer to [DLK-108, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000001539025

#### 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 for replacement and configuration procedure.

NO >> Repair or replace hazard warning switch circuit. Refer to [EXL-68, "Wiring Diagram"](#).

# KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY SWITCH (INTELLIGENT KEY UNIT INPUT)

### Diagnosis Procedure

INFOID:000000001539026

#### 1.CHECK KEY SWITCH

##### With CONSULT-III

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

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

##### Without CONSULT-III

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit harness connector.
3. Check voltage between Intelligent Key unit harness connector M70 terminal 7 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	7	Ground	Insert mechanical key into ignition switch	Battery voltage
			Remove mechanical key from ignition switch	0

Is the inspection result normal?

YES >> Key switch is OK.

NO >> GO TO 2

#### 2.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M12 terminal 3 and ground.

**3 - Ground**

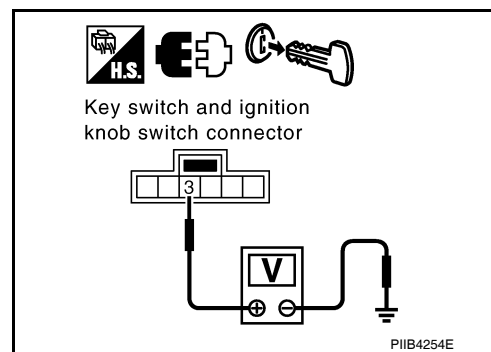
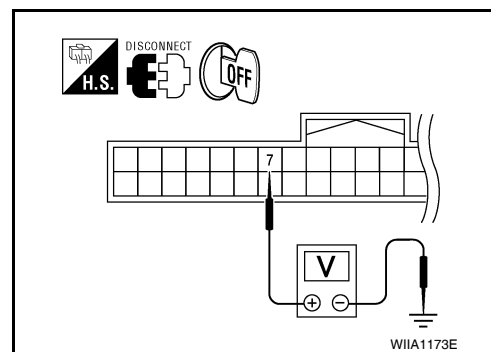
**: Battery voltage**

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)

[WITH INTELLIGENT KEY SYSTEM]

## < COMPONENT DIAGNOSIS >

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

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

Is the inspection result normal?

YES >> GO TO 4

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

## 4. CHECK KEY SWITCH CIRCUIT

1. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 7 and key switch and ignition knob switch harness connector (B) M12 terminal 4.

**7 - 4 : Continuity should exist.**

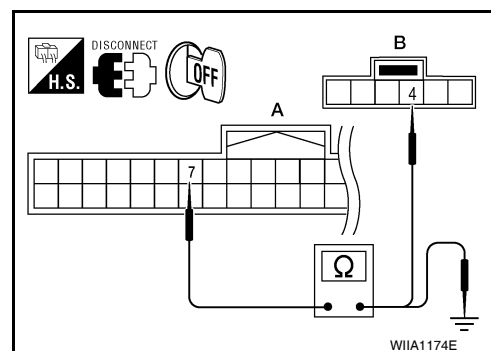
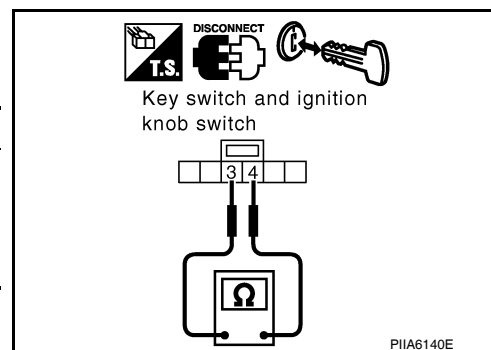
2. Check continuity between Intelligent Key unit harness connector (A) M70 terminal 7 and ground.

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

Is the inspection result normal?

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

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



# KEY SWITCH (BCM INPUT)

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY SWITCH (BCM INPUT)

### Diagnosis Procedure

INFOID:000000001539027

#### 1.CHECK KEY SWITCH POWER SUPPLY CIRCUIT

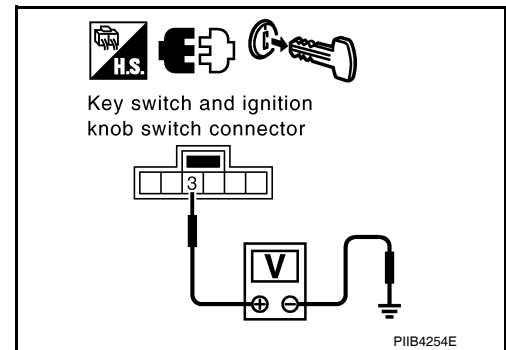
1. Remove mechanical key from ignition switch.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M12 terminal 3 and ground.

**3 – Ground : Battery voltage.**

Is the inspection result normal?

YES >> GO TO 2

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



#### 2.CHECK KEY SWITCH

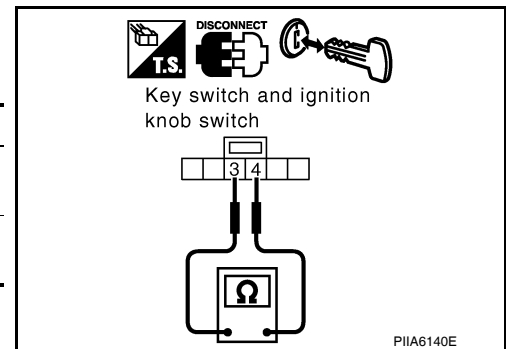
Check continuity between key switch and ignition knob switch terminals 3 and 4.

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

Is the inspection result normal?

YES >> GO TO 3

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



#### 3.CHECK KEY SWITCH SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between BCM harness connector M18 terminal 37 and key switch and ignition knob switch harness connector M12 terminal 4.

**37 – 4 : Continuity should exist.**

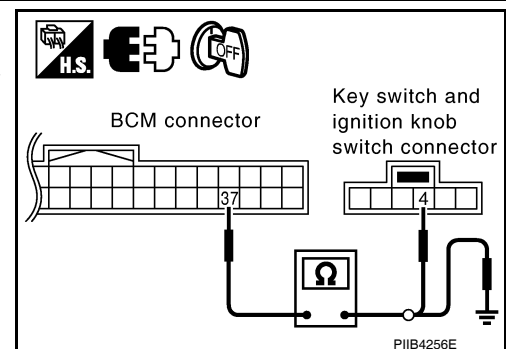
3. Check continuity between BCM harness connector M18 terminal 37 and ground.

**37 – Ground : Continuity should not exist.**

Is the inspection result normal?

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

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



# IGNITION KNOB SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## IGNITION KNOB SWITCH

### Ignition Knob Switch Check

INFOID:000000001539028

#### 1.CHECK IGNITION KNOB SWITCH

##### With CONSULT-III

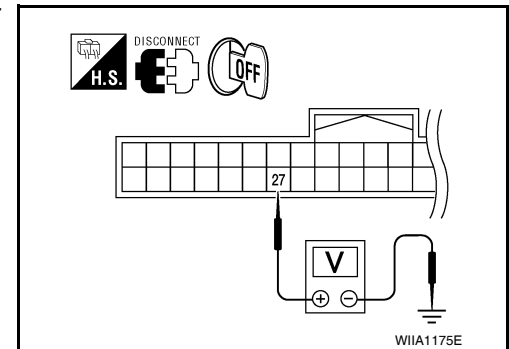
Display "PUSH SW" on DATA MONITOR screen, and check if ON/OFF display is linked to ignition switch operation.

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

##### Without CONSULT-III

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit connector.
3. Check voltage between Intelligent Key unit harness connector M70 terminal 27 and ground.

Connector	Terminals		Condition	Voltage (V) (Approx.)
	(+)	(-)		
M70	27	Ground	Ignition switch is pushed	Battery voltage
			Ignition switch is released	0



Is the inspection result normal?

- YES >> Ignition knob switch is OK.  
NO >> GO TO 2

#### 2.CHECK IGNITION KNOB SWITCH POWER SUPPLY CIRCUIT

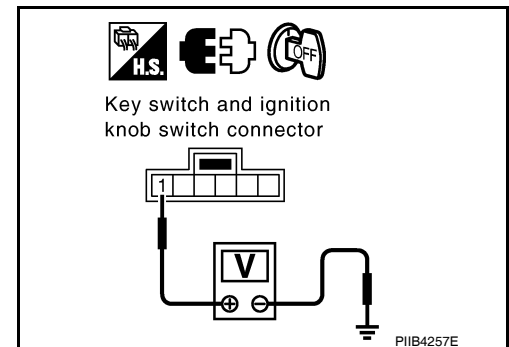
1. Turn ignition switch OFF.
2. Disconnect key switch and ignition knob switch connector.
3. Check voltage between key switch and ignition knob switch harness connector M12 terminal 1 and ground.

**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.



# IGNITION KNOB SWITCH

< COMPONENT DIAGNOSIS >

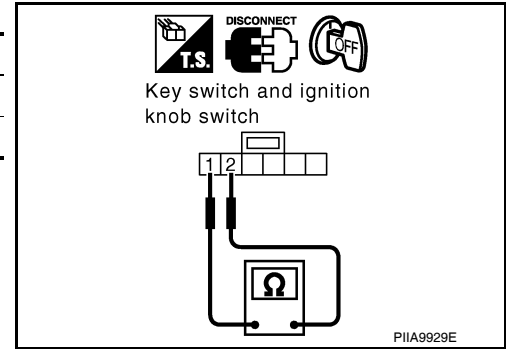
[WITH INTELLIGENT KEY SYSTEM]

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

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace key switch and ignition knob switch.



## 4. CHECK IGNITION KNOB SWITCH CIRCUIT

- Check continuity between Intelligent Key unit harness connector (A) M70 terminal 27 and key switch and ignition knob switch harness connector (B) M12 terminal 2.

**27 - 2 : Continuity should exist.**

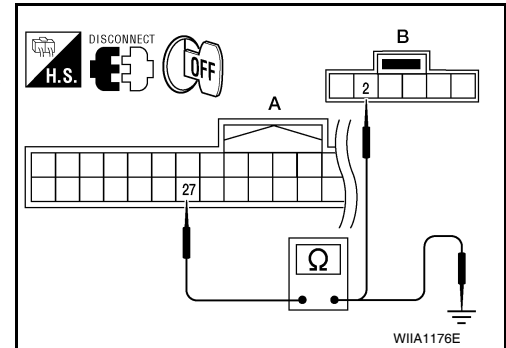
- Check continuity between Intelligent Key unit harness connector M70 terminal 27 and ground.

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

Is the inspection result normal?

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

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



## HEADLAMP FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

### HEADLAMP FUNCTION

---

#### Diagnosis Procedure

INFOID:0000000001539029

#### 1.CHECK HEADLAMP OPERATION

---

Do headlamps operate with headlamp switch?

YES or NO

YES >> Headlamp circuit is OK.

NO >> Check headlamp circuit. Refer to [EXL-4, "Work Flow"](#).

# MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## MAP LAMP AND IGNITION KEYHOLE ILLUMINATION FUNCTION

### Diagnosis Procedure

INFOID:000000001539030

#### 1.CHECK MAP LAMP OPERATION

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

Is the inspection result normal?

YES >> Map lamp circuit is OK.

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

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

## KEYFOB ID SET UP WITH CONSULT-III

### ID Code Entry Procedure

INFOID:000000001539031

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

**NOTE:**

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

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

**NOTE:**

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

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

# KEYFOB ID SET UP WITHOUT CONSULT-III

< COMPONENT DIAGNOSIS >

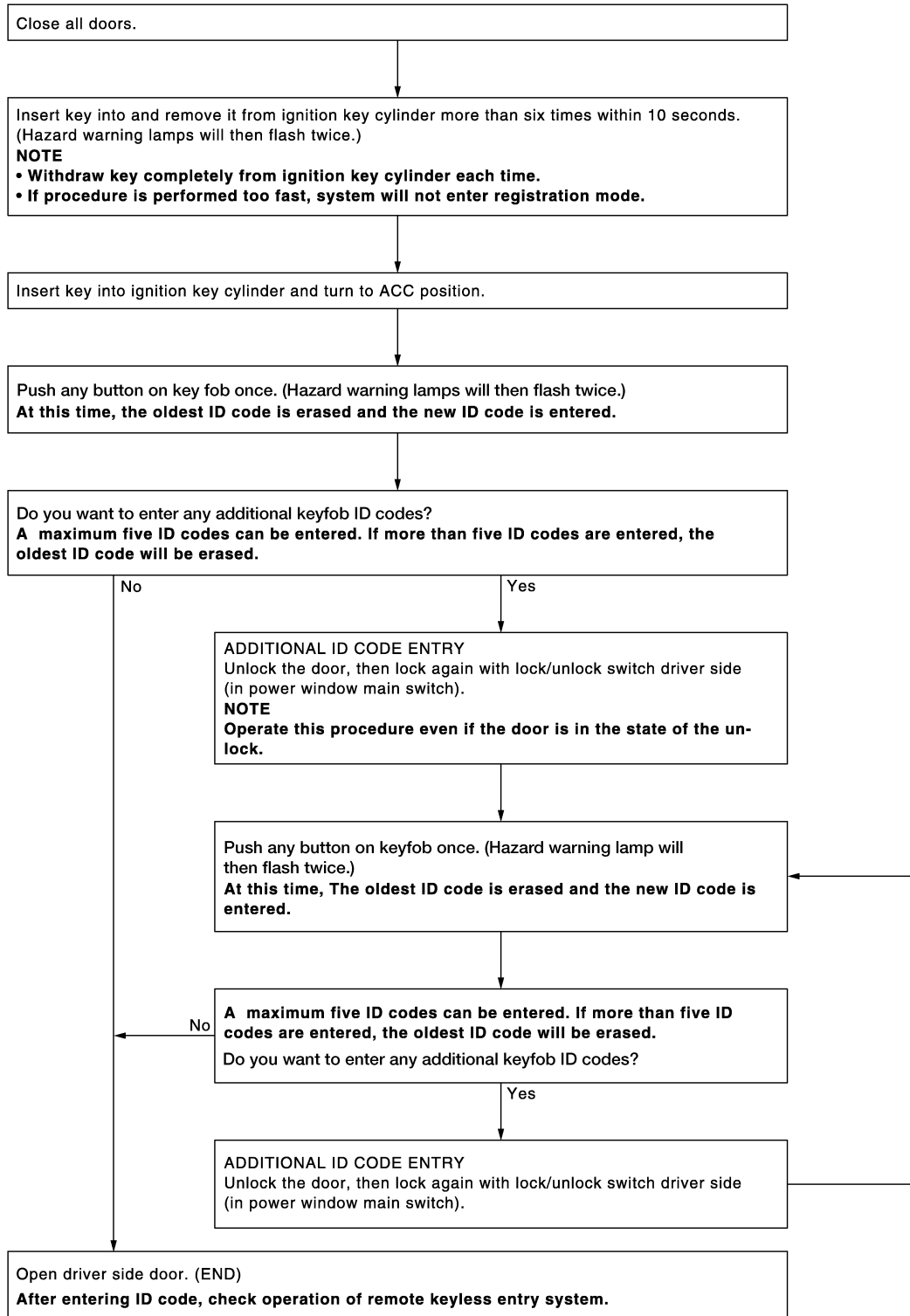
[WITH INTELLIGENT KEY SYSTEM]

## KEYFOB ID SET UP WITHOUT CONSULT-III

### ID Code Entry Procedure

INFOID:000000001539032

### 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.

# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

### Self-Diagnosis Procedure

INFOID:000000001539033

#### INPUT SIGNAL CHECK MODE

Input signal check mode allows testing of switch input signal to the back door control unit.

To activate input signal check mode on the automatic sliding door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T shift selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 seconds.
8. Release the back door handle switch.
9. Within 8 seconds of the back door warning chime sounding, press and hold the power liftgate switch.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the power liftgate switch.
12. The input signal check mode is now initialized.

The input signal check mode can test the following inputs. The back door warning chime will sound for approximately 0.5 second each time a switch signal input occurs. Use this test when one of these inputs is not responding during normal automatic back door operation.

Switch signal	Operation	Refer to
Power liftgate switch	OFF → ON	<a href="#">DLK-125</a>
Back door close switch (CLOSE)	OFF → ON	<a href="#">DLK-127</a>
Back door close switch (CANCEL)	OFF → ON	<a href="#">DLK-128</a>
Back door handle switch	OFF → ON	<a href="#">DLK-134</a>
A/T shift selector (park position switch)	P position → other than P position	<a href="#">DLK-97</a>
Vehicle speed*	Vehicle speed	<a href="#">TM-48</a>
Remote keyless entry signal	Keyfob switch OFF → ON	<a href="#">DLK-99</a>
Door lock/unlock signal	LOCK → UNLOCK	<a href="#">DLK-70</a>
Pinch strip LH signal	OFF → ON	<a href="#">DLK-129</a>
Pinch strip RH signal	OFF → ON	<a href="#">DLK-129</a>

\*Back door warning chime should sound as soon as vehicle moves.

Turn ignition switch OFF to end input signal check mode.

#### OPERATING CHECK MODE

Operating check mode allows self-diagnosis of the automatic back door system.

To activate operating check mode on the automatic back door, perform the following steps:

1. Turn ignition switch OFF.
2. Turn back door close switch to CANCEL (system cancelled).
3. Place A/T shift selector lever in P position.
4. Using the inside emergency release lever, open the back door.
5. Have an assistant press and hold the back door handle switch.
6. While the assistant continues to hold the back door handle switch, turn ignition switch ON (DO NOT start engine).
7. After approximately 5 seconds, the back door warning chime will sound for 0.5 second.
8. Release the back door handle switch.

# AUTOMATIC BACK DOOR SELF-DIAGNOSIS PROCEDURE

## < COMPONENT DIAGNOSIS >

## [WITH INTELLIGENT KEY SYSTEM]

9. Within 8 seconds of the back door warning chime sounding, press the power liftgate switch 5 times in rapid succession.
10. After approximately 5 seconds, the back door warning chime will sound for 1 second.
11. Release the power liftgate switch.
12. Immediately close the back door manually.
13. Press and release the power liftgate switch to activate the operating check mode.

Self-diagnosis results are indicated by the back door warning chime.

Back door warning chime order	Back door warning chime length	
Start self-diagnosis	1.5 seconds	
	OK	NG
1. Operating conditions diagnosis	0.5 second	0.2 second
2. Back door encoder diagnosis	0.5 second	0.2 second
3. Back door clutch diagnosis	0.5 second	0.2 second
4. Back door motor diagnosis	0.5 second	0.2 second
5. Cinch latch motor diagnosis	0.5 second	0.2 second
Restart self-diagnosis	1.5 seconds	

Item	NG Result	Refer to
1. Operating conditions diagnosis result	One of the following operating conditions no longer met: ignition switch ON, back door close switch (CANCEL) ON, A/T shift selector lever in P position	—
2. Back door encoder diagnosis result	Sensor diagnosis/short, pulse signal, pulse signal direction	<a href="#">DLK-236</a>
3. Back door clutch diagnosis result	Back door clutch does not operate	<a href="#">DLK-236</a>
4. Back door motor diagnosis result	Back door motor does not operate (no operating current)	<a href="#">DLK-236</a>
5. Cinch latch motor diagnosis result	Cinch latch motor does not operate (no operating current)	<a href="#">DLK-236</a>

Turn ignition switch OFF to end input signal check mode.



# POWER LIFTGATE SWITCH FUNCTION

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## POWER LIFTGATE SWITCH FUNCTION

### Diagnosis Procedure

INFOID:000000001539034

#### 1. POWER LIFTGATE SWITCH FUNCTION INSPECTION

Check power liftgate switch using switch operation.

Did the back door respond correctly?

YES >> Power liftgate switch is OK.

NO >> GO TO 2

#### 2. POWER LIFTGATE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the power liftgate switch, check voltage between back door control unit connector B55 terminal 23 and ground.

Terminal		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
23	Ground	Power liftgate switch	ON	0
			OFF	Battery voltage

Is the inspection result normal?

YES >> Switch is OK.

NO >> GO TO 3

#### 3. POWER LIFTGATE SWITCH CIRCUIT INSPECTION

1. Disconnect back door control unit and power liftgate switch connectors.
2. Check continuity between back door control unit connector (A) B55 terminal 23 and power liftgate switch connector (B) M92 terminal 1.

**23 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 23 and ground.

**23 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair the harness between the power liftgate switch and the back door control unit.

#### 4. POWER LIFTGATE SWITCH GROUND INSPECTION

Check continuity between power liftgate switch connector terminal 2 and ground.

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

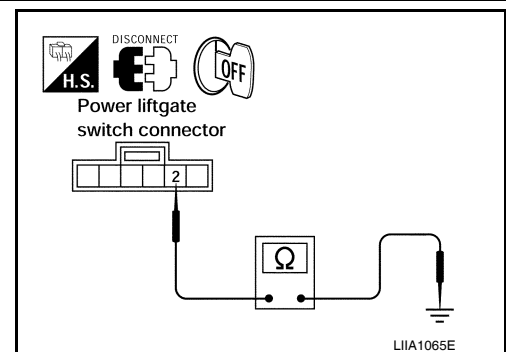
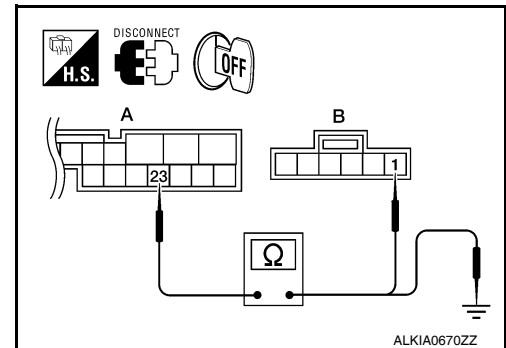
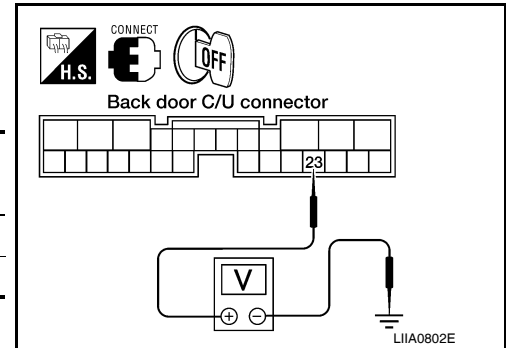
Is the inspection result normal?

YES >> GO TO 5

NO >> Repair the harness between the power liftgate switch and ground.

#### 5. POWER LIFTGATE SWITCH POWER SUPPLY CIRCUIT INSPECTION

1. Reconnect back door control unit.
2. Ensure liftgate is closed.



## POWER LIFTGATE SWITCH FUNCTION

### < COMPONENT DIAGNOSIS >

### [WITH INTELLIGENT KEY SYSTEM]

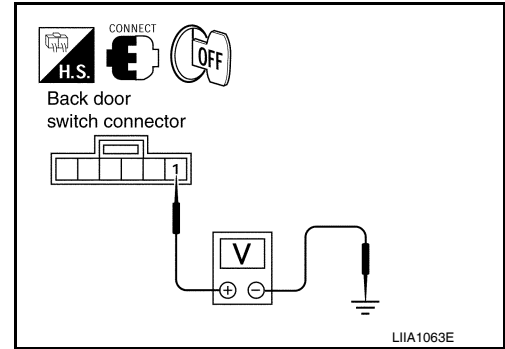
3. Check voltage between power liftgate switch connector M92 terminal 1 and ground.

**1 - Ground**

**:Approx. battery voltage**

Is the inspection result normal?

- YES >> Replace the power liftgate switch.  
NO >> Replace the back door control unit.



# GLASS HATCH SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## GLASS HATCH SWITCH

### Diagnosis Procedure

INFOID:000000004333521

#### NOTE:

Repair any front door lock actuator RH malfunction before proceeding with this diagnosis.

### 1.CHECK GLASS HATCH SWITCH

1. Turn ignition switch OFF.
2. Insure front door lock actuator RH is in the unlock position.
3. Check continuity between glass hatch switch terminal 2 and ground.

Connector	Terminals		Condition	Continuity
	(+)	(-)		
D706	2	Ground	With the glass hatch switch pressed	Yes
			With the glass hatch switch released	No

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

### 2.CHECK HARNESS CONTINUITY

1. Disconnect glass hatch switch.
2. Disconnect BCM.
3. Check continuity between BCM connector M18 (A) terminal 30 and glass hatch switch connector D706 (B) terminal 2.

**30 - 2 : Continuity should exist.**

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

**30 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> Glass hatch switch circuit is OK.

NO >> Repair or replace harness.

### 3.CHECK GLASS HATCH SWITCH

1. Disconnect glass hatch switch.
2. Check continuity between glass hatch switch harness connector D706 terminal 1 and ground.

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

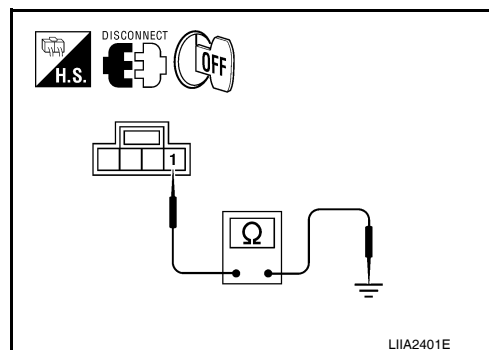
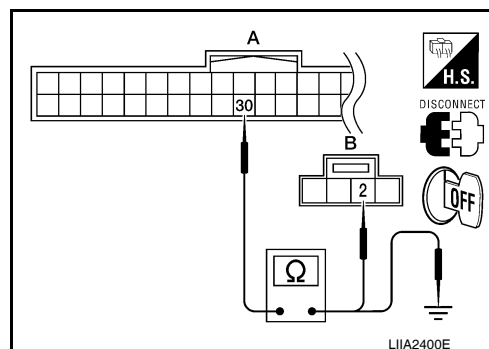
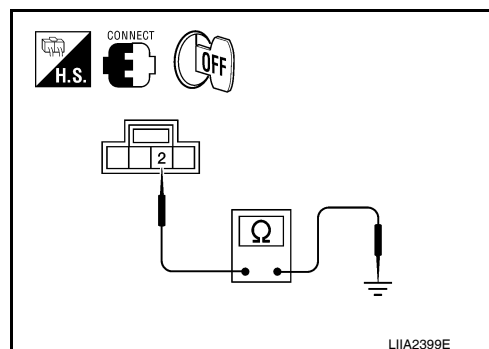
Is the inspection result normal?

YES >> Replace glass hatch switch.

NO >> GO TO 4.

### 4.CHECK HARNESS CONTINUITY

1. Disconnect front door lock actuator RH.



## GLASS HATCH SWITCH

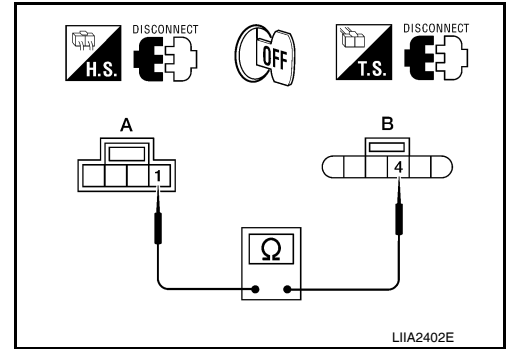
### < COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

2. Check continuity between glass hatch switch connector D706  
(A) terminal 1 and front door lock actuator RH connector D114  
(B) terminal 4

1 - 4

: Continuity should exist.



Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK FRONT DOOR LOCK ACTUATOR RH GROUND CIRCUIT

Check continuity between front door lock actuator RH connector D114 terminal 5 and ground

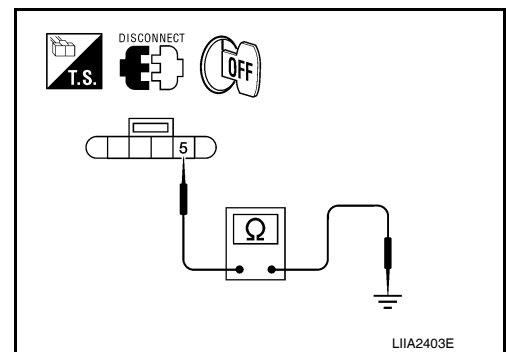
5 - Ground

: Continuity should exist.

Is the inspection result normal?

YES >> Replace front door lock actuator RH. Refer to [DLK-232](#).  
"Removal and Installation".

NO >> Repair or replace harness.



# GLASS HATCH AJAR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## GLASS HATCH AJAR SWITCH

### Diagnosis Procedure

INFOID:000000001539035

#### 1.CHECK GLASS HATCH AJAR SWITCH INPUT SIGNAL

 With CONSULT-III

Check glass hatch ajar switch ("TRNK OPN MNTR") in DATA MONITOR mode with CONSULT-III.

- When glass hatch is open:

**TRNK OPN MNTR : ON**

- When glass hatch is closed:

**TRNK OPN MNTR : OFF**

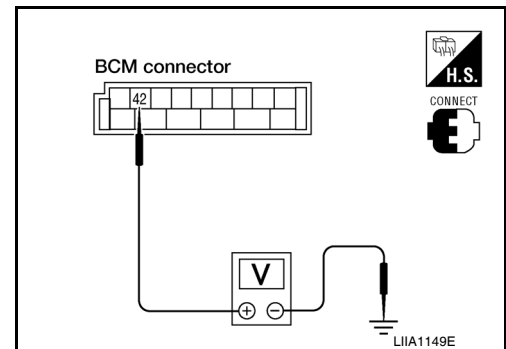
 Without CONSULT-III

Check voltage between BCM connector M19 terminal 42 and ground.

Connector	Item	Terminals		Condition	Voltage (V) (Approx.)
		(+)	(-)		
M19	BCM	42	Ground	Open ↓ Closed	0 ↓ Battery voltage

Is the inspection result normal?

- YES >> System is OK.  
NO >> GO TO 2



#### 2.CHECK GLASS HATCH AJAR SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect glass hatch ajar switch, BCM and back door control unit.
- Check continuity between BCM connector (A) M19 terminal 42 and glass hatch ajar switch connector (C) D707 terminal 1.

**42 - 1 : Continuity should exist.**

- Check continuity between back door control unit connector B55 (B) terminal 17 and glass hatch ajar switch connector (C) D707 terminal 1.

**17 - 1 : Continuity should exist.**

- Check continuity between glass hatch ajar switch connector (C) D707 terminal 1 and ground.

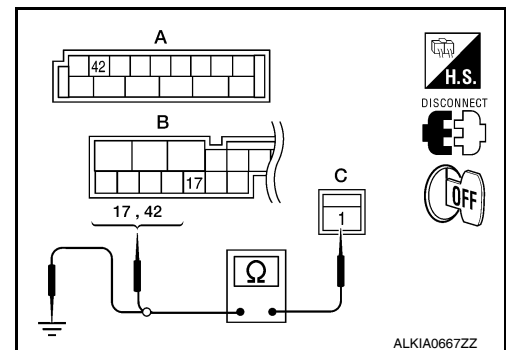
**1 - Ground : Continuity should not exist.**

Is the inspection result normal?

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

#### 3.CHECK GLASS HATCH AJAR SWITCH

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



## GLASS HATCH AJAR SWITCH

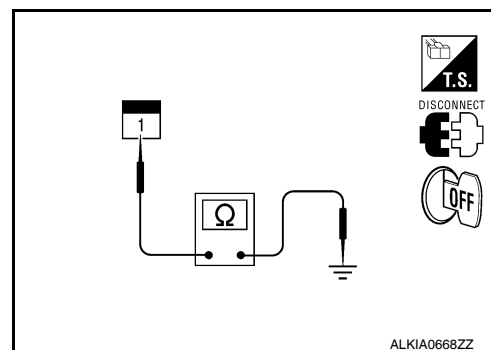
< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

Is the inspection result normal?

- YES >> Check glass hatch ajar switch case ground condition.  
NO >> Replace glass hatch ajar switch, or repair or replace harness.



# BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CLOSE) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001539036

#### 1.BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (close) switch using switch operation.

Is the inspection result normal?

YES >> Back door close switch is OK.

NO >> GO TO 2

#### 2.BACK DOOR CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close switch, check voltage between back door control unit connector B55 terminal 8 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
8	Ground	Back door close switch	ON	0
			OFF	Battery voltage

Is the inspection result normal?

YES >> Switch is OK.

NO >> GO TO 3

#### 3.BACK DOOR CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 8 and back door close switch connector (B) B63 terminal 1.

**8 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 8 and ground.

**8 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair the harness between the back door close switch and the back door control unit.

#### 4.BACK DOOR CLOSE SWITCH GROUND INSPECTION

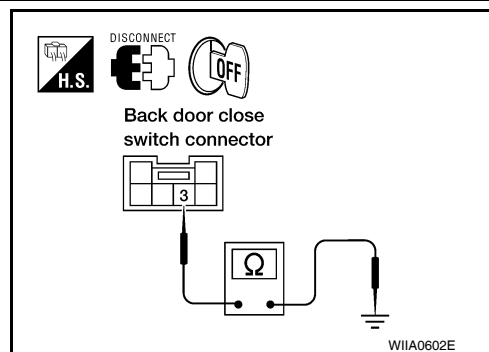
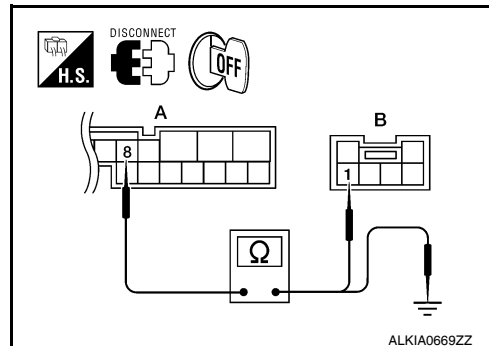
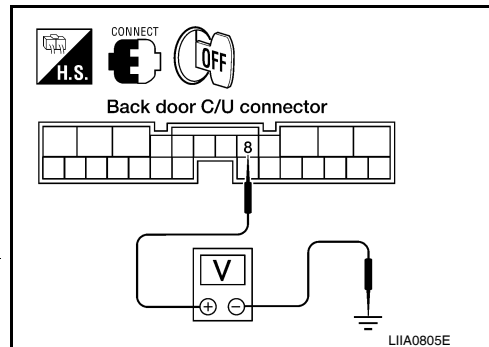
Check continuity between back door close switch connector B63 terminal 3 and ground.

**3 - Ground : Continuity should exist.**

Is the inspection result normal?

YES >> Replace the back door close switch.

NO >> Repair the harness between the back door close switch and ground.



# BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE (CANCEL) SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001539037

#### 1.BACK DOOR CLOSE SWITCH FUNCTION INSPECTION

Check back door close (cancel) switch using switch operation.

Is the inspection result normal?

YES >> Back door close switch is OK.

NO >> GO TO 2

#### 2.BACK DOOR CLOSE (CANCEL) SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door close (cancel) switch, check voltage between back door control unit connector B55 terminal 13 and ground.

Terminals		Measuring condition		Voltage (V) (Approx.)
(+)	(-)			
13	Ground	Back door close switch	ON	0
			OFF	5

Is the inspection result normal?

YES >> Switch is OK.

NO >> GO TO 3

#### 3.BACK DOOR CLOSE (CANCEL) SWITCH CIRCUIT INSPECTION

1. Disconnect back door close switch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 13 and back door close switch connector (B) B63 terminal 5.

**13 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 13 and ground.

**13 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair the harness between the back door close switch and the back door control unit.

#### 4.BACK DOOR CLOSE SWITCH GROUND INSPECTION

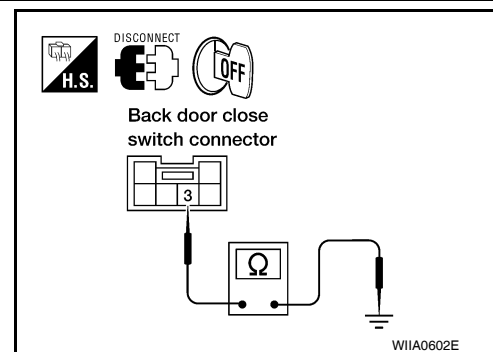
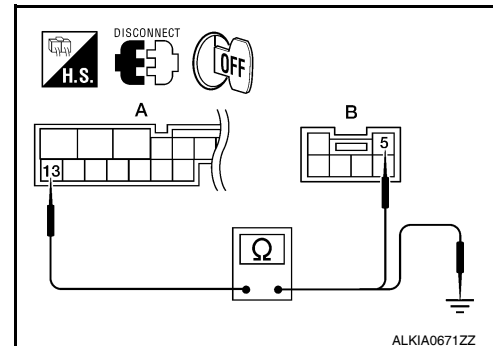
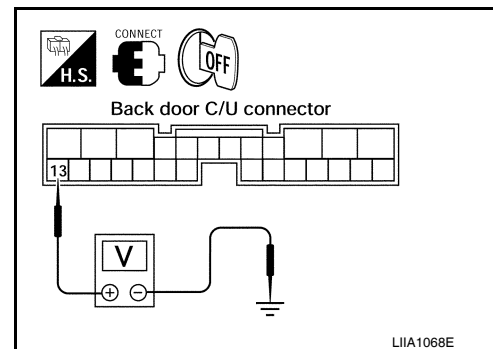
Check continuity between back door close switch connector B63 terminal 3 and ground.

**3 - Ground : Continuity should exist.**

Is the inspection result normal?

YES >> Replace the back door close switch.

NO >> Repair the harness between the back door close switch and ground.





# PINCH STRIP SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## PINCH STRIP SYSTEM

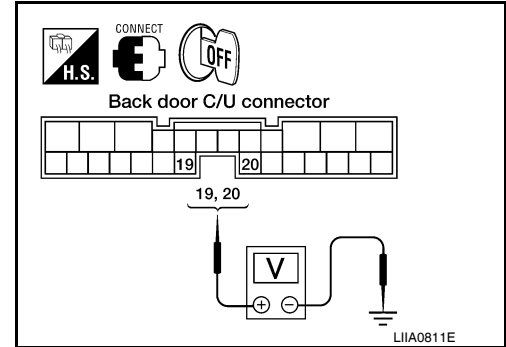
### Diagnosis Procedure

INFOID:000000001539038

#### 1. PINCH STRIP SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the pinch strip, check voltage between back door control unit connector B55 terminals 19, 20 and ground.

Terminals		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
19	Ground	Pinch strip RH operation	0
		Other	4
20	Ground	Pinch strip LH operation	0
		Other	4



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

#### 2. PINCH STRIP CIRCUIT INSPECTION

1. Disconnect pinch strip and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 5, 19 (RH) or 5, 20 (LH) and pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2.

**RH: 1 - 19 : Continuity should exist.**

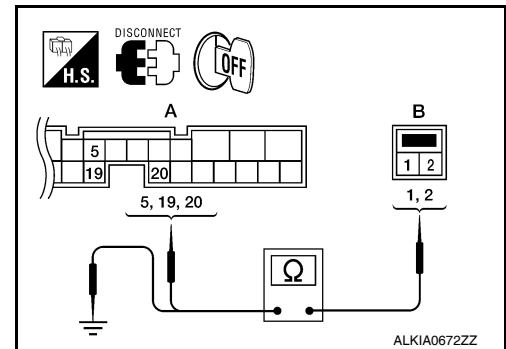
**LH: 1 - 20 : Continuity should exist.**

**RH and LH 2 - 5 : Continuity should exist.**

3. Check continuity between pinch strip connector (B) D715 (RH), D517 (LH) terminals 1, 2 and ground.

**1 - Ground : Continuity should not exist.**

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



Is the inspection result normal?

- YES >> Replace the pinch strip.  
NO >> Repair the harness between the pinch strip and the back door control unit.

# BACK DOOR WARNING CHIME SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR WARNING CHIME SYSTEM

### Diagnosis Procedure

INFOID:000000001539039

#### 1. BACK DOOR WARNING CHIME CIRCUIT INSPECTION

1. Disconnect back door control unit and back door warning chime.
2. Check continuity between back door control unit connector (A) B55 terminal 6 and back door warning chime connector (B) D514 terminal 1.

**6 - 1 : Continuity should exist.**

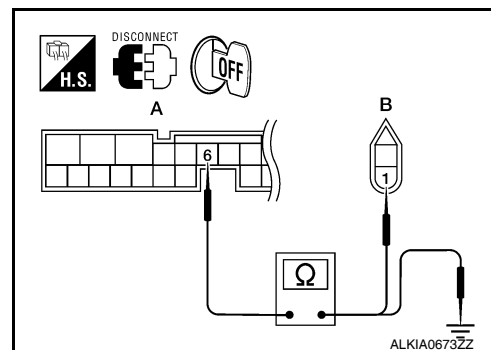
3. Check continuity between back door control unit connector (A) B55 terminal 6 and ground.

**6 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 2

NO >> Repair or replace the harness between the warning chime and the back door control unit.



#### 2. WARNING CHIME CIRCUIT INSPECTION

1. Check continuity between back door control unit connector (A) B55 terminal 9 and back door warning chime connector (B) D514 terminal 2.

**9 - 2 : Continuity should exist.**

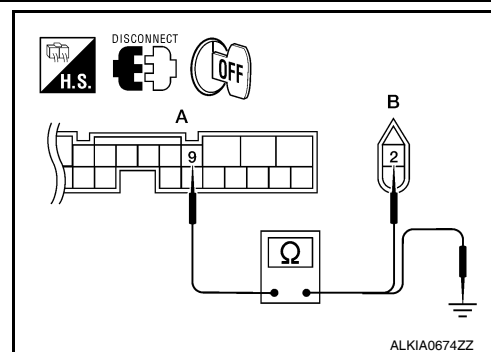
2. Check continuity between back door control unit connector (A) B55 terminal 9 and ground.

**9 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> Replace warning chime.

NO >> Repair or replace the harness between the warning chime and the back door control unit.



# HALF-LATCH SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

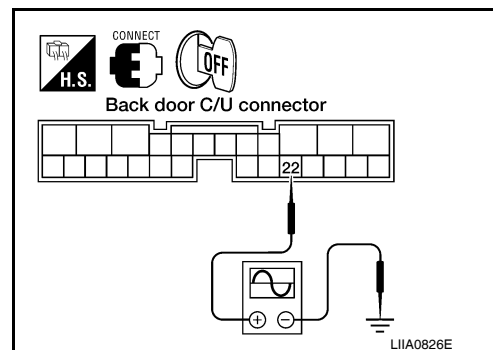
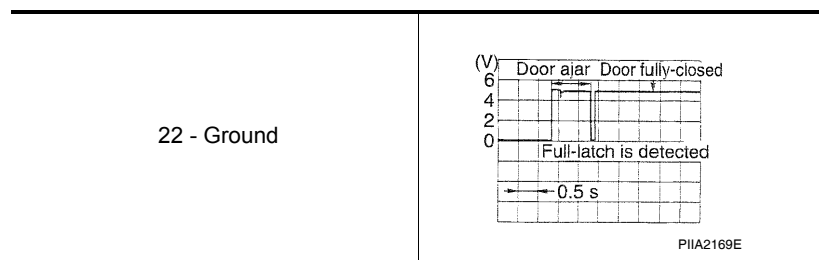
## HALF-LATCH SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001539040

#### 1. HALF-LATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 22 and ground.



Is the inspection result normal?

YES >> Half-latch switch is OK.

NO >> GO TO 2

#### 2. HALF-LATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch switch and back control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 22 and back door latch (half-latch switch) connector (B) D705 terminal 6.

**22 - 6 : Continuity should exist.**

3. Check continuity between back control unit connector (A) B55 terminal 22 and ground.

**22 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair the harness between the back door latch (half-latch switch) and the back door control unit.

#### 3. HALF-LATCH SWITCH GROUND INSPECTION

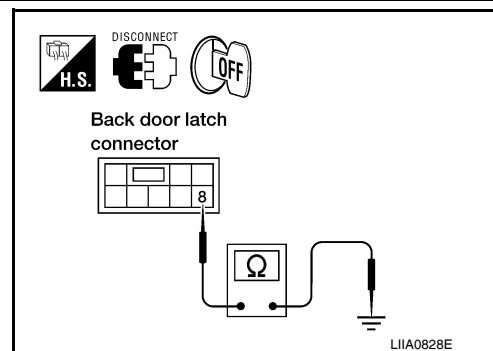
Check continuity between back door latch (half-latch switch) connector D705 terminal 8 and ground.

**8 - Ground : Continuity should exist.**

Is the inspection result normal?

YES >> Replace the back door latch.

NO >> Repair the harness between the back door latch (half-latch switch) and ground.



# BACK DOOR OPEN SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

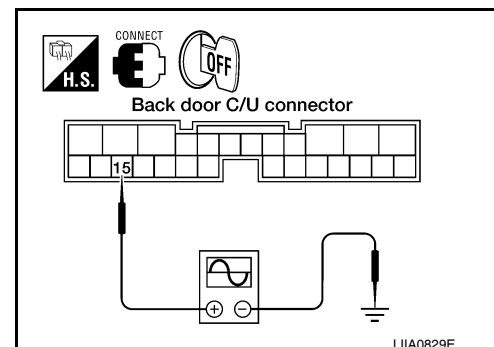
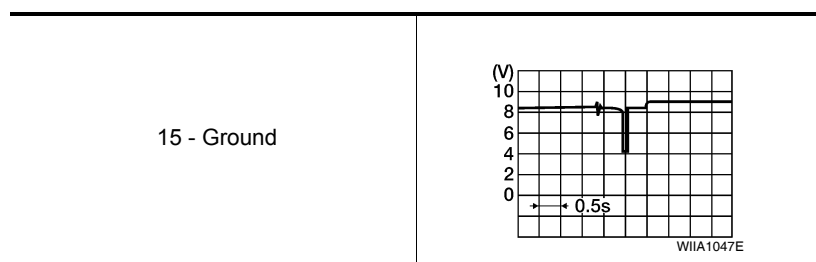
## BACK DOOR OPEN SWITCH SYSTEM

### Diagnosis Procedure

INFOID:000000001539041

#### 1.OPEN SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully closing and opening the back door, check voltage between back door control unit connector B55 terminal 15 and ground.



Is the inspection result normal?

YES >> Open switch is OK.

NO >> GO TO 2

#### 2.OPEN SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 15 and back door latch (open switch) connector (B) D705 terminal 4.

**15 - 4 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 15 and ground.

**15 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair the harness between the back door latch (open switch) and the back door control unit.

#### 3.OPEN SWITCH GROUND INSPECTION

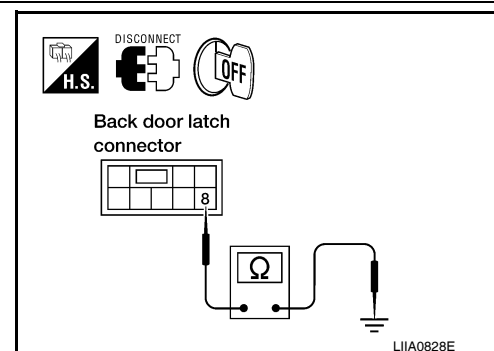
Check continuity between back door latch (open switch) connector D705 terminal 8 and ground.

**8 - Ground : Continuity should exist.**

Is the inspection result normal?

YES >> Replace the back door latch.

NO >> Repair the harness between the back door latch (open switch) and ground.



# BACK DOOR CLOSE SWITCH SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CLOSE SWITCH SYSTEM

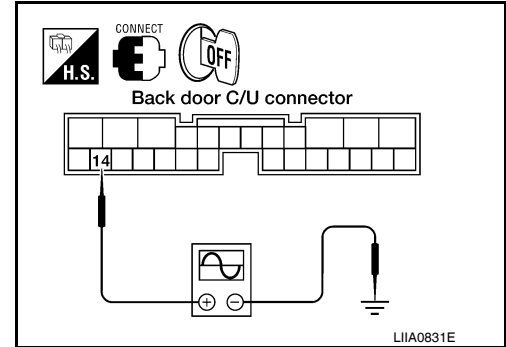
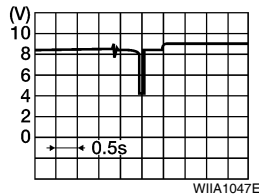
### Diagnosis Procedure

INFOID:000000001539042

#### 1. CLOSE SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminal 14 and ground.

14 - Ground



Is the inspection result normal?

- YES >> Close switch is OK.  
NO >> GO TO 2

#### 2. CLOSE SWITCH CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminal 14 and back door latch (close switch) connector (B) D705 terminal 5.

**14 - 5 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 14 and ground.

**14 - Ground : Continuity should not exist.**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (close switch) and the back door control unit.

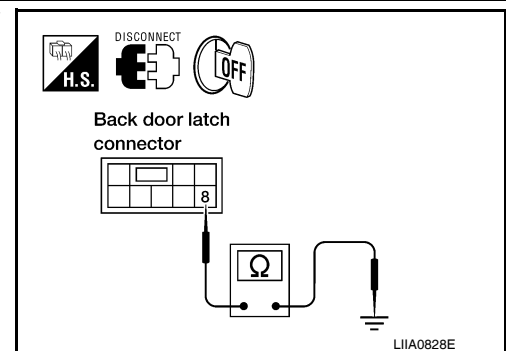
#### 3. CLOSE SWITCH GROUND INSPECTION

Check continuity between back door latch (close switch) connector D705 terminal 8 and ground.

**8 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> Replace the back door latch.  
NO >> Repair the harness between the back door latch (close switch) and ground.



# BACK DOOR SWITCH

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR SWITCH

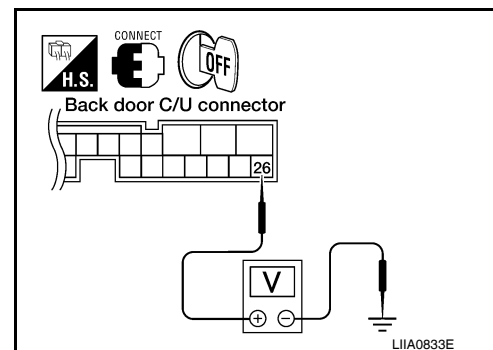
### Diagnosis Procedure

INFOID:000000001539043

#### 1. BACK DOOR AND GLASS HATCH SWITCH SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While operating the back door and glass hatch switch assembly (back door switch), check voltage between back door control unit connector B55 terminal 26 and ground.

Terminal		Measuring condition	Voltage (V) (Approx.)
(+)	(-)		
26	Ground	Push the back door and glass hatch switch assembly (back door switch) (ON)	0
		Other (OFF)	Battery voltage



Is the inspection result normal?

- YES >> Switch is OK.  
NO >> GO TO 2

#### 2. BACK DOOR AND GLASS HATCH SWITCH CIRCUIT INSPECTION

1. Disconnect back door and glass hatch switch assembly (back door switch) and back door control unit.
2. Check continuity between back door control unit connector (A) B55 terminal 26 and back door and glass hatch switch assembly (back door switch) connector (B) D706 terminal 3.

**26 - 3 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminal 26 and ground.

**26 - Ground : Continuity should not exist.**

Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door and glass hatch switch assembly (back door switch) and the back door control unit.

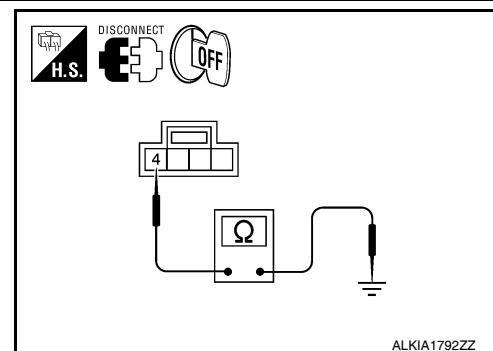
#### 3. BACK DOOR AND GLASS HATCH SWITCH GROUND INSPECTION

Check continuity between back door and glass hatch switch assembly (back door switch) connector D706 terminal 4 and ground.

**4 - Ground : Continuity should exist.**

Is the inspection result normal?

- YES >> Replace the back door and glass hatch switch assembly (back door switch).  
NO >> Repair the harness between the back door and glass hatch switch assembly (back door switch) and ground.



# CINCH LATCH MOTOR SYSTEM

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## CINCH LATCH MOTOR SYSTEM

### Diagnosis Procedure

INFOID:000000001539044

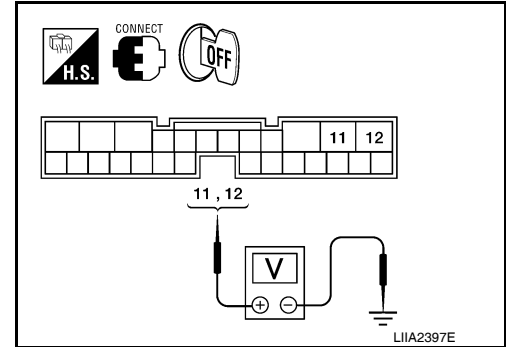
#### 1. CINCH LATCH MOTOR SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. While fully opening and closing the back door, check voltage between back door control unit connector B55 terminals 11, 12 and ground.

11 - Ground 12 - Ground	Battery voltage
----------------------------	-----------------

Is the inspection result normal?

- YES >> GO TO 2  
NO >> Replace the back door control unit.



#### 2. CINCH LATCH MOTOR CIRCUIT INSPECTION

1. Disconnect back door latch and back door control unit connector.
2. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and back door latch (cinch latch motor) connector D705 (B) terminals 1, 2.

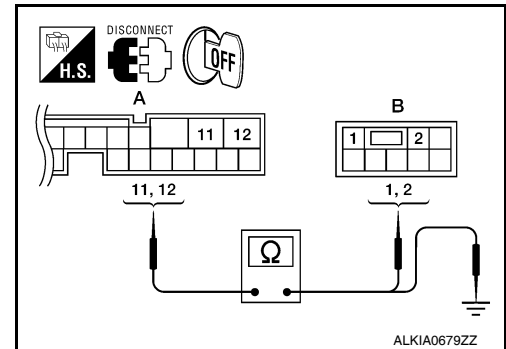
**11 - 2 : Continuity should exist.**

**12 - 1 : Continuity should exist.**

3. Check continuity between back door control unit connector (A) B55 terminals 11, 12 and ground.

**11 - Ground : Continuity should not exist.**

**12 - Ground : Continuity should not exist.**



Is the inspection result normal?

- YES >> GO TO 3  
NO >> Repair the harness between the back door latch (cinch latch motor) and the back door control unit.

#### 3. CINCH LATCH MOTOR OPERATION INSPECTION

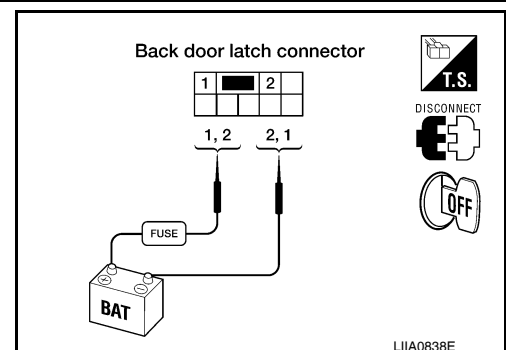
Connect battery power to terminals 1 and 2 on the back door latch connector and check motor operation.

**1 (+) - 2 (-) : It operates.**

**1 (-) - 2 (+) : It operates. (Reverse rotation)**

Is the inspection result normal?

- YES >> Motor is OK.  
NO >> Replace the back door latch.



# INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT POWER BACK DOOR INPUT SIGNAL

### Description

INFOID:000000001539045

Carrying the Intelligent Key, enables the driver to open the liftgate using the back door switch even when the vehicle is locked. When pressing the back door switch, the back door switch sends this signal to the Intelligent Key unit which treats it as a request switch signal. When the Intelligent Key unit, using the rear bumper antenna, validates the presence of the Intelligent Key, it sends an open signal to the back door control unit regardless whether the vehicle is locked.

Rear bumper antenna is mounted on the rear bumper and is used to allow the back door handle opening of the locked back door when the Intelligent Key is present.

### Diagnosis Procedure

INFOID:000000001539046

#### 1. BACK DOOR SWITCH SIGNAL INSPECTION

With all doors unlocked, check the back door switch operation by pressing the back door switch.

Did the back door respond correctly by opening?

YES >> GO TO 2

NO >> Refer to [DLK-134, "Diagnosis Procedure"](#).

#### 2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob operate correctly?

YES >> GO TO 3

NO >> Refer to [DLK-102, "Diagnosis Procedure"](#).

#### 3. INTELLIGENT KEY UNIT SIGNAL INSPECTION

##### NOTE:

Since the diode is a uni-directional component, pay close attention to the polarity of the ohmmeter being used as the presence of a diode in the circuit will affect the result.

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit, back door switch and back door control unit connectors.
3. Check continuity between Intelligent Key unit connector (A) M70 terminal 29 and back door switch connector (B) D706 terminal 3.

**29 (+) - 3 (-) : Continuity should exist.**

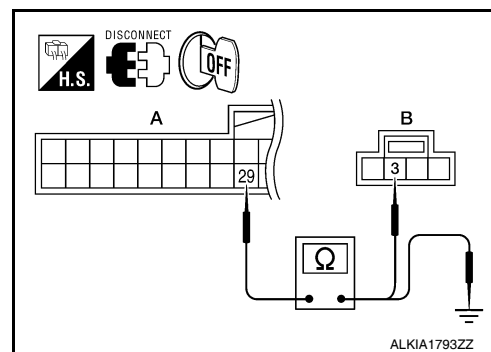
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 29 and ground.

**29 (+) - Ground (-) : Continuity should not exist.**

Is the inspection result normal?

YES >> Replace the Intelligent Key unit.

NO >> Repair or replace the harness or the diode as necessary.





# INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT POWER BACK DOOR OUTPUT SIGNAL

### Description

INFOID:000000001539047

The keyfob of the Intelligent Key unit is capable of opening and closing the power back door. The driver can open or close the liftgate by pressing the liftgate button regardless whether the vehicle is locked provided the keyfob is within operating range.

### Diagnosis Procedure

INFOID:000000001539048

#### 1. POWER LIFTGATE SWITCH FUNCTION INSPECTION

Check power liftgate switch using switch operation.

Did the back door respond correctly?

YES >> GO TO 2

NO >> Refer to [DLK-121, "Diagnosis Procedure"](#).

#### 2. KEYFOB SIGNAL INSPECTION

Check keyfob operation using lock and unlock buttons.

Did the keyfob operate correctly?

YES >> GO TO 3

NO >> Refer to [DLK-102, "Diagnosis Procedure"](#).

#### 3. INTELLIGENT KEY UNIT SIGNAL INSPECTION

1. Turn ignition switch OFF.
2. Disconnect Intelligent Key unit, back door control unit and power liftgate switch connectors.
3. Check continuity between Intelligent Key unit connector (A) M70 terminal 23 and back door control unit connector (B) B55 terminal 23.

**23 - 23 : Continuity should exist.**

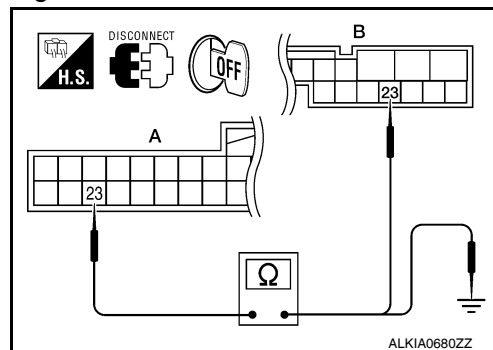
4. Check continuity between Intelligent Key unit connector (A) M70 terminal 23 and ground.

**23 - Ground : Continuity should not exist.**

Is the inspection result normal?

YES >> Replace Intelligent Key unit.

NO >> Repair or replace the harness as necessary.



ALKIA0680ZZ

# HOMELINK UNIVERSAL TRANSCEIVER

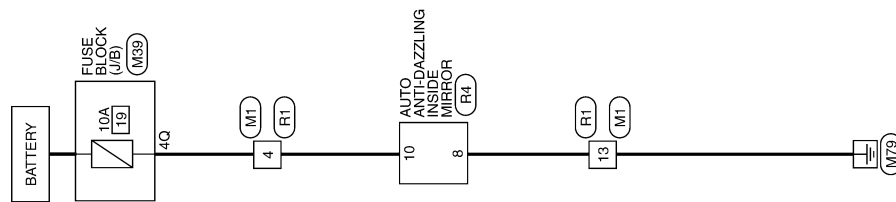
< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Wiring Diagram

INFOID:000000001744759



INTEGRATED HOMELINK TRANSMITTER

ALKWA0076GB

# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## INTEGRATED HOMELINK TRANSMITTER CONNECTORS

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



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

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

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

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

Connector No.	R4
Connector Name	AUTO ANTI-DAZZLING INSIDE MIRROR
Connector Color	GRAY



5	4	3	2	1
10	9	8	7	6

Terminal No.	Color of Wire	Signal Name
8	B	GND
10	Y/R	B+

## Description

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.

ALK1A0650GB

INFOID:0000000001539049

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Component Function Check

INFOID:000000001539050

### 1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> GO TO 2

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

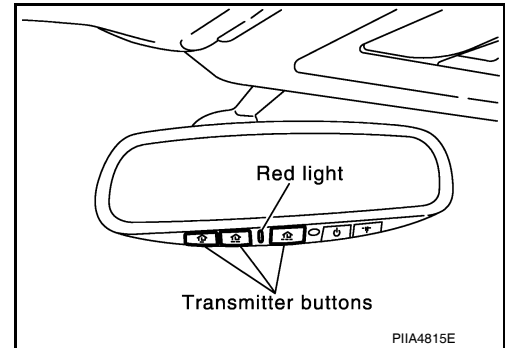
### 2.CHECK ILLUMINATION

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Refer to [DLK-140, "Diagnosis Procedure"](#).



### 3.CHECK TRANSMITTER

Check transmitter with Tool\*.

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

Is the inspection result normal?

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

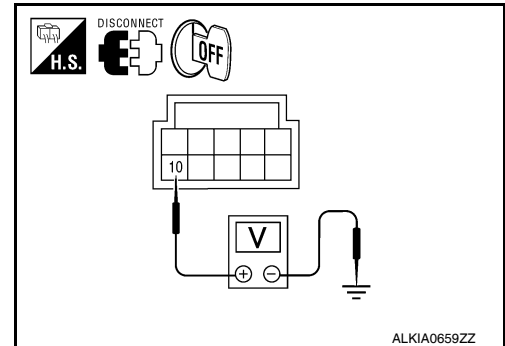
NO >> Replace auto anti-dazzling inside mirror (homelink universal transceiver).

## Diagnosis Procedure

INFOID:000000001539051

### 1.CHECK POWER SUPPLY

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



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

Is the inspection result normal?

YES >> GO TO 2

NO >> Check 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).

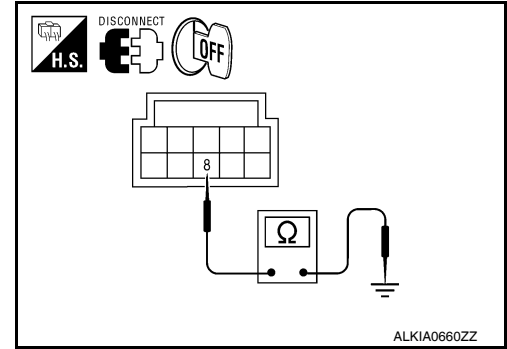
# HOMELINK UNIVERSAL TRANSCEIVER

< COMPONENT DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## 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
R4	8		Yes

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair harness.

## 3.CHECK INTERMITTENT INCIDENT

Refer to [GI-38, "Intermittent Incident"](#).

>> INSPECTION END.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

#### Reference Value

INFOID:000000004884071

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
AIR COND SW	A/C switch OFF	OFF
	A/C switch ON	ON
AUT LIGHT SYS	Outside of the room is dark	OFF
	Outside of the room is bright	ON
AUTO LIGHT SW	Lighting switch OFF	OFF
	Lighting switch AUTO	ON
BACK DOOR SW	Back door closed	OFF
	Back door opened	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the LOCK side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the UNLOCK side	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON
DOOR SW-RR	Rear door RH closed	OFF
	Rear door RH opened	ON
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1st	ON

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Monitor Item	Condition	Value/Status
HEADLAMP SW1	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HEADLAMP SW2	Headlamp switch OFF	OFF
	Headlamp switch 1st	ON
HI BEAM SW	High beam switch OFF	OFF
	High beam switch HI	ON
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
IGN SW CAN	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
I-KEY LOCK	LOCK button of Intelligent Key is not pressed	OFF
	LOCK button of Intelligent Key is pressed	ON
I-KEY UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
	UNLOCK button of Intelligent Key is pressed	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
OIL PRESS SW	<ul style="list-style-type: none"> <li>Ignition switch OFF or ACC</li> <li>Engine running</li> </ul>	OFF
	Ignition switch ON	ON
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RR WASHER SW	Rear washer switch OFF	OFF
	Rear washer switch ON	ON
RR WIPER INT	Rear wiper switch OFF	OFF
	Rear wiper switch INT	ON
RR WIPER ON	Rear wiper switch OFF	OFF
	Rear wiper switch ON	ON
RR WIPER STOP	Rear wiper stop position	OFF
	Other than rear wiper stop position	ON
TAIL LAMP SW	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
TRNK OPNR SW	When back door opener switch is not pressed	OFF
	When back door opener switch is pressed	ON
TURN SIGNAL L	Turn signal switch OFF	OFF
	Turn signal switch LH	ON
TURN SIGNAL R	Turn signal switch OFF	OFF
	Turn signal switch RH	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

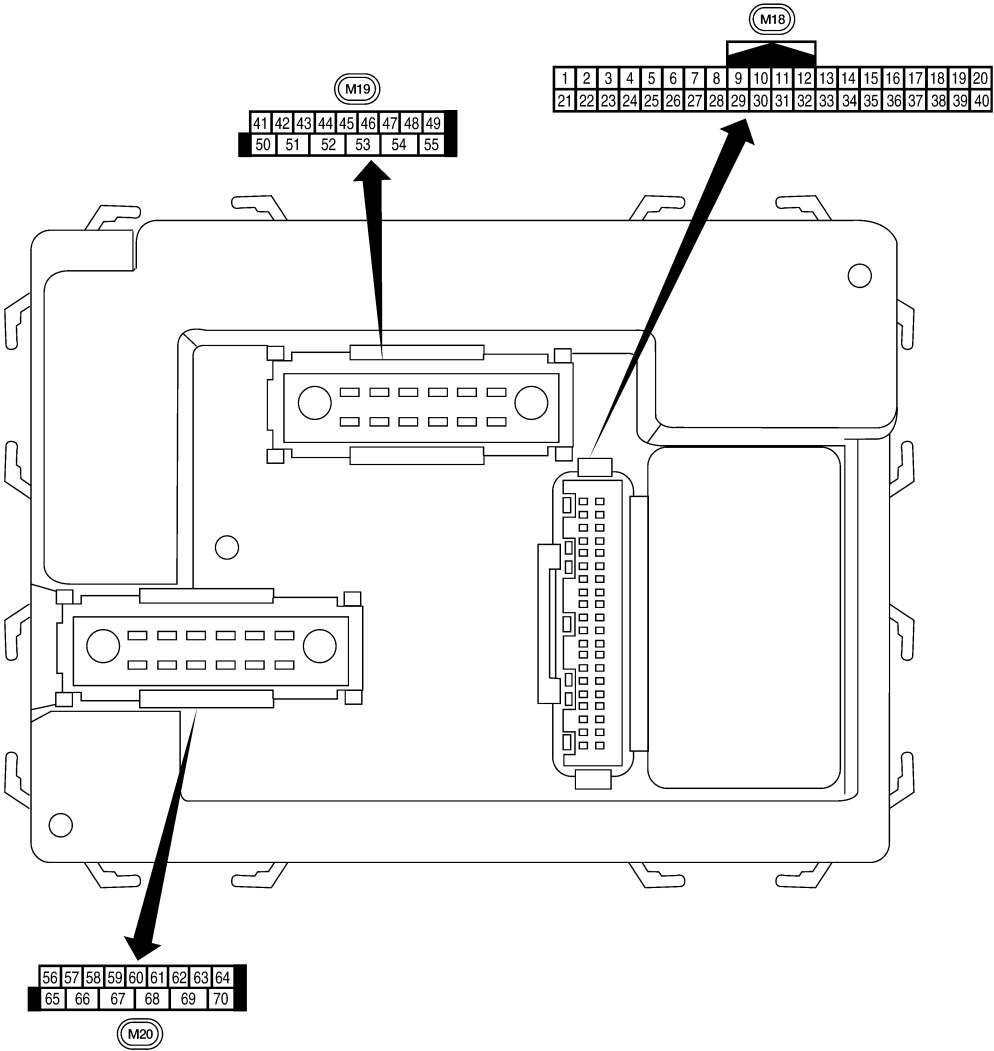
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal Layout

INFOID:000000004884072



Physical Values

LIIA2443E


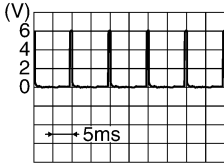

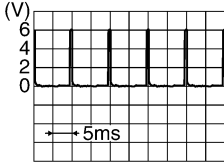
INFOID:000000004884073



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR/W	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	G/B	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	V	Combination switch input 1				
9	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
					OFF (other than above)	Battery voltage
11	O	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
15	L/W	Tire pressure warning check connector	Input	OFF	—	5V
18	P	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	—	0V

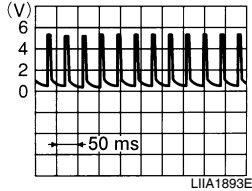
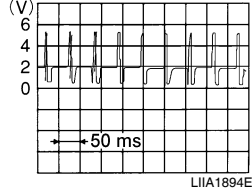
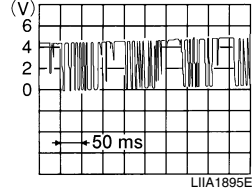
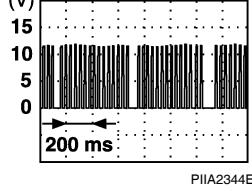
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



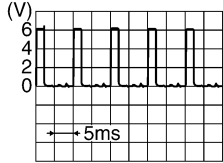
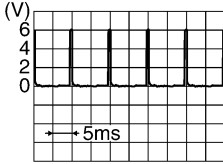
[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
19	V/W	Remote keyless entry receiver (power supply)	Output	OFF	Ignition switch OFF	 LI1A1893E
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	 LI1A1894E
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	 LI1A1895E
21	G	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	W/V	BUS	—	—	Ignition switch ON or power window timer operates	 PI1A2344E
23	G/O	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.
26	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Fluctuating
27	W/R	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
28	L/R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	W/B	Hazard switch	Input	OFF	ON	0V
					OFF	5V
30	Y/BR	Glass hatch switch	Input	OFF	Glass hatch switch released	Battery voltage
					Glass hatch switch pressed	0
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	O/B	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	R/W	Combination switch output 1				
37	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage
					Intelligent Key inserted	0V
38	W/L	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0
					Glass hatch closed	Battery
43	R/B	Back door latch (door ajar switch)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

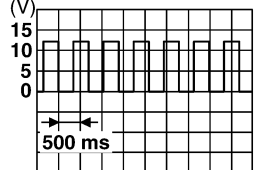
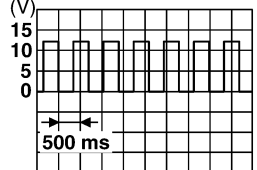
O

P

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

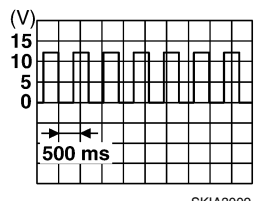
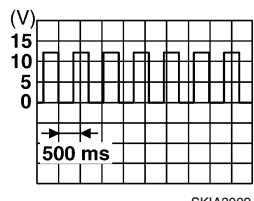
[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
44	O	Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	Battery voltage
					Forward sweep (counterclockwise direction)	Fluctuating
					B Position (full counterclockwise stop position)	0V
					Reverse sweep (clockwise direction)	Fluctuating
47	SB	Front door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
48	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
49	R	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage
51	G/Y	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
53	L/W	Glass hatch lock actuator	Output	OFF	Glass hatch switch released	0
					Glass hatch switch pressed	Battery
54	Y	Rear wiper output circuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V
					A Position (full clockwise stop position)	0V
					Forward sweep (counterclockwise direction)	0V
					B Position (full counterclockwise stop position)	Battery voltage
					Reverse sweep (clockwise direction)	Battery voltage
55	SB	Rear wiper output circuit 1	Output	ON	OFF	0
					ON	Battery voltage
56	R/G	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				ON	—	Battery voltage
57	Y/R	Battery power supply	Input	OFF	—	Battery voltage

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire color	Signal name	Signal input/output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
58	W/R	Optical sensor	Input	ON	When optical sensor is illuminated	3.1V or more
					When optical sensor is not illuminated	0.6V or less
59	G	Front door lock assembly LH actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	G/B	Turn signal (left)	Output	ON	Turn left ON	
61	G/Y	Turn signal (right)	Output	ON	Turn right ON	
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open)	0V
					OFF (all doors closed)	Battery voltage
63	L	Interior room/map lamp	Output	OFF	Any door switch	ON (open) 0V OFF (closed) Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	G/Y	Front door lock actuator RH, rear door lock actuators LH/RH and back door lock actuator (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V
68	W/L	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
					More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	W/R	Power window power supply	Output	—	—	Battery voltage
70	W/B	Battery power supply	Input	OFF	—	Battery voltage

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

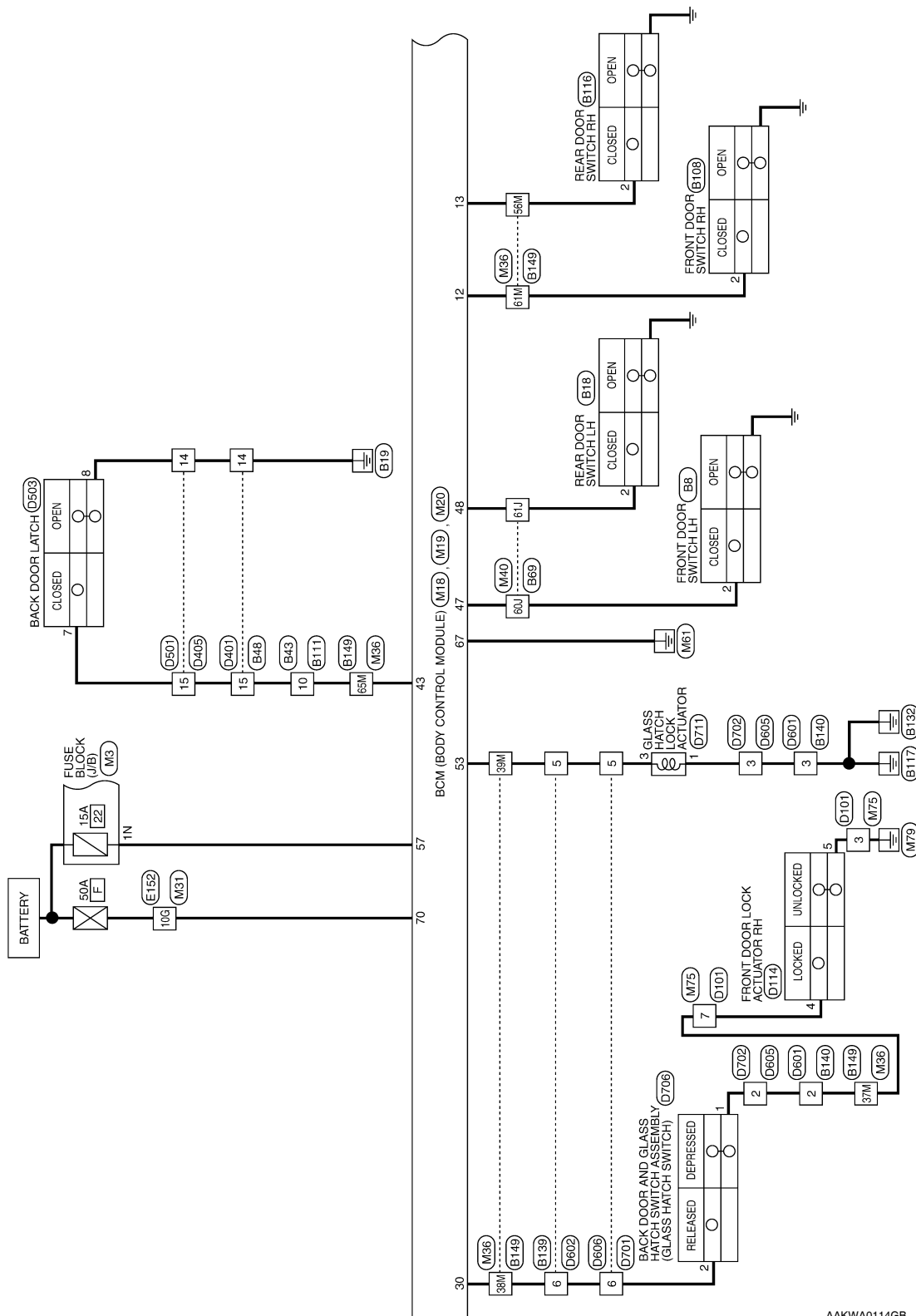
O

P

**[WITH INTELLIGENT KEY SYSTEM]**

## Wiring Diagram — POWER DOOR LOCK SYSTEM —

## POWER DOOR LOCK



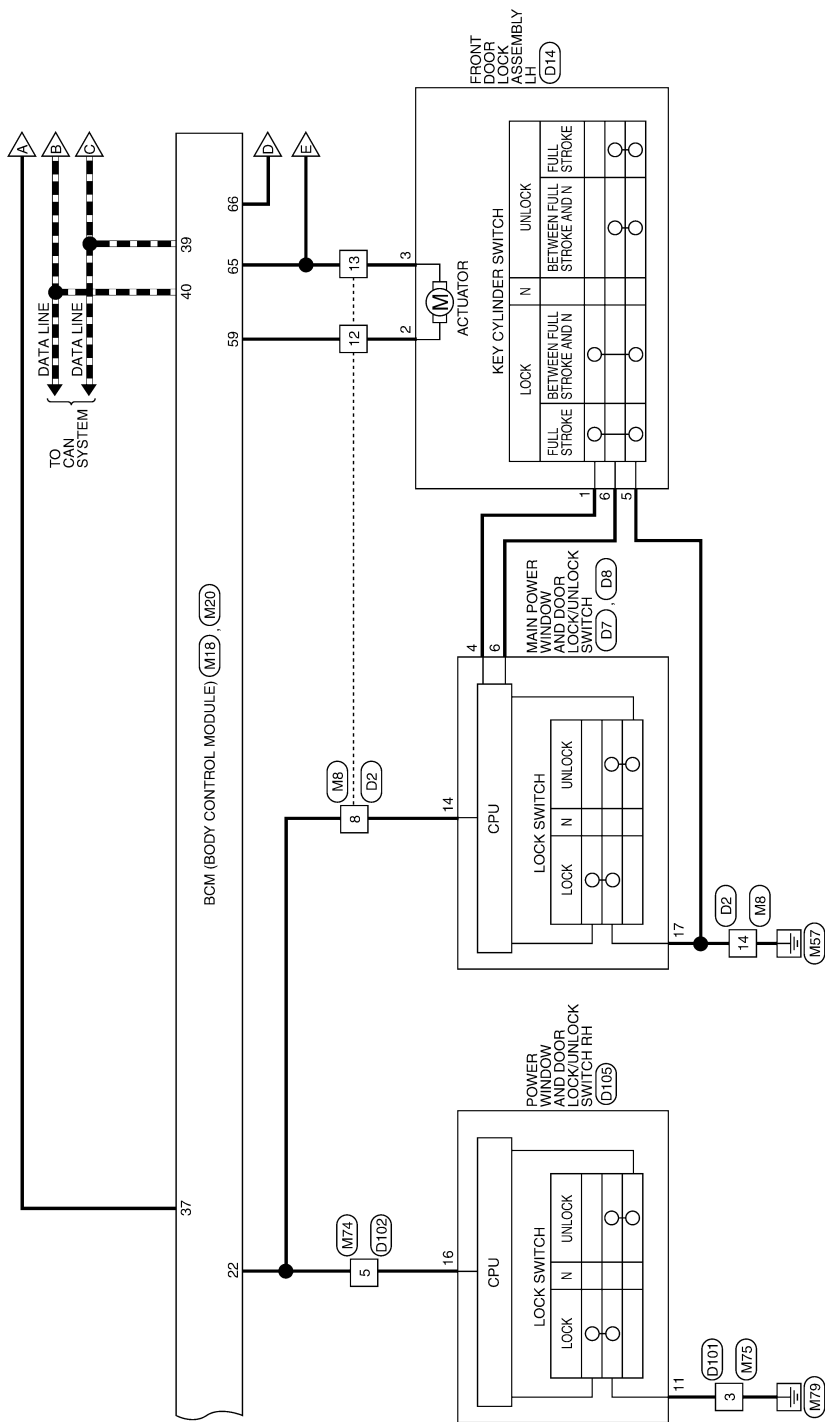
AAKWA0114GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

— : DATA LINE



AAKWA0115GB

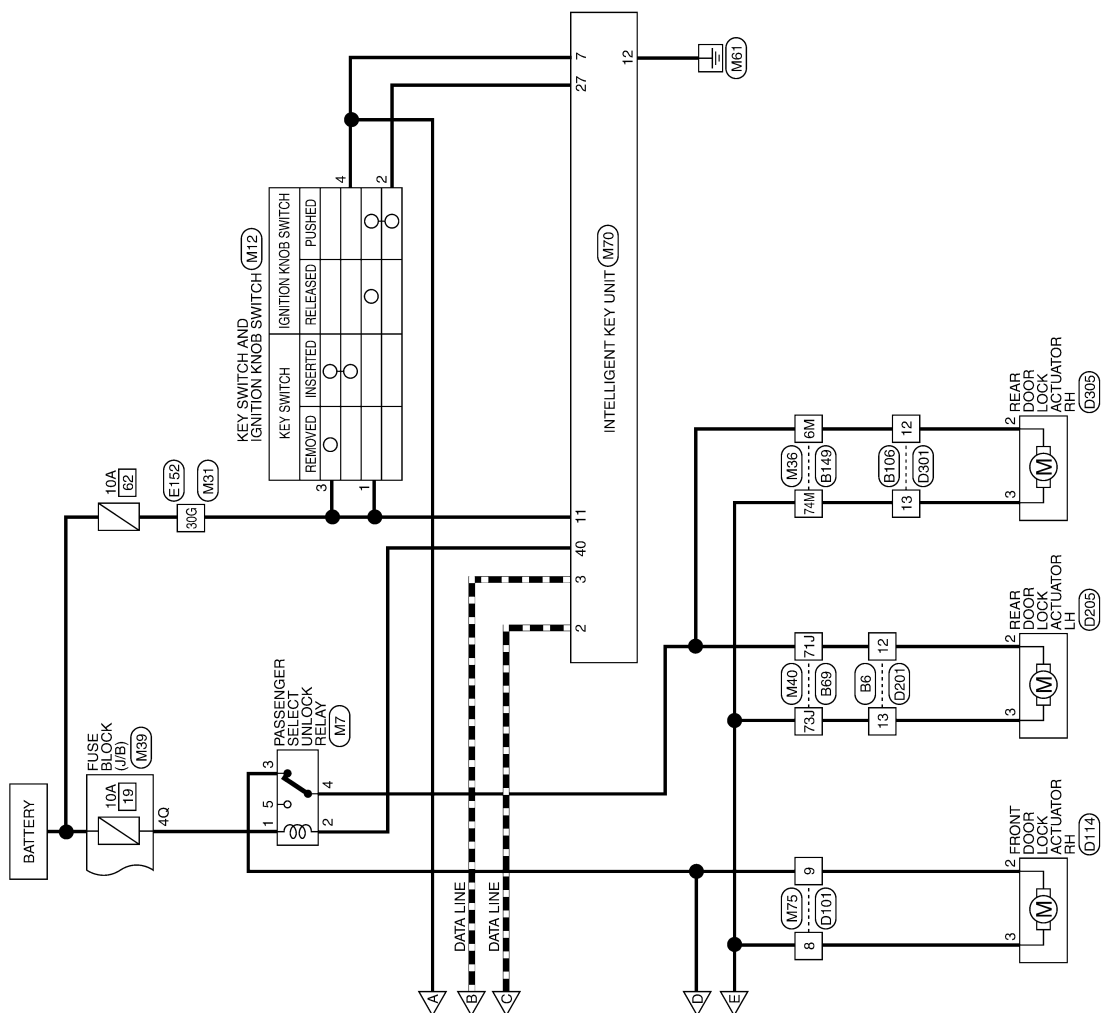
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

■ ■ ■ : DATA LINE



AAKWA0116GB



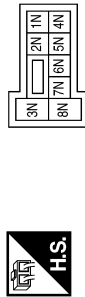
# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## POWER DOOR LOCK CONNECTORS

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



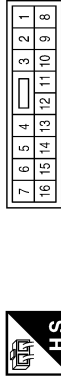
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

Connector No.	M7
Connector Name	PASSENGER SELECT UNLOCK RELAY
Connector Color	BLACK



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

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



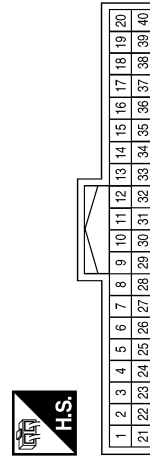
Terminal No.	Color of Wire	Signal Name
8	W/V	-
12	G	-
13	V	-
14	B	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



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

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



Terminal No.	Color of Wire	Signal Name
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)

Terminal No.	Color of Wire	Signal Name
22	W/V	ANTI-PINCH SERIAL LINK (RX, TX)
30	Y/BR	GLASS OPENER
37	B/R	KEY SW
39	L	CAN-H
40	P	CAN-L

AWKIA0134GB

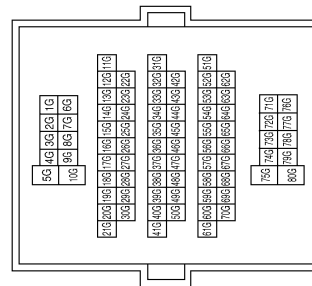
**[WITH INTELLIGENT KEY SYSTEM]**

Revision: March 2010

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

Terminal No.	Color of Wire	Signal Name
43	R/B	BACK_DOOR_SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)
53	L/W	GLASS ACTR

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



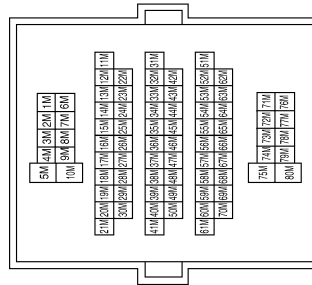
Terminal No.	Color of Wire	Signal Name
10G	W/B	-
30G	Y	-

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



Terminal No.	Color of Wire	Signal Name
57	Y/R	BAT
59	G	DOOR UNLOCK OUTPUT(DR)
65	V	DOOR LOCK OUTPUT(ALL)

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



Terminal No.	Color of Wire	Signal Name
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
70	W/B	BATT (F/L)

Terminal No.	Color of Wire	Signal Name
6M	G/Y	—
37M	L/O	—
38M	Y/BR	—
39M	L/W	—
56M	GR	—
61M	R/L	—
65M	R/B	—
74M	V	—

AWKIA0135GB

**[WITH INTELLIGENT KEY SYSTEM]**

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
OLK  
L  
M  
N  
O  
P

Terminal No.	Color of Wire	Signal Name
3	B	—
7	L/O	—
8	V	—
9	G/Y	—

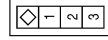
2008 QX56

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

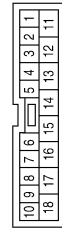
< ECU DIAGNOSIS >

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



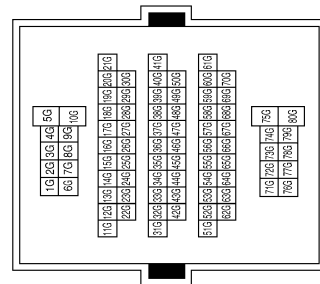
Terminal No.	Color of Wire	Signal Name
2	SB	—

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



Terminal No.	Color of Wire	Signal Name
12	G/Y	—
13	V	—

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



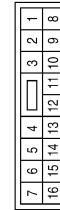
Terminal No.	Color of Wire	Signal Name
10G	W/B	—
30G	Y	—

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



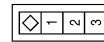
Terminal No.	Color of Wire	Signal Name
14	B	—
15	R/W	—

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



Terminal No.	Color of Wire	Signal Name
10	R/W	—

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



Terminal No.	Color of Wire	Signal Name
2	R/Y	—

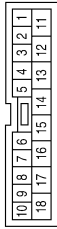
ALKIA0623GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

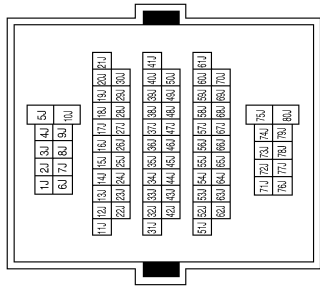
Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



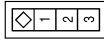
Terminal No.	Color of Wire	Signal Name
12	G/Y	—
13	V	—

Terminal No.	Color of Wire	Signal Name
60J	SB	—
61J	R/Y	—
71J	G/Y	—
73J	V	—

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

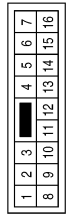


Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



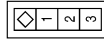
Terminal No.	Color of Wire	Signal Name
2	GR	—

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10	R/W	—

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



Terminal No.	Color of Wire	Signal Name
2	R/L	—

ALK1A0624GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE

1	2
3	4
5	6



Terminal No.	Color of Wire	Signal Name
2	L/O	-
3	B	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE

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



Terminal No.	Color of Wire	Signal Name
5	L/W	-
6	Y/BR	-

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

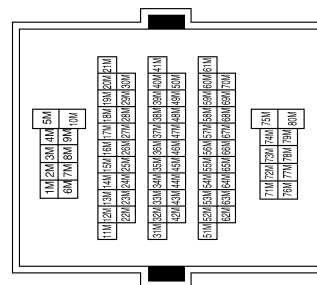


1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16					

Terminal No.	Color of Wire	Signal Name
8	LG/W	-
12	G	-
13	V	-
14	B	-

Terminal No.	Color of Wire	Signal Name
6M	G/Y	-
37M	L/O	-
38M	Y/BR	-
39M	L/W	-
56M	GR	-
61M	R/L	-
65M	R/W	-
74M	V	-

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



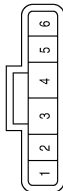
AWKIA0137GB

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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



Terminal No.	Color of Wire	Signal Name
1	L	LOCK
2	G	UNLOCK
3	V	LOCK
5	B	GND
6	R	UNLOCK

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE



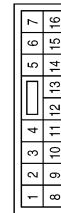
Terminal No.	Color of Wire	Signal Name
17	B	GND

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



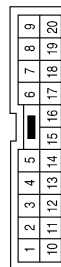
Terminal No.	Color of Wire	Signal Name
4	L	LOCK
6	R	UNLOCK
14	LG/W	ANTI_PINCH_SERIAL_LINK

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



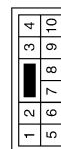
Terminal No.	Color of Wire	Signal Name
11	B	GND
16	LG/W	ANTI_PINCH_SERIAL_LINK

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



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

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



Terminal No.	Color of Wire	Signal Name
3	B	-
7	L/O	-
8	V	-
9	G/Y	-

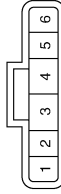
AWKIA0138GB

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

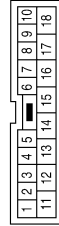
< ECU DIAGNOSIS >

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



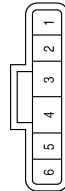
Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



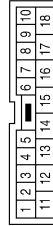
Terminal No.	Color of Wire	Signal Name
12	G/Y	–
13	V	–

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



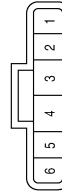
Terminal No.	Color of Wire	Signal Name
4	L/O	–
5	B	–

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



Terminal No.	Color of Wire	Signal Name
14	B	–
15	R/W	–

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



Terminal No.	Color of Wire	Signal Name
2	G/Y	UNLOCK
3	V	LOCK

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



Terminal No.	Color of Wire	Signal Name
12	G/Y	–
13	V	–

AWK1A0139GB



# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



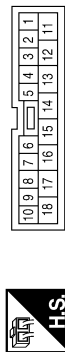
Terminal No.	Color of Wire	Signal Name
7	R/W	—
8	B	—

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



Terminal No.	Color of Wire	Signal Name
14	B	—
15	R/W	—

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



Terminal No.	Color of Wire	Signal Name
14	B	—
15	R/W	—

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	L/O	—
3	B	—

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	L/W	—
6	Y/BR	—

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	L/O	—
3	B	—

AWKIA0140GB

# BCM (BODY CONTROL MODULE)

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2
3	4
5	6

Terminal No.	Color of Wire	Signal Name
2	L/O	—
3	B	—

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L/W	—
6	Y/BR	—

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	L/W	—
6	Y/BR	—

Connector No.	D711
Connector Name	GLASS HATCH LOCK ACTUATOR
Connector Color	WHITE



2	1	3
4		

Terminal No.	Color of Wire	Signal Name
1	B	—
3	L/W	—

Connector No.	D706
Connector Name	BACK DOOR AND GLASS HATCH SWITCH ASSEMBLY
Connector Color	WHITE



4	3	2	1
---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	L/O	—
2	Y/BR	—

## Fail Safe

### Fail-safe index

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

AAKIA0177GB

INFOID:000000004884074

# BCM (BODY CONTROL MODULE)

< 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.
U1010: CONTROL UNIT (CAN)	Inhibit engine cranking	When the BCM re-start communicating with the other modules.

## DTC Inspection Priority Chart

INFOID:000000004884075

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

Priority	DTC
1	<ul style="list-style-type: none"><li>• U1000: CAN COMM CIRCUIT</li><li>• U1010: CONTROL UNIT (CAN)</li></ul>
2	<ul style="list-style-type: none"><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>
3	<ul style="list-style-type: none"><li>• C1729: VHCL SPEED SIG ERR</li><li>• C1735: IGNITION SIGNAL</li></ul>
4	<ul style="list-style-type: none"><li>• C1704: LOW PRESSURE FL</li><li>• C1705: LOW PRESSURE FR</li><li>• C1706: LOW PRESSURE RR</li><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><li>• C1712: [CHECKSUM ERR] FL</li><li>• C1713: [CHECKSUM ERR] FR</li><li>• C1714: [CHECKSUM ERR] RR</li><li>• C1715: [CHECKSUM ERR] RL</li><li>• C1716: [PRESSDATA ERR] FL</li><li>• C1717: [PRESSDATA ERR] FR</li><li>• C1718: [PRESSDATA ERR] RR</li><li>• C1719: [PRESSDATA ERR] RL</li><li>• C1720: [CODE ERR] FL</li><li>• C1721: [CODE ERR] FR</li><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><li>• C1726: [BATT VOLT LOW] RR</li><li>• C1727: [BATT VOLT LOW] RL</li></ul>

## DTC Index

INFOID:000000004884076

### 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)

< ECU DIAGNOSIS >

[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	—	—	—	<a href="#">BCS-30</a>
U1010: CONTROL UNIT (CAN)	—	—	—	<a href="#">BCS-31</a>
B2190: NATS ANTENNA AMP	—	—	—	<a href="#">SEC-29</a>
B2191: DIFFERENCE OF KEY	—	—	—	<a href="#">SEC-32</a>
B2192: ID DISCORD BCM-ECM	—	—	—	<a href="#">SEC-33</a>
B2193: CHAIN OF BCM-ECM	—	—	—	<a href="#">SEC-35</a>
B2552: INTELLIGENT KEY	—	—	—	<a href="#">SEC-37</a>
B2590: NATS MALFUNCTION	—	—	—	<a href="#">SEC-38</a>
C1704: LOW PRESSURE FL	—	—	—	<a href="#">WT-31</a>
C1705: LOW PRESSURE FR	—	—	—	<a href="#">WT-31</a>
C1706: LOW PRESSURE RR	—	—	—	<a href="#">WT-31</a>
C1707: LOW PRESSURE RL	—	—	—	<a href="#">WT-31</a>
C1708: [NO DATA] FL	—	—	—	<a href="#">WT-14</a>
C1709: [NO DATA] FR	—	—	—	<a href="#">WT-14</a>
C1710: [NO DATA] RR	—	—	—	<a href="#">WT-14</a>
C1711: [NO DATA] RL	—	—	—	<a href="#">WT-14</a>
C1712: [CHECKSUM ERR] FL	—	—	—	<a href="#">WT-16</a>
C1713: [CHECKSUM ERR] FR	—	—	—	<a href="#">WT-16</a>
C1714: [CHECKSUM ERR] RR	—	—	—	<a href="#">WT-16</a>
C1715: [CHECKSUM ERR] RL	—	—	—	<a href="#">WT-16</a>
C1716: [PRESSDATA ERR] FL	—	—	—	<a href="#">WT-18</a>
C1717: [PRESSDATA ERR] FR	—	—	—	<a href="#">WT-18</a>
C1718: [PRESSDATA ERR] RR	—	—	—	<a href="#">WT-18</a>
C1719: [PRESSDATA ERR] RL	—	—	—	<a href="#">WT-18</a>
C1720: [CODE ERR] FL	—	—	—	<a href="#">WT-16</a>
C1721: [CODE ERR] FR	—	—	—	<a href="#">WT-16</a>
C1722: [CODE ERR] RR	—	—	—	<a href="#">WT-16</a>
C1723: [CODE ERR] RL	—	—	—	<a href="#">WT-16</a>
C1724: [BATT VOLT LOW] FL	—	—	—	<a href="#">WT-16</a>
C1725: [BATT VOLT LOW] FR	—	—	—	<a href="#">WT-16</a>
C1726: [BATT VOLT LOW] RR	—	—	—	<a href="#">WT-16</a>
C1727: [BATT VOLT LOW] RL	—	—	—	<a href="#">WT-16</a>
C1729: VHCL SPEED SIG ERR	—	—	—	<a href="#">WT-19</a>
C1735: IGNITION SIGNAL	—	—	—	<a href="#">WT-20</a>

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

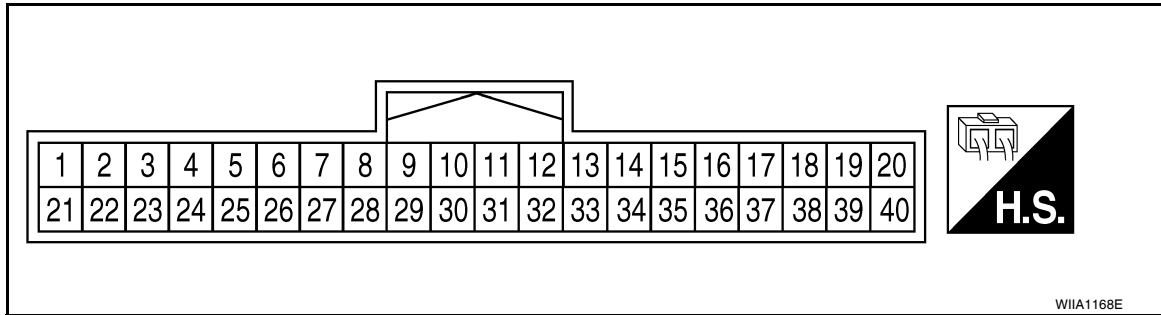
[WITH INTELLIGENT KEY SYSTEM]

## INTELLIGENT KEY UNIT

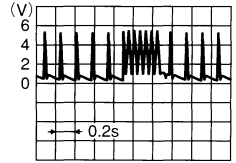
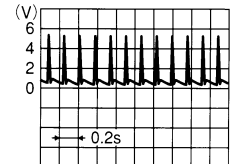
Reference Value - Intelligent Key Unit

INFOID:000000001539057

### TERMINAL LAYOUT



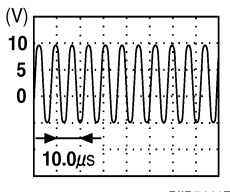
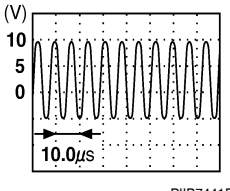
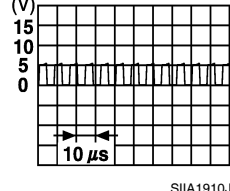
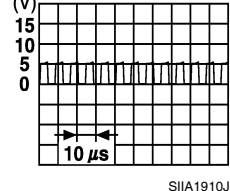
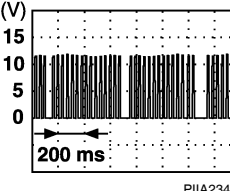
### PHYSICAL VALUES

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
1	L/Y	Steering lock solenoid power supply	LOCK	—	5
2	L	CAN-H	—	—	—
3	P	CAN-L	—	—	—
4	GR	Intelligent Key warning buzzer (front of vehicle)	LOCK	Operate door request switch.	Buzzer OFF Battery voltage
				Buzzer ON	0
5	B/W	Front door request switch LH	—	Press front door request switch LH.	0
				Other than above	Battery voltage
6	G/R	Ignition switch (ON)	ON	—	Battery voltage
7	B/R	Key switch	LOCK	Insert mechanical key into ignition key cylinder.	Battery voltage
				Remove mechanical key from ignition key cylinder.	0
8	G	Remote keyless entry receiver ground	—	—	0
9	GR	Remote keyless entry receiver signal	—	When remote keyless entry receiver receives signal from keyfob.	
				Stand-by	
11	Y	Power source (Fuse)	—	—	Battery voltage
12	B	Ground	—	—	0

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

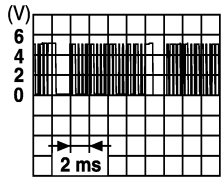
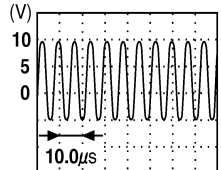
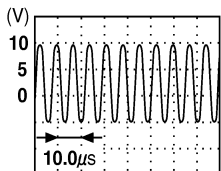
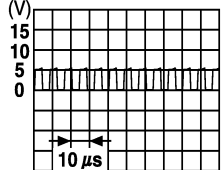
[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
13	B/W	Inside key antenna 3 (front of center console) (+) signal	LOCK	Any door open → all doors closed	
14	W/G	Inside key antenna 3 (front of center console) (-) signal			
15	G	Inside key antenna 1 (rear of center console) (+) signal	LOCK	Any door open → all doors closed	
16	L	Inside key antenna 1 (rear of center console) (-) signal			
17	P	Rear bumper antenna (+) signal	LOCK	Lift back door handle (close switch).	
18	W/R	Rear bumper antenna (-) signal			
19	P	Front outside antenna LH (+) signal	LOCK	Press front door request switch LH.	
20	V	Front outside antenna LH (-) signal			
21	B/W	Remote keyless entry receiver RSSI signal	—	—	
23	L/W	Power back door output	—	Power liftgate switch ON.	0
				Power liftgate switch OFF.	Battery voltage
25	P/L	Front door request switch RH	—	Press front door request switch RH.	0
				Other than above	Battery voltage
27	R/B	Ignition knob switch	—	Press ignition switch.	Battery voltage
				Return ignition switch to LOCK position.	0
28	R	Unlock sensor (driver side)	—	Door (driver side) is locked.	5
				Door (driver side) is unlocked.	0
29	LG/W	Back door open switch input	—	Back door handle switch ON.	0
				Back door handle switch OFF.	Battery voltage

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition		Voltage (V) Approx.
			Ignition Switch Position	Operation or Conditions	
30	G/B	Remote keyless entry receiver power supply	—	—	5
32	L/O	Steering lock solenoid communication signal	LOCK	When Intelligent Key is inside vehicle, press ignition knob switch.	 SIIA1911J
				Other than above	5
33	W	Rear parcel shelf antenna (+) signal	LOCK	Press ignition knob switch: ON (Ignition knob switch)	 PIIB7441E
34	BR	Rear parcel shelf antenna (-) signal			
35	O	Inside key antenna 2 (luggage compartment) (+) signal	LOCK	Back door open → all doors closed	 PIIB7441E
36	R	Inside key antenna 2 (luggage compartment) (-) signal			
37	LG	Front outside antenna (+) signal RH	LOCK	Press front door request switch RH.	 SIIA1910J
38	B/Y	Front outside antenna (-) signal RH			
39	L/R	P range switch	—	A/T shift selector lever is in "P" position.	0
				Other than above	Battery voltage
40	V	AS select unlock output	—	UNLOCK with rear door locks disabled.	0
				Other than above	Battery voltage

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# INTELLIGENT KEY UNIT

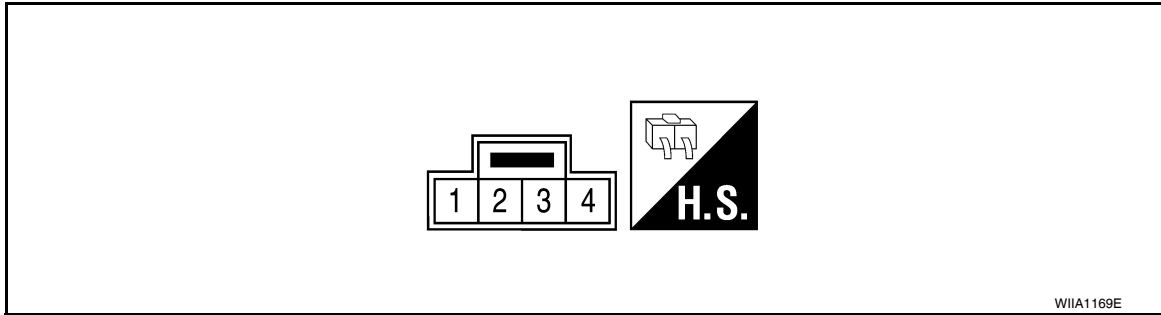
< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Reference Value - Steering Lock Solenoid

INFOID:000000001539058

### TERMINAL LAYOUT



### PHYSICAL VALUES

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

SIIA1911J



INTELLIGENT KEY UNIT

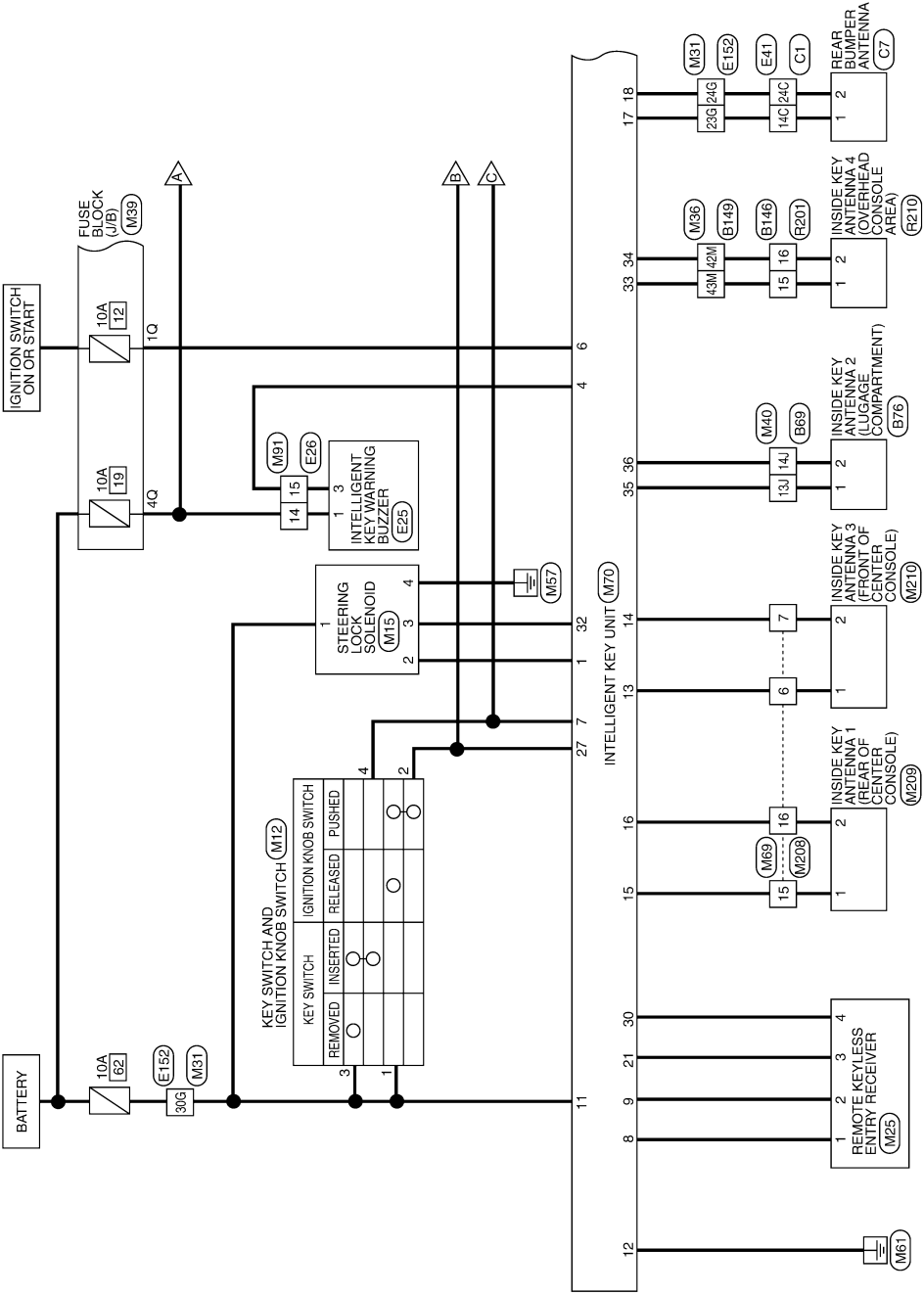
< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Wiring Diagram — INTELLIGENT KEY SYSTEM —

INFOID:000000001539059

INTELLIGENT KEY SYSTEM

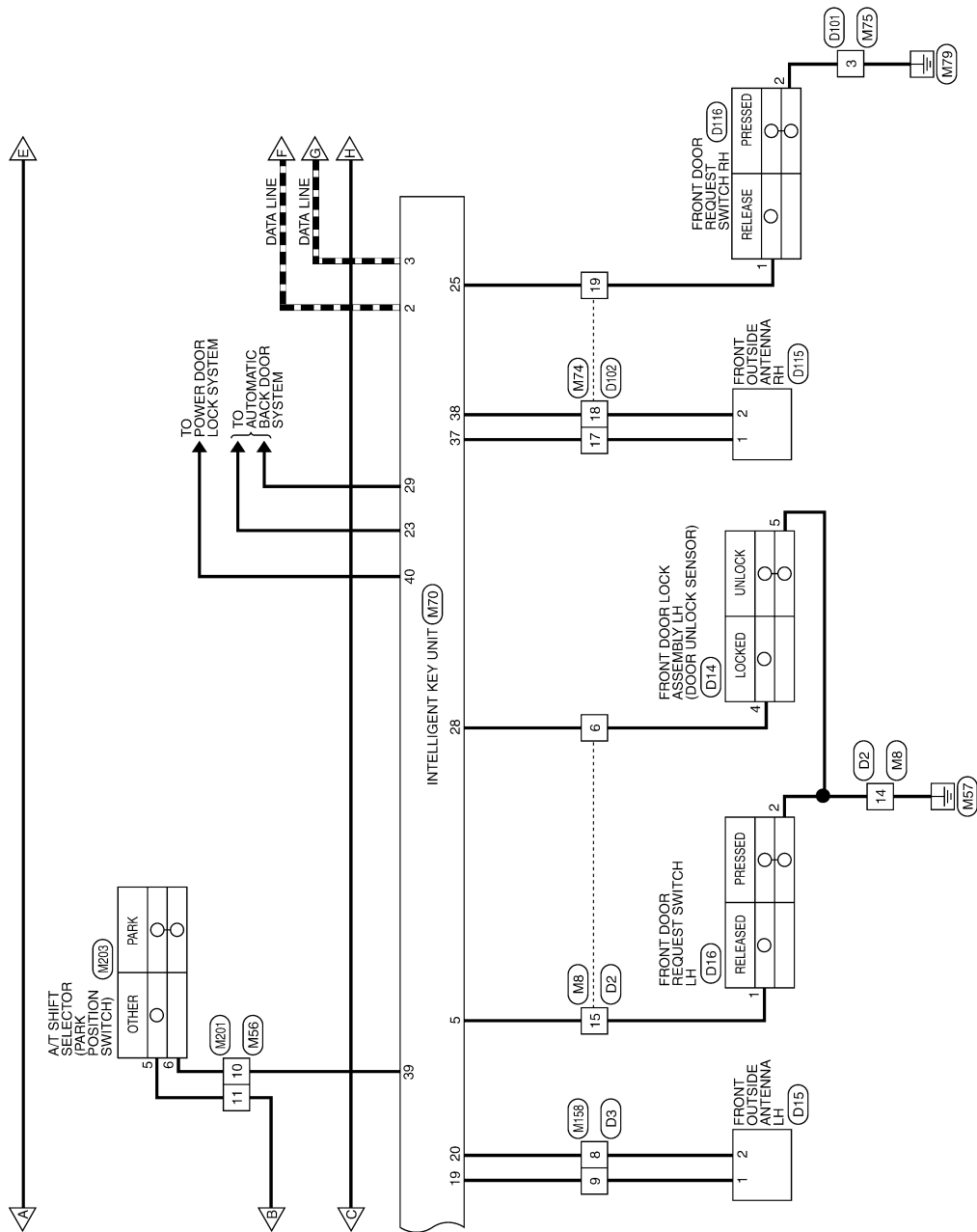


ALKWA0069GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

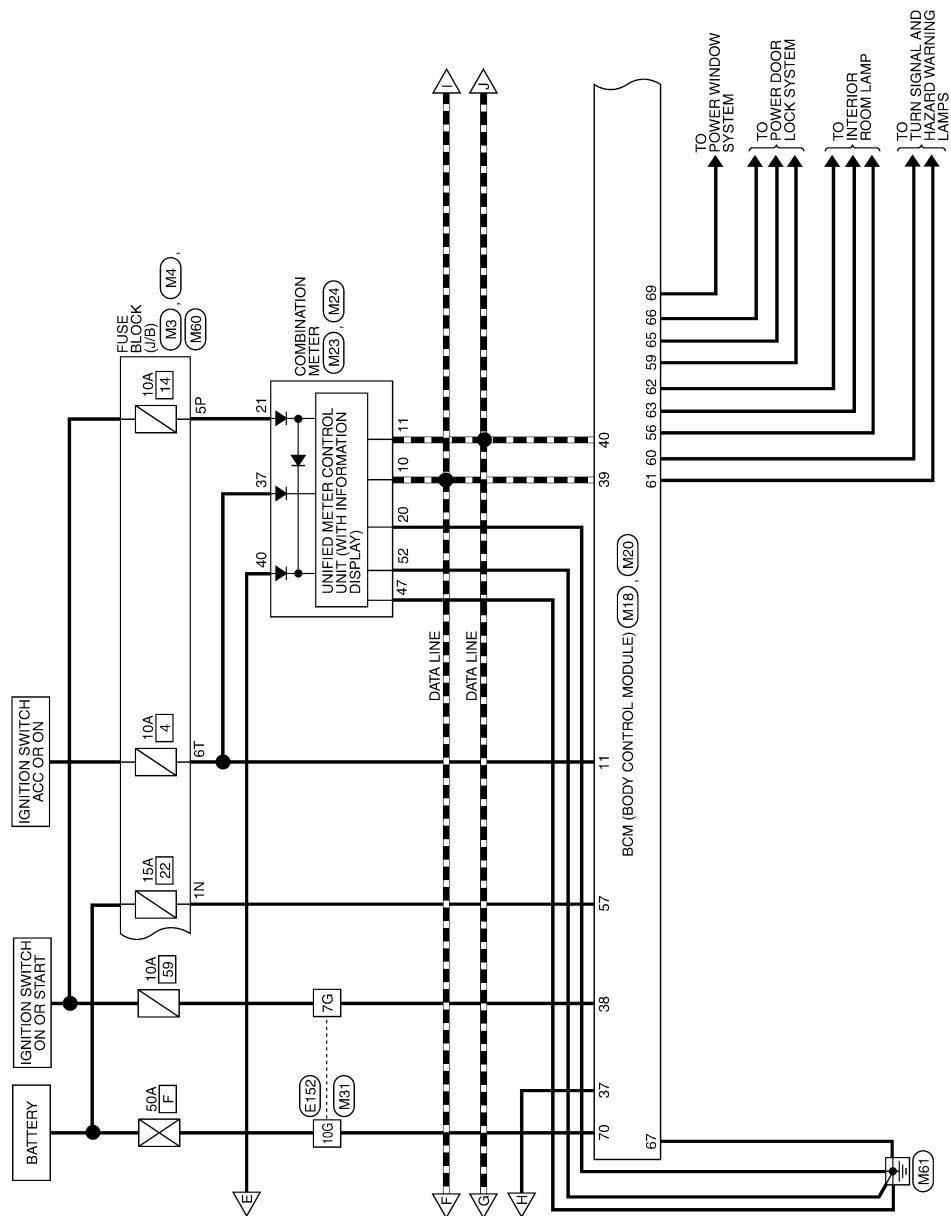
**[WITH INTELLIGENT KEY SYSTEM]**

█ : DATA LINE



2008 QX56

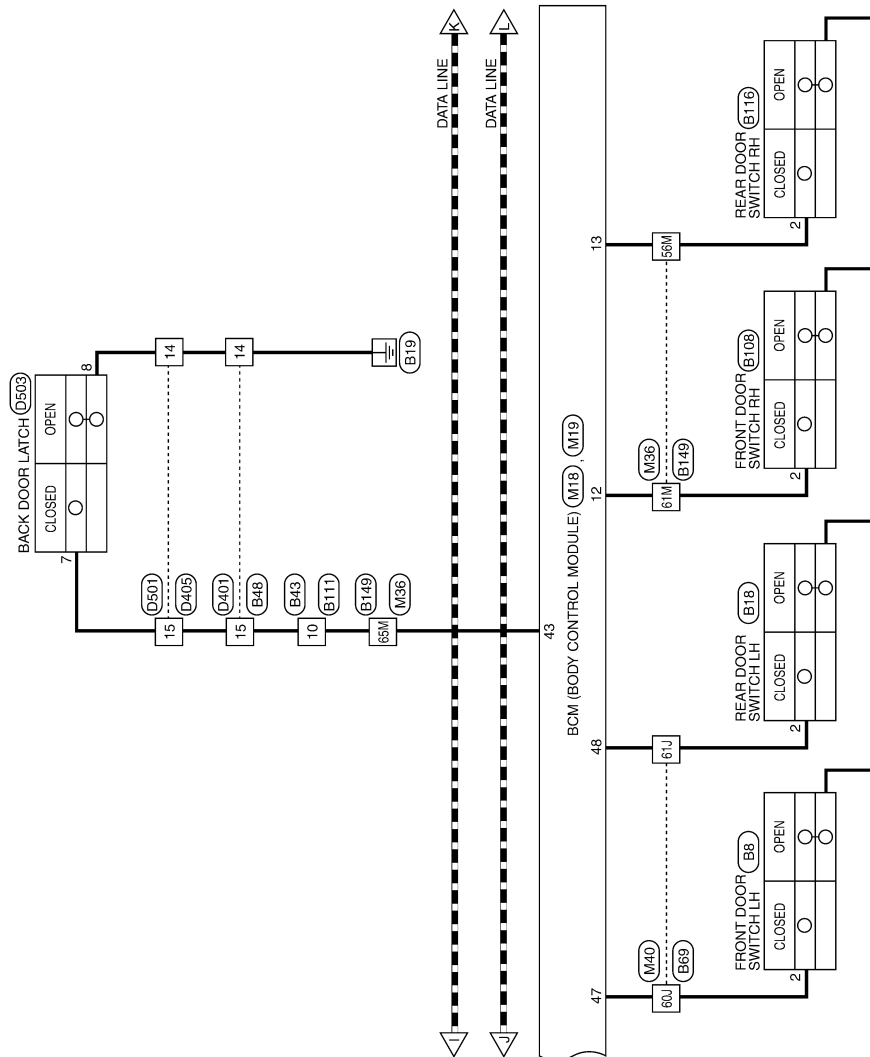
**[WITH INTELLIGENT KEY SYSTEM]**

DATA LINE: 

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

**[WITH INTELLIGENT KEY SYSTEM]**

■ : DATA LINE



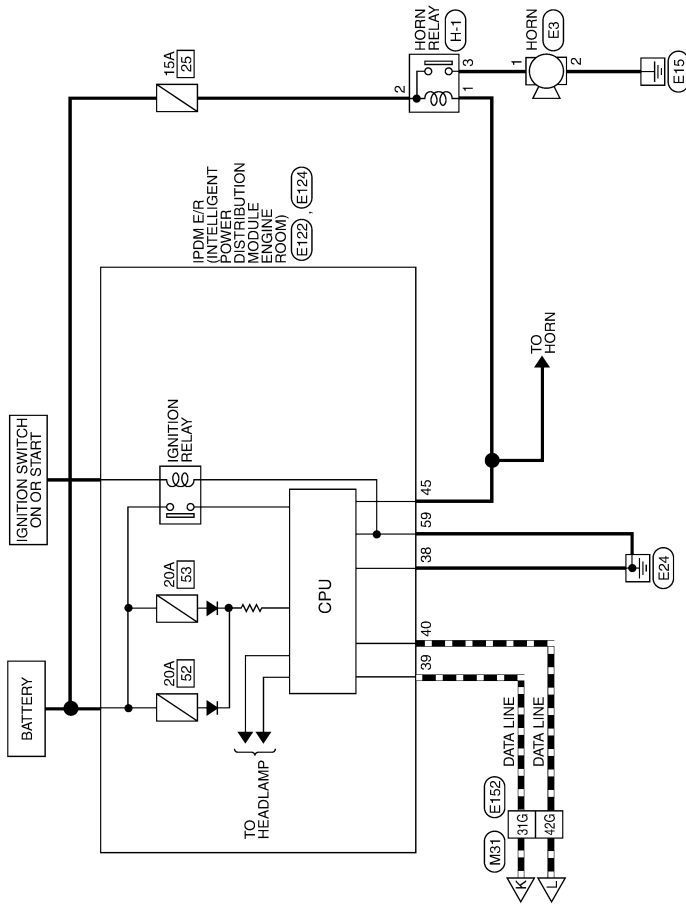
2008 QX56

INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

— : DATA LINE



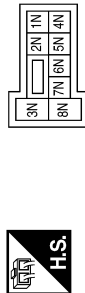
ALKWA0073GB

DLK

DLK

## INTELLIGENT KEY SYSTEM CONNECTORS

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



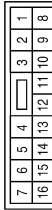
Terminal No.	Color of Wire	Signal Name
1N	Y/R	-

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



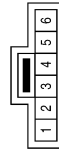
Terminal No.	Color of Wire	Signal Name
5P	O/L	-

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



Terminal No.	Color of Wire	Signal Name
6	R	-
14	B	-
15	B/W	-

Connector No.	M12
Connector Name	KEY SWITCH AND IGNITION KNOB SWITCH
Connector Color	GRAY



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

Connector No.	M15
Connector Name	STEERING LOCK SOLENOID
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/Y	B+
2	L/Y	5V_PWR
3	L/O	SIG
4	B	GND

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

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



Terminal No.	Color of Wire	Signal Name
43	R/B	BACK_DOOR_SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

Terminal No.	Color of Wire	Signal Name
11	O	ACC SW
12	R/L	DOOR SW (AS)
13	GR	DOOR SW (RR)
37	B/R	KEY SW
38	W/L	IGN SW
39	L	CAN-H
40	P	CAN-L

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

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



Terminal No.	Color of Wire	Signal Name
69	W/R	POWER WINDOW POWER SUPPLY OUTPUT (BAT)
70	W/B	BATT (F/L)

Terminal No.	Color of Wire	Signal Name
59	G	DOOR UNLOCK OUTPUT (DR)
60	G/B	FLASHER OUTPUT (LEFT)
61	G/Y	FLASHER OUTPUT (RIGHT)
62	R/W	STEP LAMP OUTPUT
63	L	ROOM LAMP OUTPUT
65	V	DOOR LOCK OUTPUT (ALL)
66	G/Y	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)

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

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



Terminal No.	Color of Wire	Signal Name
56	R/G	BATTERY SAVER OUTPUT
57	Y/R	BAT

ALKIA0608GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

DLK

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
10	L	CAN-H
11	P	CAN-L
20	B	-
21	O/L	-
37	O	-
40	Y/R	-

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



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

Connector No.	M23
Connector Name	COMBINATION METER
Connector Color	WHITE

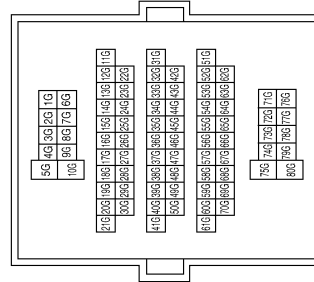


46	45	44	43	42	41
52	51	50	49	48	47

Terminal No.	Color of Wire	Signal Name
47	B	-
52	B	-

Terminal No.	Color of Wire	Signal Name
7G	W/L	-
10G	W/B	-
23G	W/L	-
24G	W/R	-
30G	Y	-
31G	L	-
42G	P	-

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



Connector No.	M25
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK



1	2	3	4
---	---	---	---

Terminal No.	Color of Wire	Signal Name
1	G	GND
2	GR	SIG
3	B/W	RSSI
4	G/B	5V

AWKIA0142GB



INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

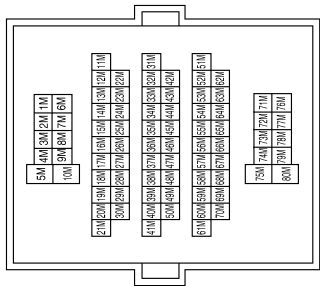


3Q	2Q	1Q
8Q	7Q	6Q
5Q	4Q	3Q

Terminal No.	Color of Wire	Signal Name
1Q	G/R	-
4Q	Y/R	-

Terminal No.	Color of Wire	Signal Name
42M	BR	-
43M	W	-
56M	GR	-
61M	R/L	-
65M	R/B	-

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



Connector No.	M56
Connector Name	WIRE TO WIRE
Connector Color	WHITE

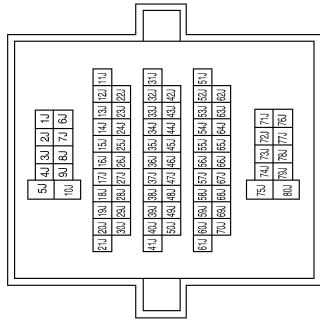


1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

Terminal No.	Color of Wire	Signal Name
10	L/R	-
11	R/B	-

Terminal No.	Color of Wire	Signal Name
13J	O	-
14J	R	-
60J	SB	-
61J	R/Y	-

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



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	BROWN

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



Terminal No.	Color of Wire	Signal Name
6	B/W	-
7	W/G	-
15	G	-
16	L	-

Connector No.	M60
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

2T	<input type="text"/>	1T	
6T	5T	4T	3T



Terminal No.	Color of Wire	Signal Name
6T	O	-

Terminal No.	Color of Wire	Signal Name
29	LG/W	BK_DR_OP_SW_INP
30	G/B	RF_TUNER_5V_OUT
32	L/O	STRG_LOCK_SIG
33	W	RM_ANT_O/H_CNSL+
34	BR	RM_ANT_O/H_CNSL-
35	O	RM_ANT_LUGGAGE+
36	R	RM_ANT_LUGGAGE-
37	LG	AS_ANTENNA (+)
38	B/Y	AS_ANTENNA (-)
39	L/R	P_RANGE_SW
40	V	AS_SEL_UNLOCK_OUT

Terminal No.	Color of Wire	Signal Name
8	G	RF_TUNER_GND
9	GR	RF_TUNER_SIG
11	Y	BAT
12	B	GND
13	B/W	RM_ANT_FR_CNSL+
14	W/G	RM_ANT_FR_CNSL-
15	G	RM_ANT_RR_CNSL+
16	L	RM_ANT_RR_CNSL-
17	W/L	BACK_DOOR_ANT+
18	W/R	BACK_DOOR_ANT-
19	P	DR_ANTENNA (+)
20	V	DR_ANTENNA (-)
21	B/W	RF_TUNER_RSSI
23	L/W	PBD_OUTPUT
25	P/L	AS_REQUEST_SW
27	R/B	PUSH_SW_INPUT
28	R	DR_STATUS_SW_INPUT

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
1	L/Y	STRG_5V_POWER
2	L	CAN-H
3	P	CAN-L
4	GR	OUTSIDE_BUZZER_OUT
5	B/W	DR_REQUEST_SW
6	G/R	IGN_SW_INPUT
7	B/R	KEY_SW_INPUT

ALKIA0611GB

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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



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

Terminal No.	Color of Wire	Signal Name
14	Y/R	—
15	GR	—

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



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

Terminal No.	Color of Wire	Signal Name
3	B	—

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



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

Terminal No.	Color of Wire	Signal Name
17	LG	—
18	B/Y	—
19	P/L	—

Connector No.	M203
Connector Name	A/T SHIFT SELECTOR
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
5	R/B	—
6	L/R	—

Connector No.	M201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	L/R	—
11	R/B	—

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
8	V	—
9	P	—

ABKIA2566GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M210
Connector Name	INSIDE KEY ANTENNA 3 (FRONT OF CENTER CONSOLE)
Connector Color	GRAY



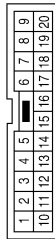
Terminal No.	Color of Wire	Signal Name
1	B/W	-
2	W/G	-

Connector No.	M209
Connector Name	INSIDE KEY ANTENNA 1 (REAR OF CENTER CONSOLE)
Connector Color	WHITE



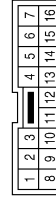
Terminal No.	Color of Wire	Signal Name
1	G	-
2	L	-

Connector No.	M208
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
6	B/W	-
7	W/G	-
15	G	-
16	L	-

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



Terminal No.	Color of Wire	Signal Name
14	Y/R	-
15	GR	-

Connector No.	E25
Connector Name	INTELLIGENT KEY WARNING BUZZER
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	Y/R	-
3	GR	-

Connector No.	E3
Connector Name	HORN
Connector Color	BLACK



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

AAKIA0178GB

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

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



59	58	57
62	61	60

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

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIG)
39	L	CAN-H
40	P	CAN-L
45	G/W	ANTI_THEFT_HORN

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



1C	2C	3C	4C	5C					
6C	7C	8C	9C	10C	11C				
12C	13C	14C	15C	16C	17C	18C	19C	20C	21C
22C	23C	24C	25C	26C	27C	28C	29C	30C	31C
32C	33C	34C	35C	36C	37C	38C	39C	40C	41C
42C	43C	44C	45C	46C	47C	48C	49C	50C	51C

Terminal No.	Color of Wire	Signal Name
14C	P	-
24C	W/R	-

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



5C	4C	3C	2C	1C					
11C	10C	9C	8C	7C	6C				
21C	20C	19C	18C	17C	16C	15C	14C	13C	12C
31C	30C	29C	28C	27C	26C	25C	24C	23C	22C
41C	40C	39C	38C	37C	36C	35C	34C	33C	32C
47C	46C	45C	44C	43C	42C	41C	40C	39C	38C
52C	51C	50C	49C	48C	47C	46C	45C	44C	43C

Terminal No.	Color of Wire	Signal Name
14C	P	-
24C	W/R	-

Terminal No.	Color of Wire	Signal Name
7G	L/W	-
10G	W/B	-
23G	P	-
24G	W/R	-
30G	Y	-
31G	L	-
42G	P	-

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



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

11G	12G	13G	14G	15G	16G	17G	18G	19G	20G	21G
22G	23G	24G	25G	26G	27G	28G	29G	30G	31G	32G
33G	34G	35G	36G	37G	38G	39G	40G	41G	42G	43G
44G	45G	46G	47G	48G	49G	50G	51G	52G	53G	54G
55G	56G	57G	58G	59G	60G	61G	62G	63G	64G	65G
66G	67G	68G	69G	70G	71G	72G	73G	74G	75G	76G
77G	78G	79G	80G	81G	82G	83G	84G	85G	86G	87G
88G	89G	90G	91G	92G	93G	94G	95G	96G	97G	98G
99G	100G	101G	102G	103G	104G	105G	106G	107G	108G	109G
110G	111G	112G	113G	114G	115G	116G	117G	118G	119G	120G
121G	122G	123G	124G	125G	126G	127G	128G	129G	130G	131G
132G	133G	134G	135G	136G	137G	138G	139G	140G	141G	142G
143G	144G	145G	146G	147G	148G	149G	150G	151G	152G	153G
154G	155G	156G	157G	158G	159G	160G	161G	162G	163G	164G
165G	166G	167G	168G	169G	170G	171G	172G	173G	174G	175G
176G	177G	178G	179G	180G	181G	182G	183G	184G	185G	186G
187G	188G	189G	190G	191G	192G	193G	194G	195G	196G	197G
198G	199G	200G	201G	202G	203G	204G	205G	206G	207G	208G
209G	210G	211G	212G	213G	214G	215G	216G	217G	218G	219G
220G	221G	222G	223G	224G	225G	226G	227G	228G	229G	230G
231G	232G	233G	234G	235G	236G	237G	238G	239G	240G	241G
242G	243G	244G	245G	246G	247G	248G	249G	250G	251G	252G
253G	254G	255G	256G	257G	258G	259G	260G	261G	262G	263G
264G	265G	266G	267G	268G	269G	270G	271G	272G	273G	274G
275G	276G	277G	278G	279G	280G	281G	282G	283G	284G	285G
286G	287G	288G	289G	290G	291G	292G	293G	294G	295G	296G
297G	298G	299G	300G	301G	302G	303G	304G	305G	306G	307G
308G	309G	310G	311G	312G	313G	314G	315G	316G	317G	318G
319G	320G	321G	322G	323G	324G	325G	326G	327G	328G	329G
330G	331G	332G	333G	334G	335G	336G	337G	338G	339G	340G
341G	342G	343G	344G	345G	346G	347G	348G	349G	350G	351G
352G	353G	354G	355G	356G	357G	358G	359G	360G	361G	362G
363G	364G	365G	366G	367G	368G	369G	370G	371G	372G	373G
374G	375G	376G	377G	378G	379G	380G	381G	382G	383G	384G
385G	386G	387G	388G	389G	390G	391G	392G	393G	394G	395G
396G	397G	398G	399G	400G	401G	402G	403G	404G	405G	406G
407G	408G	409G	410G	411G	412G	413G	414G	415G	416G	417G
418G	419G	420G	421G	422G	423G	424G	425G	426G	427G	428G
429G	430G	431G	432G	433G	434G	435G	436G	437G	438G	439G
440G	441G	442G	443G	444G	445G	446G	447G	448G	449G	450G
451G	452G	453G	454G	455G	456G	457G	458G	459G	460G	461G
462G	463G	464G	465G	466G	467G	468G	469G	470G	471G	472G
473G	474G	475G	476G	477G	478G	479G	480G	481G	482G	483G
484G	485G	486G	487G	488G	489G	490G	491G	492G	493G	494G
495G	496G	497G	498G	499G	500G	501G	502G	503G	504G	505G
506G	507G	508G	509G	510G	511G	512G	513G	514G	515G	516G
517G	518G	519G	520G	521G	522G	523G	524G	525G	526G	527G
528G	529G	530G	531G	532G	533G	534G	535G	536G	537G	538G
539G	540G	541G	542G	543G	544G	545G	546G	547G	548G	549G
550G	551G	552G	553G	554G	555G	556G	557G	558G	559G	560G
561G	562G	563G	564G	565G	566G	567G	568G	569G	570G	571G
572G	573G	574G	575G	576G	577G	578G	579G	580G	581G	582G
583G	584G	585G	586G	587G	588G	589G	590G	591G	592G	593G
594G	595G	596G	597G	598G	599G	600G	601G	602G	603G	604G
605G	606G	607G	608G	609G	610G	611G	612G	613G	614G	615G
616G	617G	618G	619G	620G	621G	622G	623G	624G	625G	626G
627G	628G	629G	630G	631G	632G	633G	634G	635G	636G	637G
638G	639G	640G	641G	642G	643G	644G	645G	646G	647G	648G
649G	650G	651G	652G	653G	654G	655G	656G	657G	658G	659G
660G	661G	662G	663G	664G	665G	666G	667G	668G	669G	670G
671G	672G	673G	674G	675G	676G	677G	678G	679G	680G	681G
682G	683G	684G	685G	686G	687G	688G	689G	690G	691G	692G
693G	694G	695G	696G	697G	698G	699G	700G	701G	702G	703G
704G	705G	706G	707G	708G	709G	710G	711G	712G	713G	714G
715G	716G	717G	718G	719G	720G	721G	722G	723G	724G	725G
726G	727G	728G	729G	730G	731G	732G	733G	734G	735G	736G
737G	738G	739G	740G	741G	742G	743G	744G	745G	746G	747G
748G	749G	750G	751G	752G	753G	754G	755G	756G	757G	758G
759G	760G	761G	762G	763G	764G	765G	766G	767G	768G	769G
770G	771G	772G	773G	774G	775G	776G	777G	778G	779G	780G
781G	782G	783G	784G	785G	786G	787G	788G	789G	790G	791G
792G	793G	794G	795G	796G	797G	798G	799G	800G	801G	802G
803G	804G	805G	806G	807G	808G	809G	810G	811G	812G	813G
814G	815G	816G	817G	818G	819G	820G	821G	822G	823G	824G
825G	826G	827G	828G	829G	830G	831G	832G	833G	834G	835G
836G	837G	838G	839G	840G	841G	842G	843G	844G	845G	846G
847G	848G	849G	850G	851G	852G	853G	854G	855G	856G	857G
858G	859G	860G	861G	862G	863G	864G	865G	866G	867G	868G
869G	870G	871G	872G	873G	874G	875G	876G	877G	878G	879G
880G	881G	882G	883G	884G	885G	886G	887G	888G	889G	890G
891G	892G	893G	894G	895G	896G	897G	898G	899G	900G	901G
902G	903G	904G	905G	906G	907G	908G	909G	910G	911G	912G
913G	914G	915G	916G	917G	918G	919G	920G	921G	922G	923G
924G	925G	926G	927G	928G	929G	930G	931G	932G	933G	934G
935G	936G	937G	938G	939G	940G	941G	942G	943G	944G	945G
946G	947G	948G	949G	950G	951G	952G	953G	954G	955G	956G
957G	958G	959G	960G	961G	962G	963G	964G	965G	966G	967G
968G	969G	970G	971G	972G	973G	974G	975G	976G	977G	978G
979G	980G	981G	982G	983G	984G	985G	986G	987G	988G	989G
990G	991G	992G	993G	994G	995G	996G	997G	998G	999G	1000G

ALKIA0614GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# INTELLIGENT KEY UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	C7
Connector Name	REAR BUMPER ANTENNA
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	P	—
2	W/R	—

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



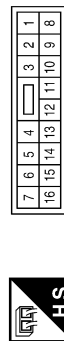
Terminal No.	Color of Wire	Signal Name
2	SB	—

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



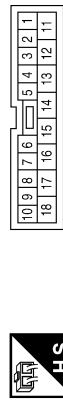
Terminal No.	Color of Wire	Signal Name
2	R/Y	—

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



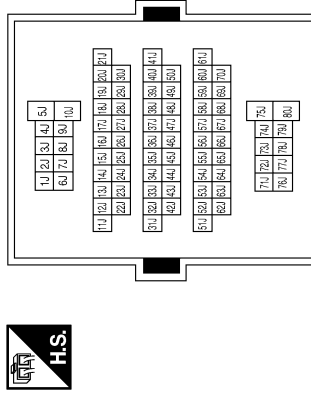
Terminal No.	Color of Wire	Signal Name
10	R/W	—

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



Terminal No.	Color of Wire	Signal Name
14	B	—
15	R/W	—

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



Terminal No.	Color of Wire	Signal Name
13J	O	—
14J	R	—
60J	SB	—
61J	R/Y	—

INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	10
Color of Wire	R/W
Signal Name	-

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



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

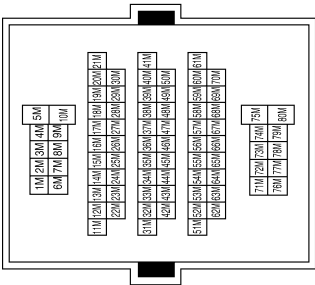
Terminal No.	2
Color of Wire	R/L
Signal Name	-

Connector No.	B76
Connector Name	INSIDE KEY ANTENNA 2 (LUGGAGE COMPARTMENT)
Connector Color	GRAY



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

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



Connector No.	B146
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	15	16
Color of Wire	W	BR
Signal Name	-	-

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



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

Terminal No.	2
Color of Wire	GR
Signal Name	-

Terminal No.	42M	43M	56M	61M	65M
Color of wire	BR	W	GR	R/L	R/W
Signal Name	-	-	-	-	-

ALK1A0616GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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



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

Connector No.	R210
Connector Name	INSIDE KEY ANTENNA 4 (OVERHEAD CONSOLE AREA)
Connector Color	WHITE



2	1
---	---

Terminal No.	Color of Wire	Signal Name
6	L/R	—
14	B	—
15	B/W	—

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

Connector No.	R201
Connector Name	WIRE TO WIRE
Connector Color	BROWN



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

Terminal No.	Color of Wire	Signal Name
15	W	—
16	BR	—

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



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



1	2	3	4	5	6
---	---	---	---	---	---

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

Terminal No.	Color of Wire	Signal Name
4	L/R	STATUS SWITCH
5	B	GND

Connector No.	D3
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4		
5	6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
8	V	—
9	P	—

ALKIA0617GB



# INTELLIGENT KEY UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

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

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



Terminal No.	Color of Wire	Signal Name
17	LG	-
18	B/Y	-
19	P/L	-

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

1	2	3	4
5	6	7	8
9	10		



Terminal No.	Color of Wire	Signal Name
3	B	-

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



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

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

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
1	P/L	-
2	B	-

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

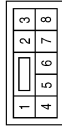


Terminal No.	Color of Wire	Signal Name
1	LG	-
2	B/Y	-

ALKIA0618GB

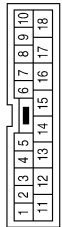
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



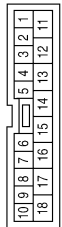
Terminal No.	Color of Wire	Signal Name
7	R/W	-
8	B	-

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



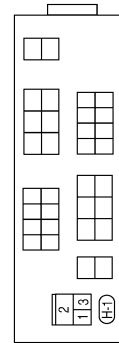
Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

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



Terminal No.	Color of Wire	Signal Name
14	B	-
15	R/W	-

Connector No.	H-1
Connector Name	FUSE AND FUSIBLE LINK BOX
Connector Color	-



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

ABKIA2567GB

INFOID:0000000001539060

## 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.

# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

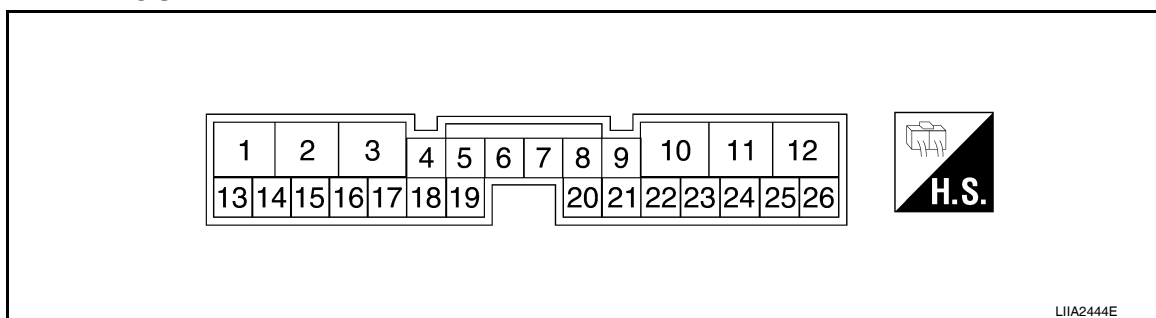
[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR CONTROL UNIT

Reference Value

INFOID:000000001539061

### TERMINAL LAYOUT



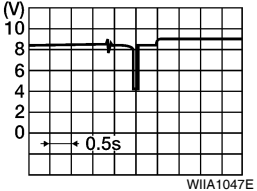
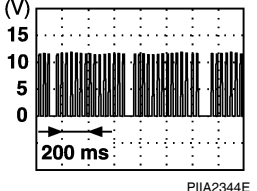
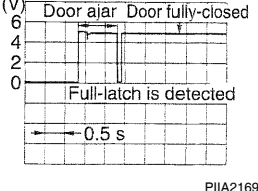
### PHYSICAL VALUES

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
1	B	Ground	—	—
2	B	Ground	—	—
3	Y/R	Battery power supply	—	Battery voltage
4	G	Hazard lamp output	Request to flash hazards	<p>Pulse must be &gt;50ms but less than 250ms</p> <p>PIIA3278E</p>
5	B/P	Pinch strip ground	—	—
6	R	Warning chime output	Back door motor active	Battery voltage
7	G/R	Ignition switch	Ignition switch ON	Battery voltage
			Ignition switch OFF	0
8	GR/B	Back door close switch	Close position ON	0
			Neutral position OFF	Battery voltage
9	L	Warning chime ground	—	—
10	L/B	Battery power	—	Battery voltage
11	Y	Cinch latch motor CLOSE output	Back door close operation	Battery voltage
12	L	Closure motor RETURN output	Back door release operation	Battery voltage
13	P/L	Back door close switch	Cancel position	0
			Neutral position	5
14	P	Close switch signal	While fully opening back door	<p>WIIA1047E</p>

# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal	Wire Color	Item	Condition	Voltage (V) (Approx.)
15	O/L	Open switch signal	While fully closing back door	
17	GR	Glass hatch ajar signal	Glass hatch OPEN	0
			Glass hatch CLOSED	5
18	GR/R	Park switch	P or N position (Ignition is ON)	0
			Other (Ignition is ON)	9
19	BR/B	Pinch strip RH	Detecting obstruction	0
			Other	5
20	GR	Pinch strip LH	Detecting obstruction	0
			Other	5
21	W/V	Power window serial link	—	
22	BR	Half switch signal	Back door half latch position	
23	L/W	Power liftgate switch	ON	0
			OFF	Battery voltage
26	V	Outside handle signal	Back door handle switch (at rest)	Battery voltage
			Back door handle switch (open)	0

# BACK DOOR CONTROL UNIT

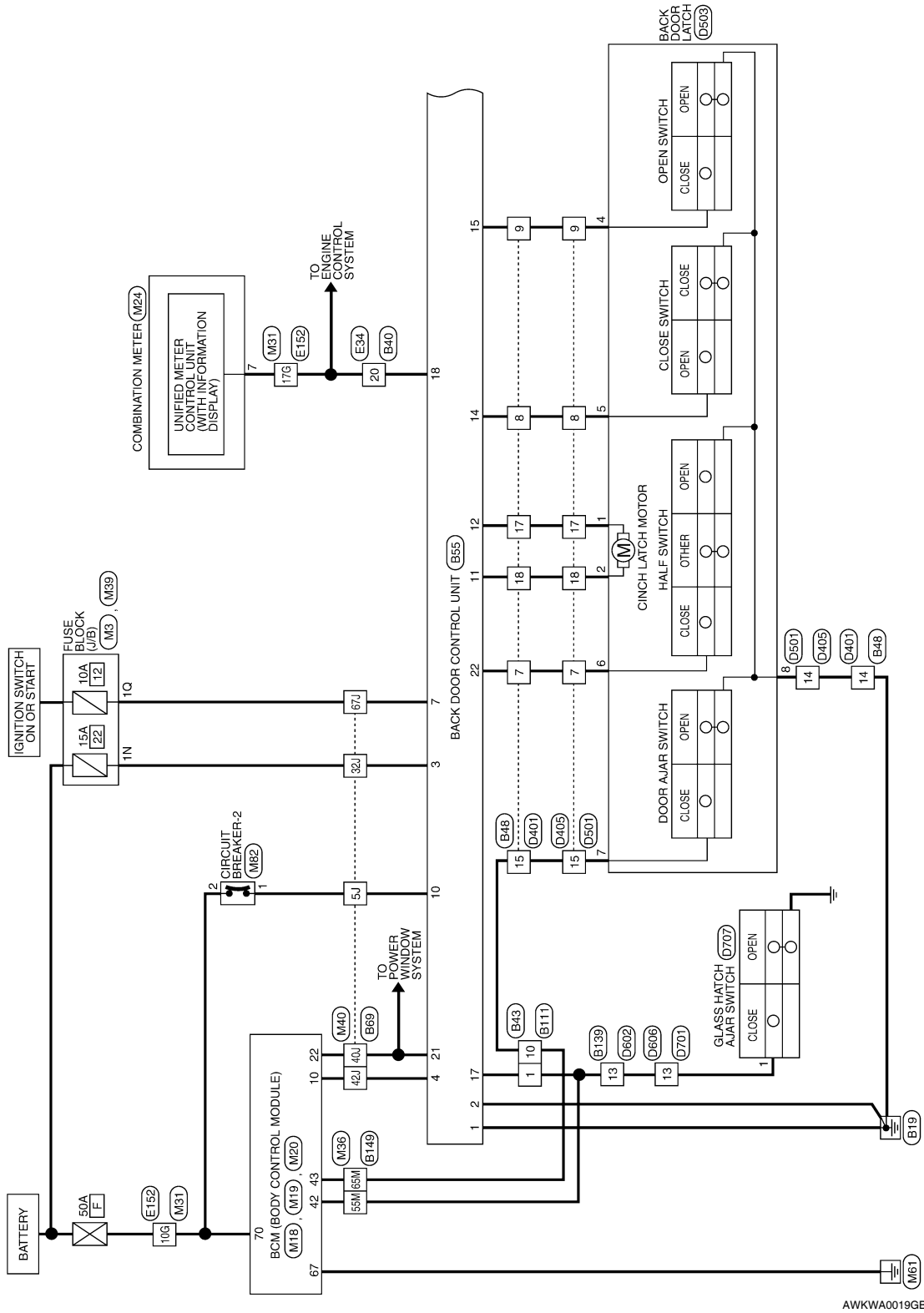
< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Wiring Diagram—AUTOMATIC BACK DOOR SYSTEM—

INFOID:000000001539062

### AUTOMATIC BACK DOOR SYSTEM



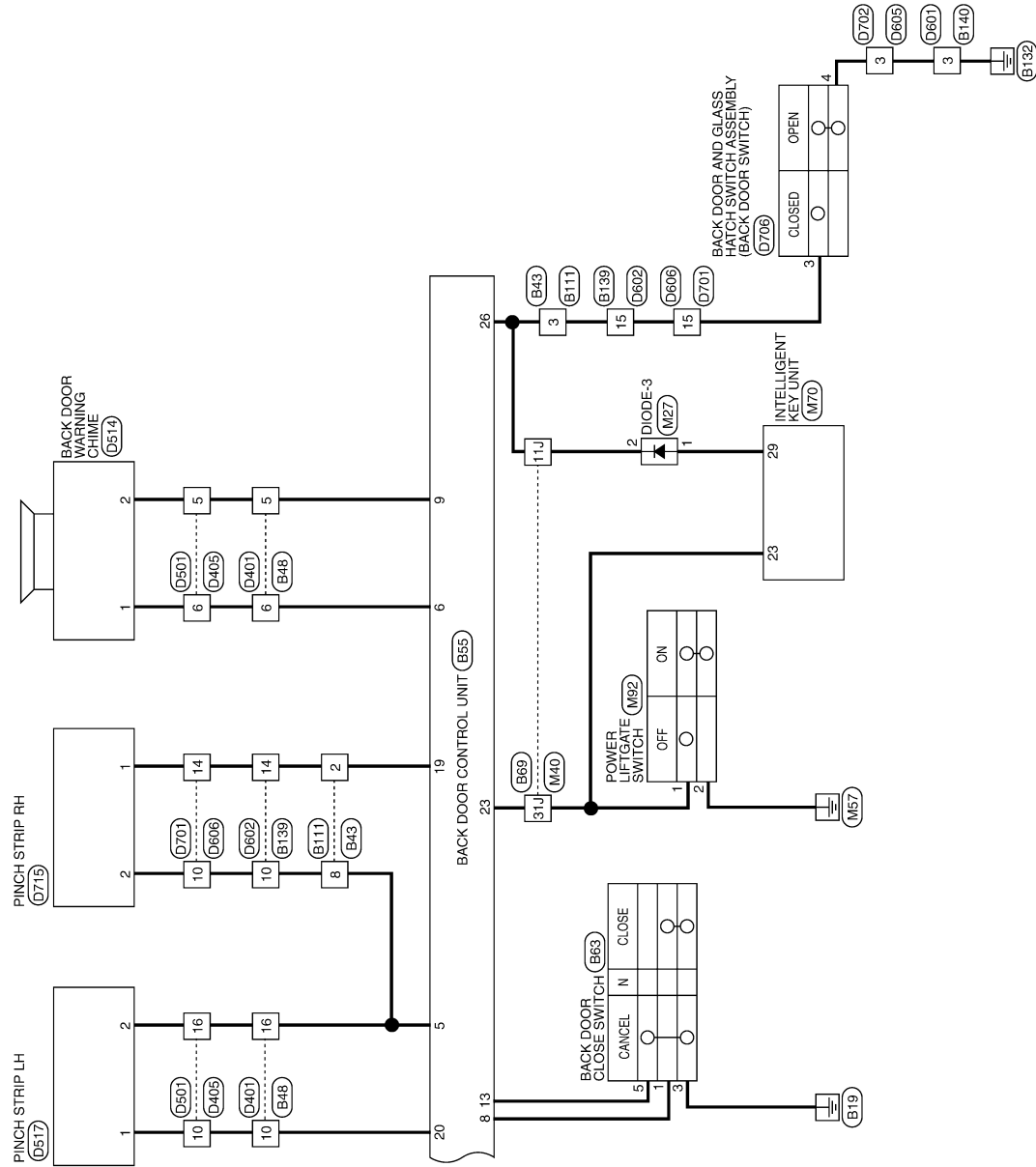
AWKWA0019GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]



AAKWA0117GB

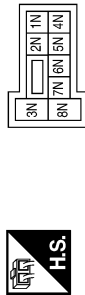
# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

## AUTOMATIC BACK DOOR SYSTEM CONNECTORS

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



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



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

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

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



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

Terminal No.	Color of Wire	Signal Name
42	GR	TRNK/GLASS HATCH SW
43	R/B	BACK DOOR SW/FUEL LID OPEN SW

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

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



Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W/B	BATT (F/L)

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
7	GR/R	—

Connector No.	M27
Connector Name	DIODE-3
Connector Color	—

2	1
---	---



Terminal No.	Color of Wire	Signal Name
1	LG/W	—
2	W	—

AAKIA0179GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

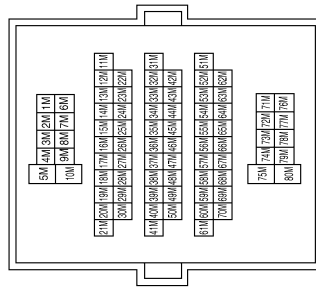
# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

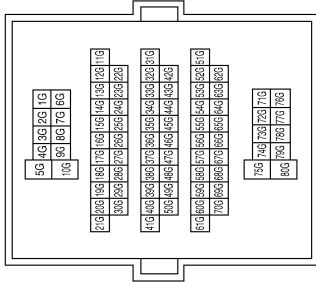
< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
55M	GR	—
65M	R/B	—

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



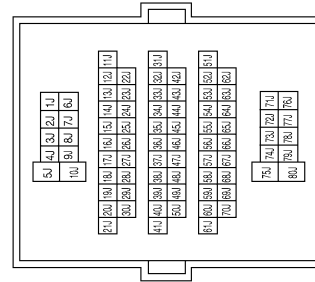
Connector No.	M31
Connector Name	WIRE TO WIRE
Connector Color	WHITE



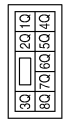
Terminal No.	Color of Wire	Signal Name
10G	W/B	—
17G	GR/R	—

Terminal No.	Color of Wire	Signal Name
5J	L/B	—
11J	W	—
31J	L/W	—
32J	Y/R	—
40J	W/V	—
42J	G	—
67J	G/R	—

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



Connector No.	M39
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1Q	G/R	—

AAKIA0180GB



# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Connector No.	M92
Connector Name	POWER LIFTGATE SWITCH
Connector Color	GRAY



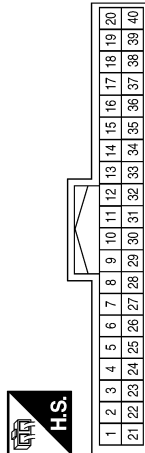
Terminal No.	Color of Wire	Signal Name
1	L/W	-
2	B	-

Connector No.	M82
Connector Name	CIRCUIT BREAKER-2
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	L/B	-
2	W/B	-

Connector No.	M70
Connector Name	INTELLIGENT KEY UNIT
Connector Color	WHITE



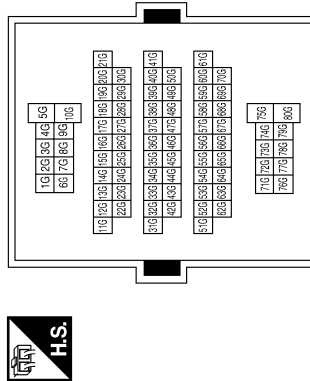
Terminal No.	Color of Wire	Signal Name
23	L/W	PBD_OUTPUT
29	LG/W	BK_DR_OP_SW_INP

Connector No.	B40
Connector Name	WIRE TO WIRE
Connector Color	WHITE



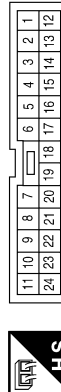
Terminal No.	Color of Wire	Signal Name
20	GR/R	-

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



Terminal No.	Color of Wire	Signal Name
10G	W/B	-
17G	GR/R	-

Connector No.	E34
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20	GR/R	-

ALK1A0644GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Terminal No.	Color of Wire	Signal Name
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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

10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-
7	BR	-
8	P	-

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

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



Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Connector No.	B63
Connector Name	BACK DOOR CLOSE SWITCH
Connector Color	WHITE



6	5		
1	2	3	4

Terminal No.	Color of Wire	Signal Name
9	L	SP(-)
10	L/B	B+(MOTOR)
11	Y	MTR+
12	L	MTR-
13	P/L	PBD_DISABLE_SW
14	P	CLOSE_SW
15	O/L	OPEN_SW
17	GR	GLASS_HATCH_AJAR
18	GR/R	PARK_SW
19	BR/B	RH_PINCH_STRIP
20	V/G	LH_PINCH_STRIP
21	W/V	ANTI_PINCH_SERIAL_LINK
22	BR	HALF_SW
23	L/W	P-LIFTGATE_SW
26	V	OUTSIDE_HANDLE

Connector No.	B55
Connector Name	BACK DOOR CONTROL UNIT
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	17	18	19	20	21	22	23	24	26

Terminal No.	Color of Wire	Signal Name
1	B	GND
2	B	GND
3	Y/R	B+
4	G	FLASH_LAMP_IVCS
5	B/P	-
6	R	SP(+)
7	G/R	IGN
8	GR/B	PBD_CLOSE_SW

ALKIA0645GB

# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	B111
Connector Name	WIRE TO WIRE
Connector Color	WHITE

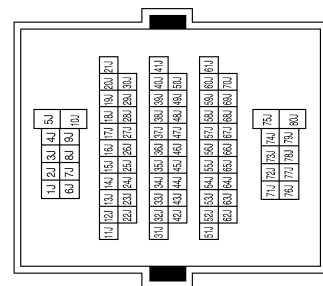


1	2	3	4		5	6	7	
8	9	10	11	12	13	14	15	16

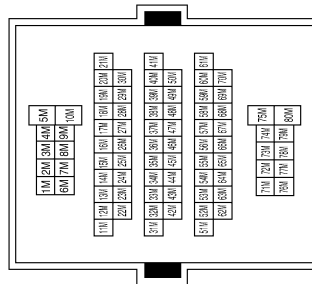
Terminal No.	Color of Wire	Signal Name
1	GR	-
2	BR/B	-
3	V	-
8	B/P	-
10	R/W	-

Terminal No.	Color of Wire	Signal Name
5J	L/B	-
11J	W	-
31J	L/W	-
32J	Y/R	-
40J	W/V	-
42J	G	-
67J	G/R	-

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



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



Connector No.	B140
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2		
3	4	5	6

Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	B139
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Terminal No.	Color of Wire	Signal Name
55M	GR	-
65M	R/W	-

AAKIA0181GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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

10	9	8	7	6	5	4	3	2	1
18	17	16	15	14	13	12	11		



Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

ALKIA0647GB

# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D503
Connector Name	BACK DOOR LATCH
Connector Color	WHITE



1	2	3
4	5	6
7	8	

Terminal No.	Color of Wire	Signal Name
1	L	-
2	Y	-
4	O/L	-
5	P	-
6	BR	-
7	R/W	-
8	B	-

Terminal No.	Color of Wire	Signal Name
7	BR	-
8	P	-
9	O/L	-
10	V/G	-
14	B	-
15	R/W	-
16	B/P	-
17	L	-
18	Y	-

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



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18		

Terminal No.	Color of Wire	Signal Name
5	L	-
6	R	-

Connector No.	D601
Connector Name	WIRE TO WIRE
Connector Color	WHITE



2	1
6	5
4	3

Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D517
Connector Name	PINCH STRIP LH
Connector Color	BROWN



1	2
---	---

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

Connector No.	D514
Connector Name	BACK DOOR WARNING CHIME
Connector Color	BROWN



2	1
---	---

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

ALKIA0648GB

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# BACK DOOR CONTROL UNIT

[WITH INTELLIGENT KEY SYSTEM]

< ECU DIAGNOSIS >

Connector No.	D606
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D605
Connector Name	WIRE TO WIRE
Connector Color	WHITE



2	<div></div>	1
6	5	4
		3

Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D602
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

Connector No.	D706
Connector Name	BACK DOOR AND GLASS HATCH SWITCH ASSEMBLY
Connector Color	WHITE



4	3	2	1
---	---	---	---

Terminal No.	Color of Wire	Signal Name
3	V	-
4	B	-

Connector No.	D702
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2		
3	4	5	6

Terminal No.	Color of Wire	Signal Name
3	B	-

Connector No.	D701
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Terminal No.	Color of Wire	Signal Name
10	B/P	-
13	GR	-
14	BR/B	-
15	V	-

AWKIA0144GB

# BACK DOOR CONTROL UNIT

< ECU DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

Connector No.	D715
Connector Name	PINCH STRIP RH
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	BR/B	-
2	B/P	-

Connector No.	D707
Connector Name	GLASS HATCH AJAR SWITCH
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	GR	-

AAKIA0182GB

INFOID:0000000001539063

## Fail Safe

### Fail-safe operation

The automatic back door system operation will be interrupted if the back door control unit loses power, switch input signals or communication with the BCM.

# INTELLIGENT KEY SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SYMPTOM DIAGNOSIS

### INTELLIGENT KEY SYSTEM SYMPTOMS

#### Symptom Table

INFOID:000000001539065

#### ALL FUNCTIONS OF INTELLIGENT KEY SYSTEM DO NOT OPERATE

##### NOTE:

- Before performing the diagnosis in the following table, check “WORK FLOW”. Refer to [DLK-6. "Work Flow"](#).
- Check that vehicle is under the condition shown in “Conditions of vehicle” before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

##### Conditions of Vehicle (Operating Conditions)

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

Symptom	Diagnosis/service procedure	Reference page
All doors and ignition switch do not respond to Intelligent Key command.	1. Check Intelligent Key function and battery inspection.	<a href="#">DLK-102</a>
	2. Check Intelligent Key unit power supply and ground circuit.	<a href="#">DLK-64</a>
	3. Check remote keyless entry receiver.	<a href="#">DLK-99</a>
	4. Check BCM power supply and ground circuit.	<a href="#">DLK-64</a>
	5. Replace Intelligent Key unit.	<a href="#">DLK-102</a>



# 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

INFOID:000000001539066

### DOOR LOCK/UNLOCK FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-6, "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

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

Symptom	Diagnosis/service procedure	Reference page
Power door lock does not operate with door lock and unlock switch.	1. Check BCM Power supply and ground circuit.	<a href="#">BCS-32</a>
	2. Check door lock and unlock switch.	<a href="#">DLK-70</a>
	3. Check door lock actuator (driver side)	<a href="#">DLK-82</a>
	4. Check Intermittent Incident.	<a href="#">GI-38</a>
Power door lock does not operate with door key cylinder operation. (Power door lock operate properly with door lock and unlock switch.)	1. Check key cylinder switch.	<a href="#">DLK-75</a>
	2. Replace power window main switch.	<a href="#">PWC-115</a>
Specific door lock actuator does not operate.	1a. Check driver side door lock actuator.	<a href="#">DLK-82</a>
	1b. Check passenger side door lock actuator.	<a href="#">DLK-83</a>
	1c. Check rear LH side door lock actuator.	<a href="#">DLK-84</a>
	1d. Check rear RH side door lock actuator.	<a href="#">DLK-86</a>
	1e. Check back door lock operation (refer to back door).	<a href="#">DLK-204</a>
	1f. Check glass hatch lock actuator.	<a href="#">DLK-88</a>
	2. Check Intermittent Incident.	<a href="#">GI-38</a>
Door lock/unlock do not operate by request switch.	1. Door switch check.	<a href="#">DLK-67</a>
	2. Ignition knob switch check.	<a href="#">DLK-112</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Door lock/unlock does not operate by request switch (LH side).	1. Front door request switch LH check.	<a href="#">DLK-79</a>
	2. Front outside antenna LH check.	<a href="#">DLK-93</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Door lock/unlock does not operate by request switch (RH side).	1. Front door request switch RH check.	<a href="#">DLK-79</a>
	2. Front outside antenna RH check.	<a href="#">DLK-93</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Selective unlock function does not operate by front door request switch LH (other door lock functions operate properly).	1. Check "SELECT UNLOCK FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-51</a>
	2. Replace Intelligent Key unit.	<a href="#">SEC-116</a>

# DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure	Reference page
Auto lock function does not operate properly.	1. Check "AUTO RELOCK TIMER" setting in "WORK SUPPORT".	<a href="#">DLK-48</a>
	2. Key switch check (BCM).	<a href="#">DLK-111</a>
	3. Ignition knob switch check.	<a href="#">DLK-112</a>
	4. Door switch check.	<a href="#">DLK-67</a>
	5. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Key reminder function does not operate properly.	1. Check "ANTI KEY LOCK IN FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-48</a>
	2. Door switch check.	<a href="#">DLK-67</a>
	3a. Inside key antenna 1 (rear of center console) check.	<a href="#">DLK-56</a>
	3b. Inside key antenna 2 (luggage compartment) check.	<a href="#">DLK-58</a>
	3c. Inside key antenna 3 (front of center console) check.	<a href="#">DLK-60</a>
	3d. Inside key antenna 4 (overhead console area) check.	<a href="#">DLK-62</a>
	4. Front door lock actuator LH (door unlock sensor) check.	<a href="#">DLK-77</a>
	5. Intelligent Key battery and function inspection.	<a href="#">DLK-102</a>
	6. Replace Intelligent Key unit.	<a href="#">SEC-116</a>

## INTELLIGENT KEY

### INTELLIGENT KEY : Symptom Table

INFOID:000000001539067

#### REMOTE KEYLESS ENTRY FUNCTION MALFUNCTION

##### NOTE:

- Before performing the diagnosis in the following table, check "Trouble Diagnosis Procedure". Refer to [DLK-6, "Work Flow"](#).
- Make sure that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms" are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

##### Conditions of Vehicle (Operating Conditions)

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

Symptom	Diagnosis/service procedure	Reference page
All of the remote keyless entry functions do not operate.	1. Intelligent Key battery and function inspection.	<a href="#">DLK-102</a>
	2. Remote Keyless Entry function check.	<a href="#">DLK-99</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Selective unlock function does not operate by Intelligent Key remote control button.	1. Check "SELECT UNLOCK FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-48</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-102</a>
	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
Auto lock function does not operate properly.	1. Check "AUTO RELOCK TIMER" setting in "WORK SUPPORT".	<a href="#">DLK-48</a>
	2. Key switch check (BCM).	<a href="#">DLK-111</a>
	3. Ignition knob switch check.	<a href="#">DLK-112</a>
	4. Door switch check.	<a href="#">DLK-67</a>
	5. Replace Intelligent Key unit.	<a href="#">SEC-116</a>

# DOOR LOCK FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure	Reference page
Key reminder function does not operate properly.	1. Check "ANTI KEY LOCK IN FUNCTION" setting in "WORK SUPPORT".	<a href="#">DLK-48</a>
	2. Door switch check.	<a href="#">DLK-67</a>
	3a. Inside key antenna 1 (rear of center console) check.	<a href="#">DLK-56</a>
	3b. Inside key antenna 2 (luggage compartment) check.	<a href="#">DLK-58</a>
	3c. Inside key antenna 3 (front of center console) check.	<a href="#">DLK-60</a>
	3d. Inside key antenna 4 (overhead console area) check.	<a href="#">DLK-62</a>
	4. Front door lock actuator LH (door unlock sensor) check.	<a href="#">DLK-77</a>
	5. Intelligent Key battery inspection.	<a href="#">DLK-102</a>
Panic alarm function does not operate properly.	6. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
	1. Check "PANIC ALARM DELAY" setting in "WORK SUPPORT".	<a href="#">DLK-49</a>
	2. Theft warning operation check.	<a href="#">DLK-206</a>
	3. Intelligent Key battery inspection.	<a href="#">DLK-102</a>
	4. Key switch check (BCM).	<a href="#">DLK-111</a>
	5. Ignition knob switch check.	<a href="#">DLK-112</a>
Back door open function does not operate properly.	6. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
	1. Back door diagnosis.	<a href="#">DLK-119</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-102</a>
Power window down function does not operate.	3. Replace Intelligent Key unit.	<a href="#">SEC-116</a>
	1. Check "PW DOWN SET" setting in "WORK SUPPORT".	<a href="#">DLK-49</a>
	2. Intelligent Key battery inspection.	<a href="#">DLK-102</a>

DLK

# BACK DOOR OPENER FUNCTION

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR OPENER FUNCTION

### BACK DOOR OPENER SWITCH

### BACK DOOR OPENER SWITCH : Symptom Table

INFOID:000000001539068

#### TRUNK OPEN FUNCTION MALFUNCTION

##### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-6, "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)

- Vehicle is in park.

Symptom	Suspect systems	Refer to
Automatic operations are not executed from the back door fully closed or fully open position. (Auto closure operates normally).	Power liftgate switch system inspection	<a href="#">DLK-137</a>
	Park switch	—
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-129</a>
Automatic operations are not carried out together with open/close operations. (Manual operations are normal).	Power liftgate switch system inspection	<a href="#">DLK-137</a>
	Back door close switch system inspection	<a href="#">DLK-133</a>
	Auto back door power supply and ground circuit system inspection.	<a href="#">DLK-65</a>
The auto closure function does not operate. (Stops at the halfway position for auto closing operations).	Pinch strip system inspection	<a href="#">DLK-129</a>
During auto closing operations, if obstruction is detected, the door does not operate in reverse.	Back door motor assembly	<a href="#">DLK-236</a>
During close or cinch operations, the door does not operate in reverse if the back door handle is operated.	Handle switch system	<a href="#">DLK-136</a>
When the keyfob is operated, the back door does not operate automatically.	Remote keyless entry system inspection	<a href="#">DLK-99</a>
	Power window serial link	—
	Pinch strip system inspection	<a href="#">DLK-129</a>
Auto closure does not operate.	Half-latch switch system	<a href="#">DLK-131</a>
	Cinch latch motor system	<a href="#">DLK-135</a>
	Handle switch system	<a href="#">DLK-136</a>
The back door does not open. (Closure motor rotation is not reversed).	Open switch system	<a href="#">DLK-132</a>
	Handle switch system	<a href="#">DLK-136</a>
Warning chime does not sound.	Back door warning chime system	<a href="#">DLK-130</a>
Auto closure operation works, but the back door is not fully closed	Close switch system	<a href="#">DLK-133</a>
	Handle switch system	<a href="#">DLK-136</a>
	Cinch latch motor system	<a href="#">DLK-135</a>
	Back door latch assembly mechanism damaged or worn.	<a href="#">DLK-236</a>
Auto open operation releases lock, but does not fully open back door.	Glass hatch ajar switch check	<a href="#">DLK-125</a>
Glass hatch lock actuator does not operate (Right front door must be unlocked for normal operation)	Glass hatch switch check	<a href="#">DLK-123</a>
	Glass hatch lock actuator check	<a href="#">DLK-88</a>
	Replace BCM	<a href="#">BCS-55</a>

## BACK DOOR SWITCH

# BACK DOOR OPENER FUNCTION

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## BACK DOOR SWITCH : Symptom Table

INFOID:000000001539069

### BACK DOOR OPEN FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-6, "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)

- Vehicle is in park.

Symptom	Diagnosis/service procedure	Reference page
Back door open function does not operate by back door switch (doors unlocked).	1. Refer to diagnosis chart.	<a href="#">DLK-204</a>
	2. Check Intermittent Incident.	<a href="#">GI-38</a>
Back door open function does not operate by back door switch only. (doors locked but Intelligent Key present).	1. Outside key antenna check.	<a href="#">DLK-93</a>
	2. Intelligent Key unit power back door input signal.	<a href="#">DLK-136</a>
	3. Intelligent Key unit power back door output signal.	<a href="#">DLK-137</a>
	4. Intelligent Key battery and function check.	<a href="#">DLK-102</a>

## INTELLIGENT KEY

### INTELLIGENT KEY : Symptom Table

INFOID:000000001539070

### BACK DOOR OPEN FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-6, "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)

- Ignition switch is not depressed.

DLK

Symptom	Diagnosis/service procedure	Reference page
Back door open function does not operate by Intelligent Key.	1. Check Intelligent Key battery inspection.	<a href="#">DLK-102</a>
	2. Intelligent Key unit power and ground check.	<a href="#">DLK-64</a>
	3. Check intermittent incident.	<a href="#">GI-38</a>

# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## WARNING FUNCTION SYMPTOMS

### Symptom Table

INFOID:000000001539071

### WARNING FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check "WORK FLOW". Refer to [DLK-6, "Work Flow"](#).
- Check that vehicle is under the condition shown in "Conditions of vehicle" before starting diagnosis, and check each symptom.
- If the following "symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

#### Conditions of Vehicle (Operating Conditions)

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

Symptom		Diagnosis/service procedure	Reference page
OFF position warn- ing does not oper- ate.	For internal	1. Check ignition knob switch.	<a href="#">DLK-112</a>
		2. Check door switch.	<a href="#">DLK-67</a>
		3. Check warning chime function.	<a href="#">DLK-107</a>
		4. Check Intermittent Incident.	<a href="#">GI-38</a>
	For external	1. Check ignition knob switch.	<a href="#">DLK-112</a>
		2. Check door switch.	<a href="#">DLK-67</a>
		3. Check Intelligent Key warning buzzer.	<a href="#">DLK-91</a>
		4. Check Intermittent Incident.	<a href="#">GI-38</a>
P position warning does not operate.	1. Check Park position switch.	<a href="#">TM-43</a>	
	2. Check door switch.	<a href="#">DLK-67</a>	
	3. Check Intelligent Key warning buzzer.	<a href="#">DLK-91</a>	
	4. Check warning chime function.	<a href="#">DLK-107</a>	
	5. Check combination meter display function.	<a href="#">DLK-106</a>	
	6. Check Intermittent Incident.	<a href="#">GI-38</a>	
ACC warning does not operate	1. Check ignition knob switch.	<a href="#">DLK-112</a>	
	2. Check warning chime function.	<a href="#">DLK-107</a>	
	3. Check combination meter display function.	<a href="#">DLK-106</a>	
	4. Check Intermittent Incident.	<a href="#">GI-38</a>	

# WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom		Diagnosis/service procedure		Reference page
Take away warning does not operate.	Door open to close	1. Check door switch.		<a href="#">DLK-67</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-56</a>
			Luggage compartment	<a href="#">DLK-58</a>
			Front of center console	<a href="#">DLK-60</a>
			Overhead console area	<a href="#">DLK-62</a>
		3. Check Intelligent Key warning buzzer.		<a href="#">DLK-91</a>
		4. Check warning chime function.		<a href="#">DLK-107</a>
		5. Check ignition knob switch.		<a href="#">DLK-112</a>
		6. Check combination meter display function.		<a href="#">DLK-106</a>
		7. Check Intermittent Incident.		<a href="#">GI-38</a>
	Push-button ignition switch operation	1. Check ignition knob switch.		<a href="#">DLK-112</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-56</a>
			Luggage compartment	<a href="#">DLK-58</a>
			Front of center console	<a href="#">DLK-60</a>
			Overhead console area	<a href="#">DLK-62</a>
		3. Check warning chime function.		<a href="#">DLK-107</a>
		4. Check combination meter display function.		<a href="#">DLK-106</a>
		5. Check Intermittent Incident.		<a href="#">GI-38</a>
	Door is open	1. Check ignition knob switch.		<a href="#">DLK-112</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-56</a>
			Luggage compartment	<a href="#">DLK-58</a>
			Front of center console	<a href="#">DLK-60</a>
			Overhead console area	<a href="#">DLK-62</a>
		3. Check combination meter display function.		<a href="#">DLK-106</a>
		4. Check Intermittent Incident.		<a href="#">GI-38</a>
	Take away through window	1. Check "TAKE OUT FROM WIN WARN" setting in "WORK SUPPORT".		<a href="#">DLK-51</a>
		2. Check inside key antennas (1, 2, 3, 4).	Rear of center console	<a href="#">DLK-56</a>
			Luggage compartment	<a href="#">DLK-58</a>
			Front of center console	<a href="#">DLK-60</a>
			Overhead console area	<a href="#">DLK-62</a>
		3. Check warning chime function.		<a href="#">DLK-107</a>
		4. Check ignition knob switch.		<a href="#">DLK-112</a>
		5. Check combination meter display function.		<a href="#">DLK-106</a>
		6. Check Intermittent Incident.		<a href="#">GI-38</a>
Key warning chime does not operate.		1. Check door switch.		<a href="#">DLK-67</a>
		2. Check warning chime function.		<a href="#">DLK-107</a>
		3. Check ignition knob switch.		<a href="#">DLK-112</a>
		4. Check combination meter display function.		<a href="#">DLK-106</a>
		5. Check Intermittent Incident.		<a href="#">GI-38</a>

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

## WARNING FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

Symptom	Diagnosis/service procedure		Reference page
Door lock operation warning chime does not operate.	1.	Check door switch.	<a href="#">DLK-67</a>
	2.	Check ignition knob switch.	<a href="#">DLK-112</a>
	3.	Check Intelligent Key warning buzzer.	<a href="#">DLK-91</a>
	4.	Check inside key antennas (1, 2, 3, 4).	Rear of center console <a href="#">DLK-56</a>
			Luggage compartment <a href="#">DLK-58</a>
			Front of center console <a href="#">DLK-60</a>
			Overhead console area <a href="#">DLK-62</a>
	5.	Check Intermittent Incident.	<a href="#">GI-38</a>



# KEY REMINDER FUNCTION SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## KEY REMINDER FUNCTION SYMPTOMS

### Symptom Table

INFOID:000000001539072

### KEY REMINDER FUNCTION MALFUNCTION

#### NOTE:

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-6, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

#### Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure		Reference page
Key reminder function does not operate.	1.	Check “ANTI KEY LOCK IN FUNCTI”setting in “WORK SUPPORT”.	<a href="#">DLK-51</a>
	2.	Check door switch.	<a href="#">DLK-67</a>
	3.	Check inside key antennas (1, 2, 3, 4)	Rear of center console <a href="#">DLK-56</a>
			Luggage compartment <a href="#">DLK-58</a>
			Front of center console <a href="#">DLK-60</a>
			Overhead console area <a href="#">DLK-62</a>
	4.	Check unlock sensor.	<a href="#">DLK-77</a>
	5.	Check Intelligent Key battery inspection.	<a href="#">DLK-102</a>
	6.	Check Intermittent Incident.	<a href="#">GI-38</a>

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

## HAZARD FUNCTION

## Symptom Table

INFOID:000000001539073

## HAZARD AND BUZZER REMINDER FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check “Work flow”. Refer to [DLK-6, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the “Diagnosis/service procedure” column in this order.

## Conditions of Vehicle (Operating Conditions)

- “LOCK/UNLOCK BY I-KEY” is ON when setting on CONSULT-III.
- “ANSWER BACK FUNCTION” is ON when setting on CONSULT-III.
- Ignition switch is in OFF position.
- All doors are closed.
- Ignition switch is not depressed.

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">DLK-51</a>
	2. Check hazard function.	<a href="#">DLK-108</a>
	3. Check Intermittent incident.	<a href="#">GI-38</a>
Hazard reminder does not operate by Intelligent Key. (Buzzer reminder operate.)	1. Check “HAZARD ANSWER BACK” setting in “WORK SUPPORT”.	<a href="#">DLK-51</a>
	2. Check hazard function.	<a href="#">DLK-108</a>
	3. Check Intelligent Key battery inspection.	<a href="#">DLK-102</a>
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”.	<a href="#">DLK-51</a>
	2. Check Intelligent Key warning buzzer.	<a href="#">DLK-91</a>
	3. Check Intermittent incident.	<a href="#">GI-38</a>

# HORN FUNCTION

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HORN FUNCTION

### Symptom Table

INFOID:000000001539074

#### HAZARD AND HORN REMINDER FUNCTION MALFUNCTION

**NOTE:**

- Before performing the diagnosis in the following table, check "Work flow". Refer to [DLK-6, "Work Flow"](#).
- If the following symptoms are detected, check systems shown in the "Diagnosis/service procedure" column in this order.

Conditions of Vehicle (Operating Conditions)

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

Symptom	Diagnosis/service procedure	Reference page
Hazard reminder does not operate by request switch. (Horn reminder operate.)	1. Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	<a href="#">DLK-51</a>
	2. Check hazard function.	<a href="#">DLK-108</a>
	3. Check Intermittent Incident.	<a href="#">GI-38</a>
Hazard reminder does not operate by Intelligent Key. (Horn reminder operate.)	1. Check "HAZARD ANSWER BACK" setting in "WORK SUPPORT".	<a href="#">DLK-51</a>
	2. Check hazard function.	<a href="#">DLK-108</a>
	3. Check Intelligent Key battery inspection.	<a href="#">DLK-102</a>
Horn reminder does not operate by request switch. (Hazard reminder operate.)	1. Check "ANSWER BACK WITH I-KEY LOCK" or "ANSWER BACK WITH I-KEY UNLOCK" setting in "WORK SUPPORT".	<a href="#">DLK-51</a>
	2. Check Intelligent Key warning buzzer.	<a href="#">DLK-91</a>
	3. Check Intermittent Incident.	<a href="#">GI-38</a>
Horn reminder does not operate by Intelligent Key. (Hazard reminder operate.)	1. Check "HORN WITH KEYLESS LOCK" setting in "WORK SUPPORT".	<a href="#">DLK-51</a>
	2. Check horn function.	<a href="#">DLK-104</a>
	3. Check Intermittent Incident.	<a href="#">GI-38</a>

# HOMELINK UNIVERSAL TRANSCEIVER

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## HOMELINK UNIVERSAL TRANSCEIVER

### Symptom Table

INFOID:000000001539075

### HOMELINK UNIVERSAL TRANSCEIVER MALFUNCTION

Symptom	Diagnosis/service procedure	Reference page
Homelink universal transceiver does not operate properly.	1. Check homelink universal transceiver function.	<a href="#">DLK-140</a>
	2. Check Intermittent Incident.	<a href="#">GI-38</a>

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

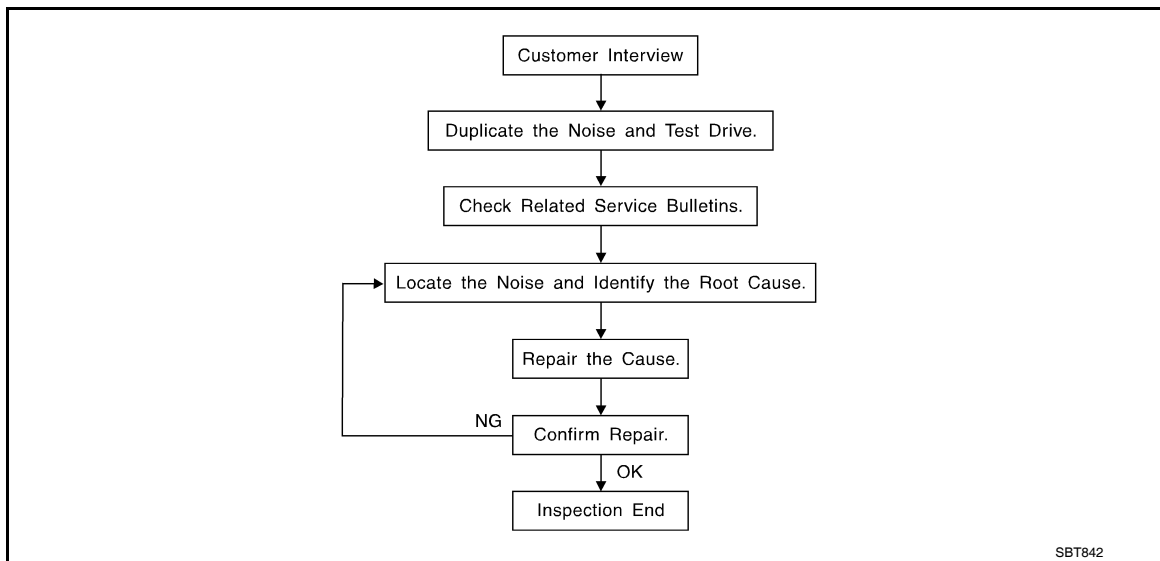
< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SQUEAK AND RATTLE TROUBLE DIAGNOSES

### Work Flow

INFOID:000000001539076



### CUSTOMER INTERVIEW

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any customer's comments; refer to [DLK-217, "Diagnostic Worksheet"](#). This information is necessary to duplicate the conditions that exist when the noise occurs.

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

### DUPLICATE THE NOISE AND TEST DRIVE

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

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

## < SYMPTOM DIAGNOSIS >

## [WITH 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 and mechanics stethoscope).
2. Narrow down the noise to a more specific area and identify the cause of the noise by:
  - removing the components in the area that you suspect the noise is coming from.  
Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken or lost during the repair, resulting in the creation of new noise.
  - tapping or pushing/pulling the component that you suspect is causing the noise.  
Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only temporarily.
  - feeling for a vibration with your hand by touching the component(s) that you suspect is (are) causing the noise.
  - placing a piece of paper between components that you suspect are causing the noise.
  - looking for loose components and contact marks.  
Refer to [DLK-215, "Inspection Procedure"](#).

## REPAIR THE CAUSE

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

## CAUTION:

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

## NOTE:

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

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

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

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

INSULATOR (Foam blocks)

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

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

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

INSULATOR (Light foam block)

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

FELT 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

# 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:000000001539077

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

## INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

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

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

### CAUTION:

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

## CENTER CONSOLE

Components to pay attention to include:

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

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

## DOORS

Pay attention to the:

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

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

## TRUNK

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

In addition look for:

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

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

DLK

# **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:

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

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

### **SEATS**

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

Cause of seat noise include:

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

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

### **UNDERHOOD**

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

Causes of transmitted underhood noise include:

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

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



# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## Diagnostic Worksheet

INFOID:000000001539078

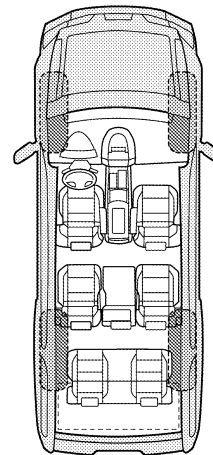
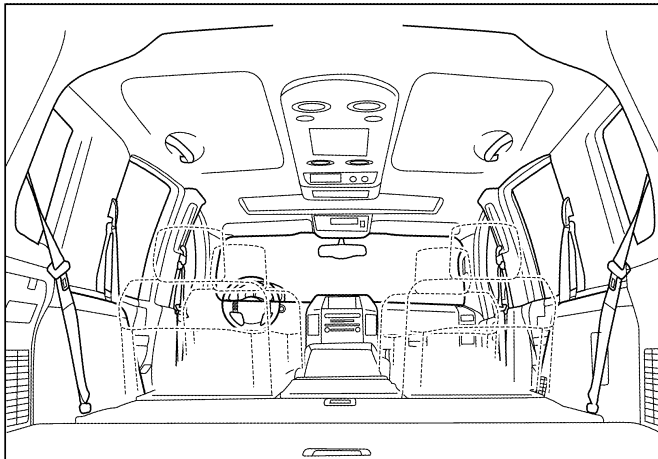
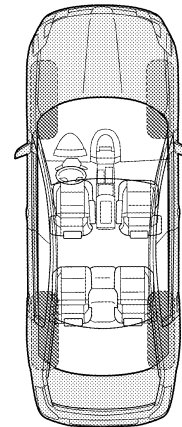
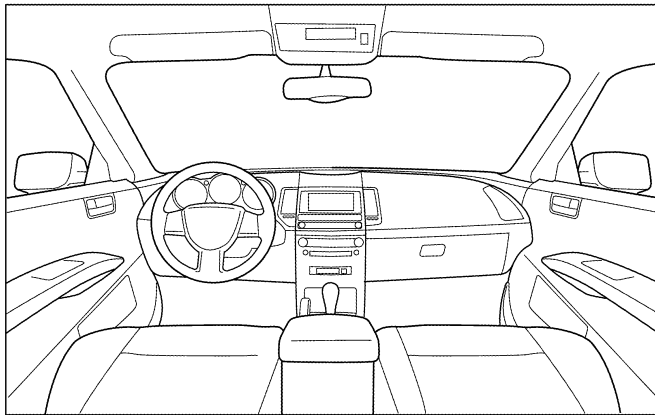
Dear Customer:

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.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

[WITH INTELLIGENT KEY SYSTEM]

## SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

---

---

### II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Anytime                      | <input type="checkbox"/> After sitting out in the rain |
| <input type="checkbox"/> 1st time in the morning      | <input type="checkbox"/> When it is raining or wet     |
| <input type="checkbox"/> Only when it is cold outside | <input type="checkbox"/> Dry or dusty conditions       |
| <input type="checkbox"/> Only when it is hot outside  | <input type="checkbox"/> Other:                        |

### III. WHEN DRIVING:

- ☐ Through driveways
- ☐ Over rough roads
- ☐ Over speed bumps
- ☐ Only about \_\_\_\_ mph
- ☐ On acceleration
- ☐ Coming to a stop
- ☐ On turns: left, right or either (circle)
- ☐ With passengers or cargo
- ☐ Other: \_\_\_\_\_
- ☐ After driving \_\_\_\_ miles or \_\_\_\_ minutes

### IV. WHAT TYPE OF NOISE

- ☐ Squeak (like tennis shoes on a clean floor)
- ☐ Creak (like walking on an old wooden floor)
- ☐ Rattle (like shaking a baby rattle)
- ☐ Knock (like a knock at the door)
- ☐ Tick (like a clock second hand)
- ☐ Thump (heavy muffled knock noise)
- ☐ Buzz (like a bumble bee)

### TO BE COMPLETED BY DEALERSHIP PERSONNEL

#### Test Drive Notes:

---

---

---

	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: \_\_\_\_\_ Customer Name \_\_\_\_\_

W.O.# \_\_\_\_\_ Date: \_\_\_\_\_

This form must be attached to Work Order

LAIA0071E

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000004884149

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:000000004884151

#### **NOTE:**

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

#### OPERATION PROCEDURE

1. Connect both battery cables.

#### **NOTE:**

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

## 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

INFOID:0000000001539080

- 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 >

[WITH INTELLIGENT KEY SYSTEM]

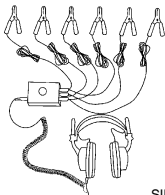

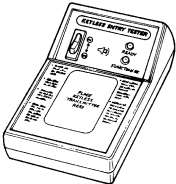
## PREPARATION

### PREPARATION

#### Special Service Tool

INFOID:000000001539081

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

Tool number (Kent-Moore No.) Tool name		Description
— (J-39570) Chassis ear	 SIIA0993E	Locating the noise
— (J-43980) NISSAN Squeak and Rattle Kit	 SIIA0994E	Repairing the cause of noise
— (J-43241) Remote Keyless Entry Tester	 LEL946A	Used to test keyfobs

A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

O

P

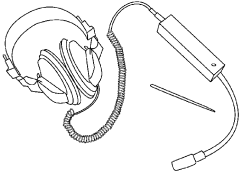
# PREPARATION

< PREPARATION >

[WITH INTELLIGENT KEY SYSTEM]

## Commercial Service Tool

INFOID:000000001539082

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

# HOOD

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

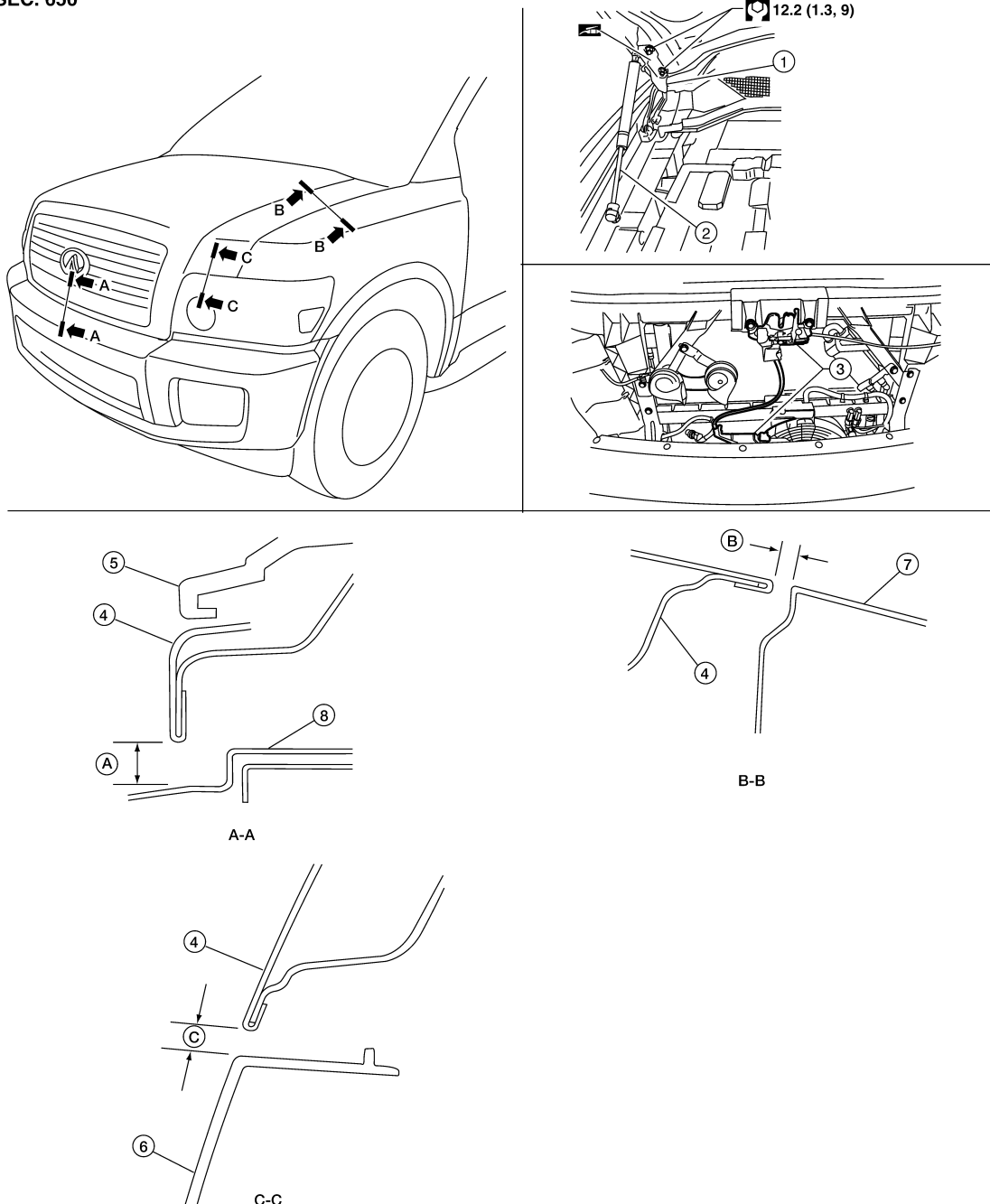
## ON-VEHICLE REPAIR

### HOOD

#### Fitting Adjustment

INFOID:000000001542676

SEC. 650



- 1. Hood hinge
- 4. Hood assembly
- 7. Front fender
- B. 2.0 mm (0.079 in)

- 2. Hood stay
- 5. Front grille
- 8. Front bumper fascia
- C. 8.0 mm (0.315 in)

- 3. Hood lock assembly
- 6. Headlamp
- A. 8.0 mm (0.315 in)

WIA0899E

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
DLK  
L  
M  
N  
O  
P

# HOOD

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

## CLEARANCE AND SURFACE HEIGHT ADJUSTMENT

1. Remove the front grille. Refer to [EXT-17, "Removal and Installation"](#).
2. Remove the hood lock assembly and adjust the height by rotating the bumper rubber until the hood clearance of hood and fender becomes 1 mm (0.04 in) lower than fitting standard dimension.
3. Temporarily tighten the hood lock, and position it by engaging it with the hood striker. Check the lock and striker for looseness, and tighten the lock mounting bolt to the specified torque.
4. Adjust the clearance and surface height of hood and fender according to the fitting standard dimension by rotating right and left bumper rubbers.

### CAUTION:

**Adjust right/left gap between hood and each part to the following specification.**

**Hood and headlamp (B-B) : Less than 2.0 mm**

5. Install the front grille. Refer to [EXT-17, "Removal and Installation"](#).

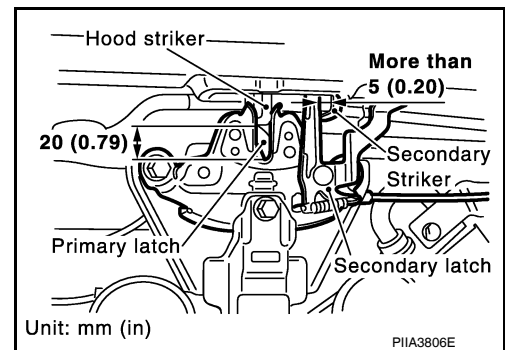
## HOOD LOCK ADJUSTMENT

1. Remove the front grille. Refer to [EXT-17, "Removal and Installation"](#).
2. Move the hood lock to the left or right so that striker center is vertically aligned with hood lock center (when viewed from vehicle front).
3. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height or by pressing it lightly approx. 3 kg (29 N, 7lb).

### CAUTION:

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

4. After adjusting hood lock, tighten the lock bolts.
5. Install the front grille. Refer to [EXT-17, "Removal and Installation"](#).



INFOID:000000001542677

## Removal and Installation of Hood Assembly

1. Support the hood striker with proper material to prevent it from falling.

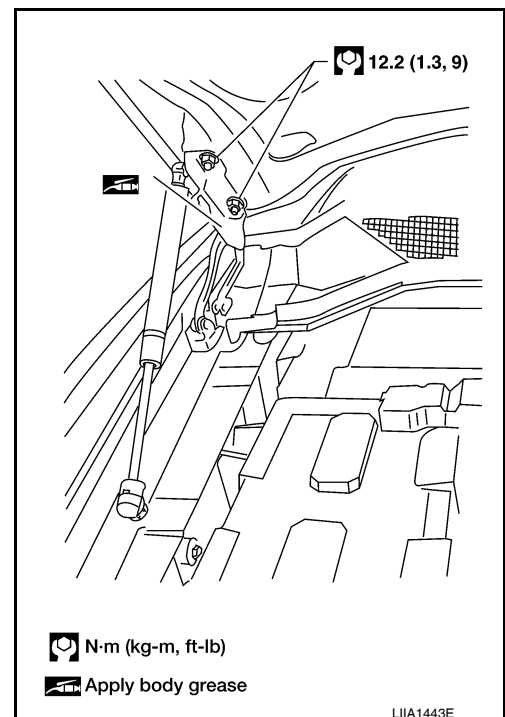
### WARNING:

**Body injury may occur if no supporting rod is holding the hood open when removing the damper stay.**

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

### CAUTION:

**Operate with two workers, because of its heavy weight.**  
Installation is in the reverse order of removal.



## HOOD STAY

### Disposal



# HOOD

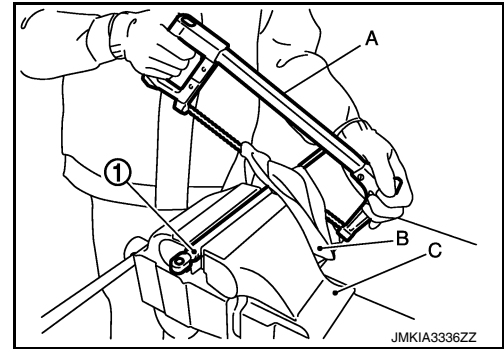
## < ON-VEHICLE REPAIR >

## [WITH INTELLIGENT KEY SYSTEM]

1. Secure hood stay (1) using a vise (C)
2. Using hacksaw (A) slowly make 2 holes in the hood stay (1), in numerical order as shown in the figure

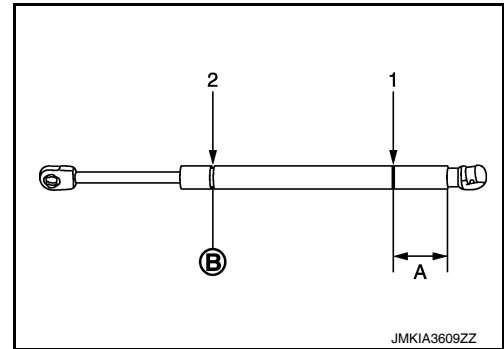
### CAUTION:

- When cutting a hole on hood stay (1), always cover a hacksaw using a shop cloth (B) to avoid scattering metal fragments or oil
- Wear eye protection (safety glasses)
- Wear gloves



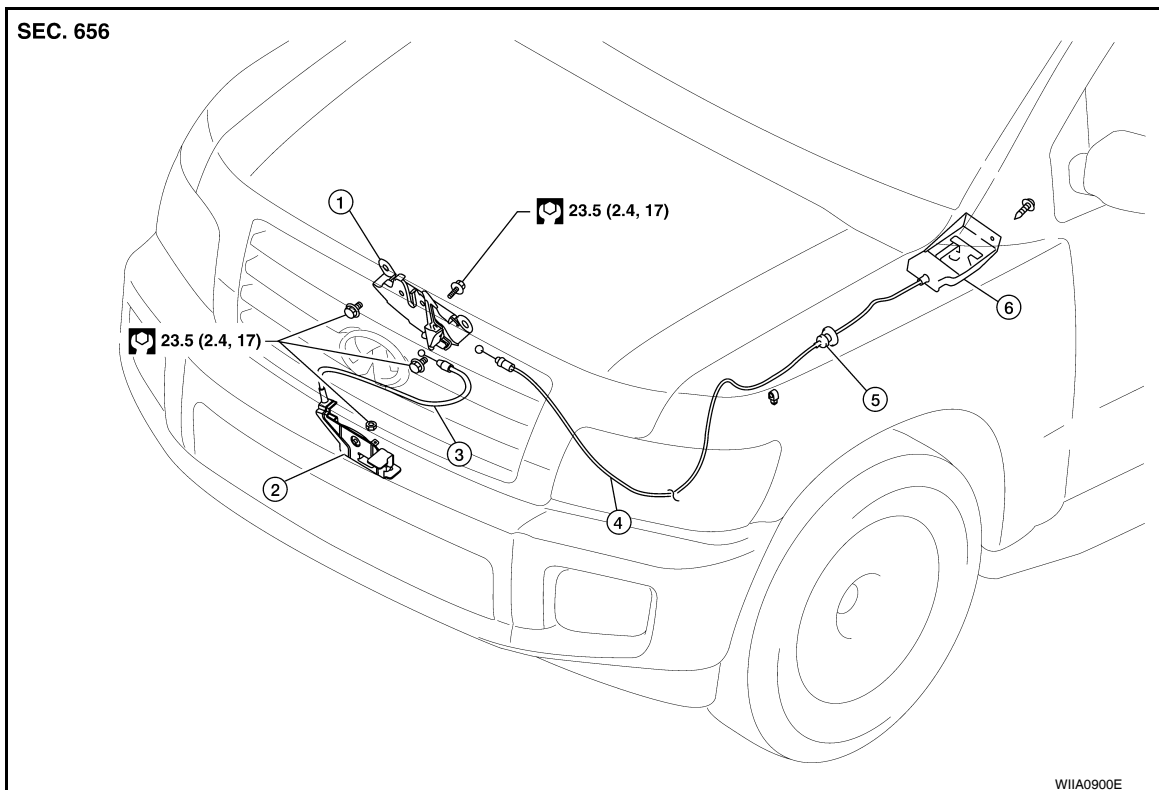
A: 20 mm (0.787 In)

B: Cut at the groove



## Removal and Installation of Hood Lock Control

INFOID:0000000001542678



- |                            |   |                              |
|----------------------------|---|------------------------------|
| 1. Hood lock assembly      | 2. Secondary hood lock release assembly | 3. Secondary hood lock cable |
| 4. Primary hood lock cable | 5. Grommet                              | 6. Hood lock release handle  |

## REMOVAL

# HOOD

## < ON-VEHICLE REPAIR >

## [WITH INTELLIGENT KEY SYSTEM]

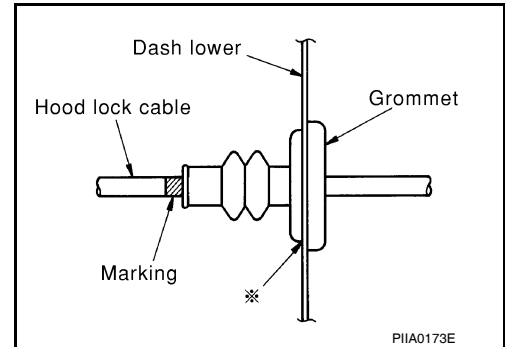
1. Remove the front fender protector (LH). Refer to [EXT-23. "Removal and Installation"](#).
2. Disconnect the hood lock primary and secondary hood lock cables from the hood lock. Unclip the primary cable from the radiator core support upper and hood ledge.
3. Remove the hood lock assembly.
4. Remove the secondary hood lock release assembly.
5. Remove the grommet from the dash lower, and pull the primary hood lock cable into the passenger room.

### **CAUTION:**

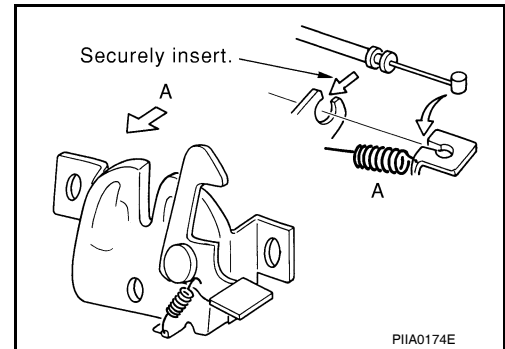
**While pulling, be careful not to damage the outside of the hood lock cable.**

## INSTALLATION

1. Pull the hood lock cable through the dash lower hole into the engine room.  
Be careful not to bend the cable too much, keeping the radius 100mm (3.94 in) or more.
2. Make sure the cable is not offset from the positioning grommet, and push the grommet into the dash lower hole securely.
3. Apply sealant around the grommet at \* mark.



4. Install the primary and secondary cables securely to the hood lock.
5. Install the hood lock and the secondary hood lock release assemblies.
6. Check the hood lock adjustment and hood opener operation.  
Refer to [DLK-223. "Fitting Adjustment"](#).



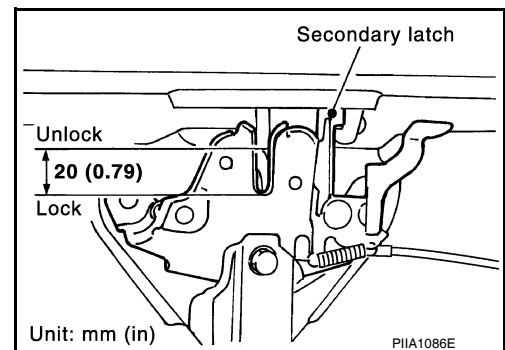
## Hood Lock Control Inspection

INFOID:000000001542679

### **CAUTION:**

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

1. Remove the front grille. Refer to [EXT-17. "Removal and Installation"](#).
2. Make sure the secondary latch is properly engaged with the secondary striker with hood's own weight by dropping it from approx. 200 mm (7.87 in) height.
3. While operating the hood opener, carefully make sure the front end of the hood is raised by approx. 20 mm (0.79 in). Also make sure the hood opener returns to the original position.

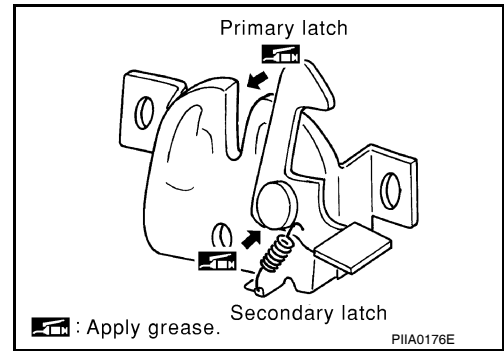


## HOOD

### < ON-VEHICLE REPAIR >

### [WITH INTELLIGENT KEY SYSTEM]

4. Check the hood lock lubrication condition. If necessary, apply "body grease" to the points shown in the figure.
5. Install the front grille. Refer to [EXT-17, "Removal and Installation"](#).



A

B

C

D

E

F

G

H

I

J

DLK

L

M

N

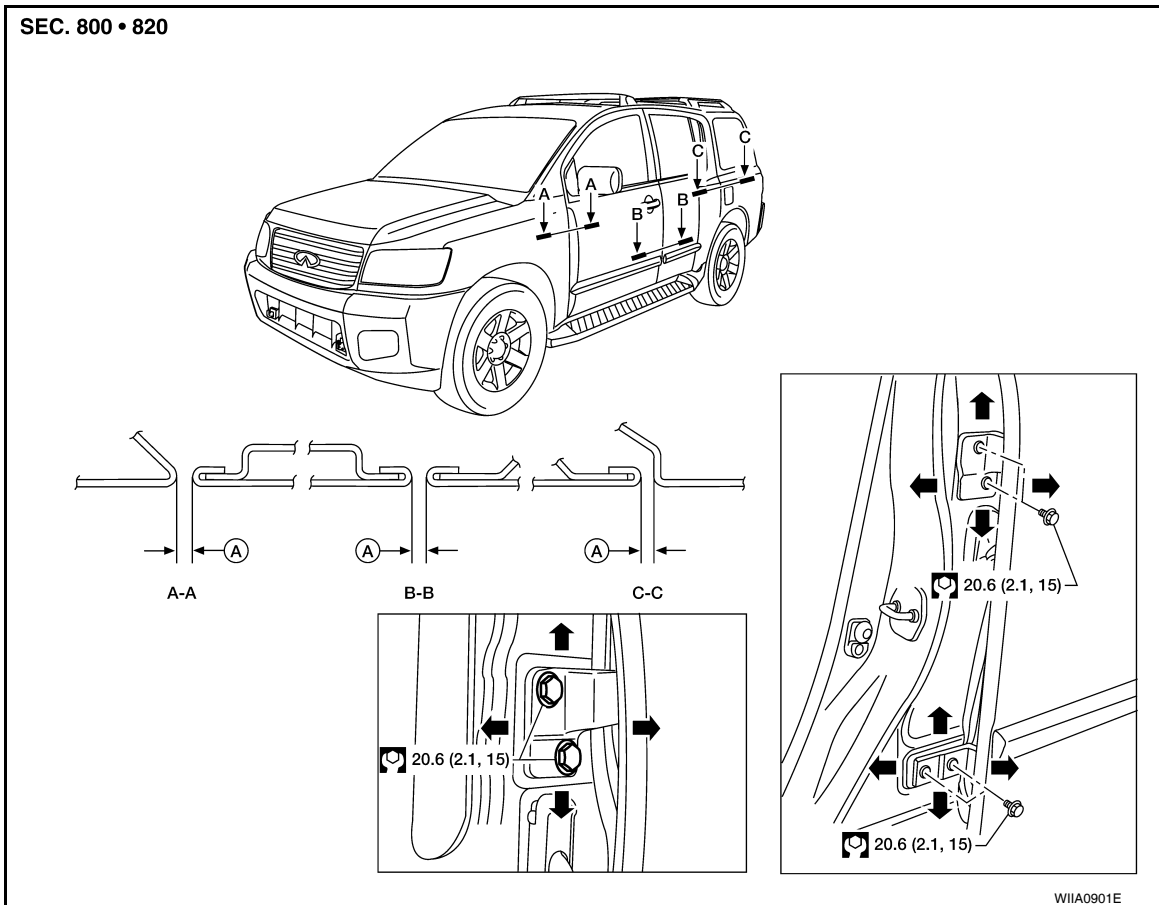
O

P

## DOOR

## Fitting Adjustment

INFOID:000000001542680



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 the front door at rear end to adjust.
3. Install the fender. Refer to [EXT-20, "Removal and Installation"](#).

## Rear door

Longitudinal clearance and surface height adjustment at front end

1. Loosen the bolts. Open the rear door, and raise the rear door at rear end to adjust.

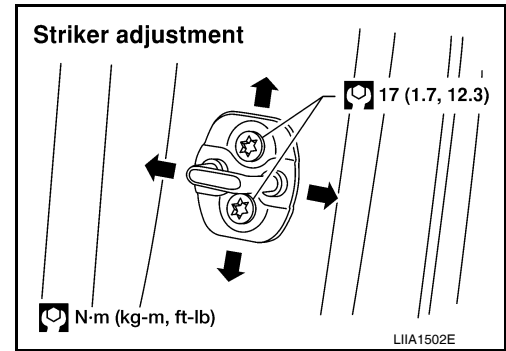
## Striker adjustment

# DOOR

## < ON-VEHICLE REPAIR >

## [WITH INTELLIGENT KEY SYSTEM]

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



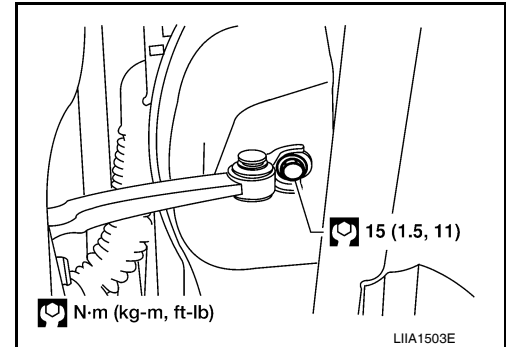
## Removal and Installation

### FRONT DOOR

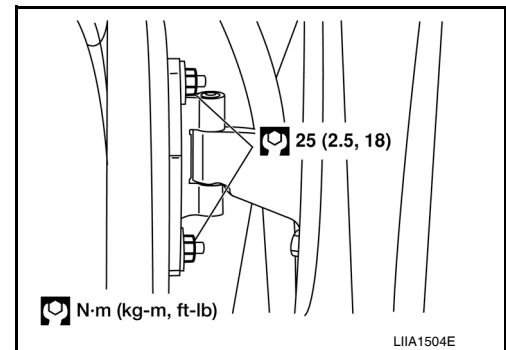
#### Removal

#### 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 door window and module assembly. Refer to [GW-9, "Removal and Installation"](#).
  2. Remove the door harness.
  3. Remove the check link cover.
  4. Remove the check link bolt from the hinge pillar.



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



#### Installation

Installation is in the reverse order of removal.

### REAR DOOR

#### Removal

#### CAUTION:

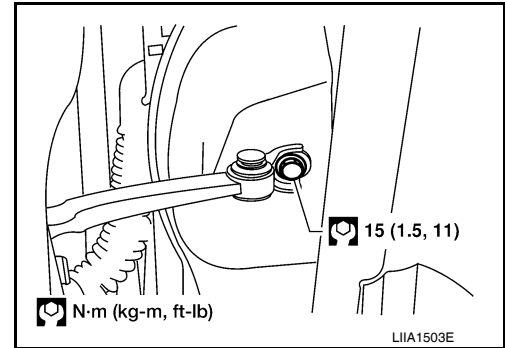
- When removing and installing the door assembly, support the door with a jack and shop cloth to protect the door and body.
- When removing and installing door assembly, be sure to carry out the fitting adjustment.
- Check the hinge rotating part for poor lubrication. If necessary, apply "body grease".

## DOOR

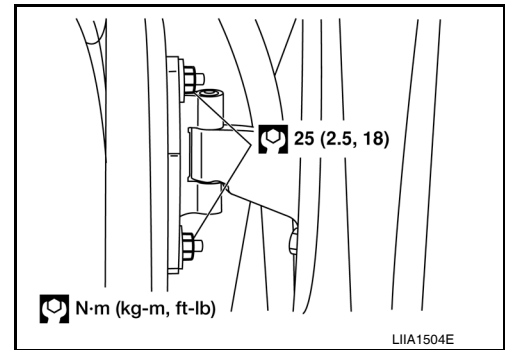
### < ON-VEHICLE REPAIR >

### [WITH INTELLIGENT KEY SYSTEM]

1. Remove the door window and module assembly. Refer to [GW-13, "Removal and Installation"](#).
2. Remove the door harness.
3. Remove the check link cover.
4. Remove the check link bolt from the hinge pillar.



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



#### Installation

Installation is in the reverse order of removal.

### BACK DOOR

#### Removal

#### **WARNING:**

**Always support back door when removing or replacing back door stays. Power back door opener will not support back door with back door stays removed.**

1. Remove the back door glass. Refer to [GW-7, "Removal and Installation"](#).
2. Remove the back door lock assembly. Refer to [DLK-237, "Door Lock Assembly"](#).
3. Remove the rear wiper motor. Refer to [WW-83, "Rear Wiper Motor"](#).
4. Remove the back door wire harness.
5. Remove the rear washer nozzle and hose from the back door. Refer to [WW-85, "Rear Washer Tube Layout"](#).

#### **CAUTION:**

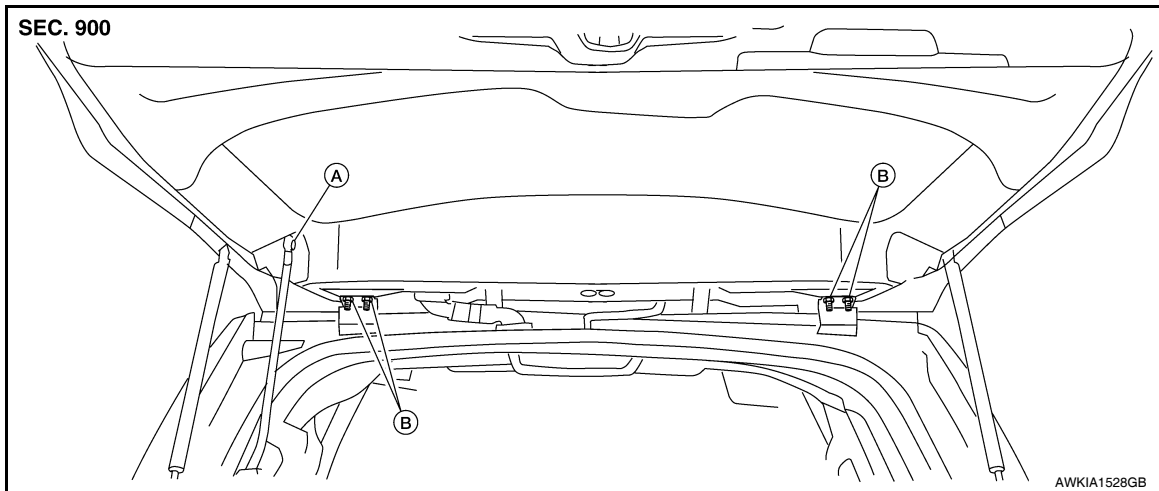
**Two technicians should be used to avoid damaging the back door during removal.**

6. Support the back door.
7. Disconnect the power back door lift arm from the door.
8. Remove the back door stays.
9. Remove the door side nuts and the back door assembly.

# DOOR

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]



- A. 15.2 Nm (1.6 Kg-m, 11 ft-lb)      B. 17.0 Nm (1.7 Kg-m, 13 ft-lb)

## Installation

Installation is in the reverse order of removal.

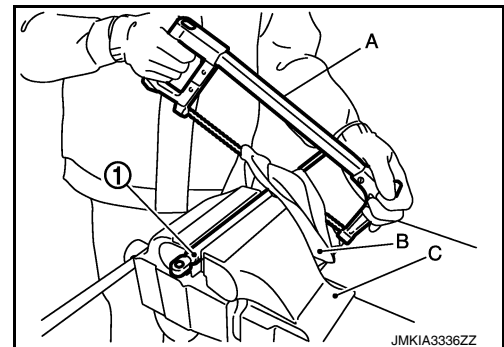
## BACK DOOR STAY

### Disposal

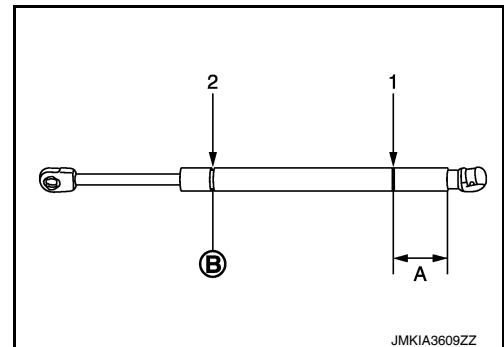
1. Secure back door stay (1) using a vise (C)
2. Using hacksaw (A) slowly make 2 holes in the back door stay (1), in numerical order as shown in the figure

### CAUTION:

- When cutting a hole on back door stay (1), always cover a hacksaw using a shop cloth (B) to avoid scattering metal fragments or oil
- Wear eye protection (safety glasses )
- Wear gloves



- A: 20 mm (0.787 In)  
B: Cut at the groove



# FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

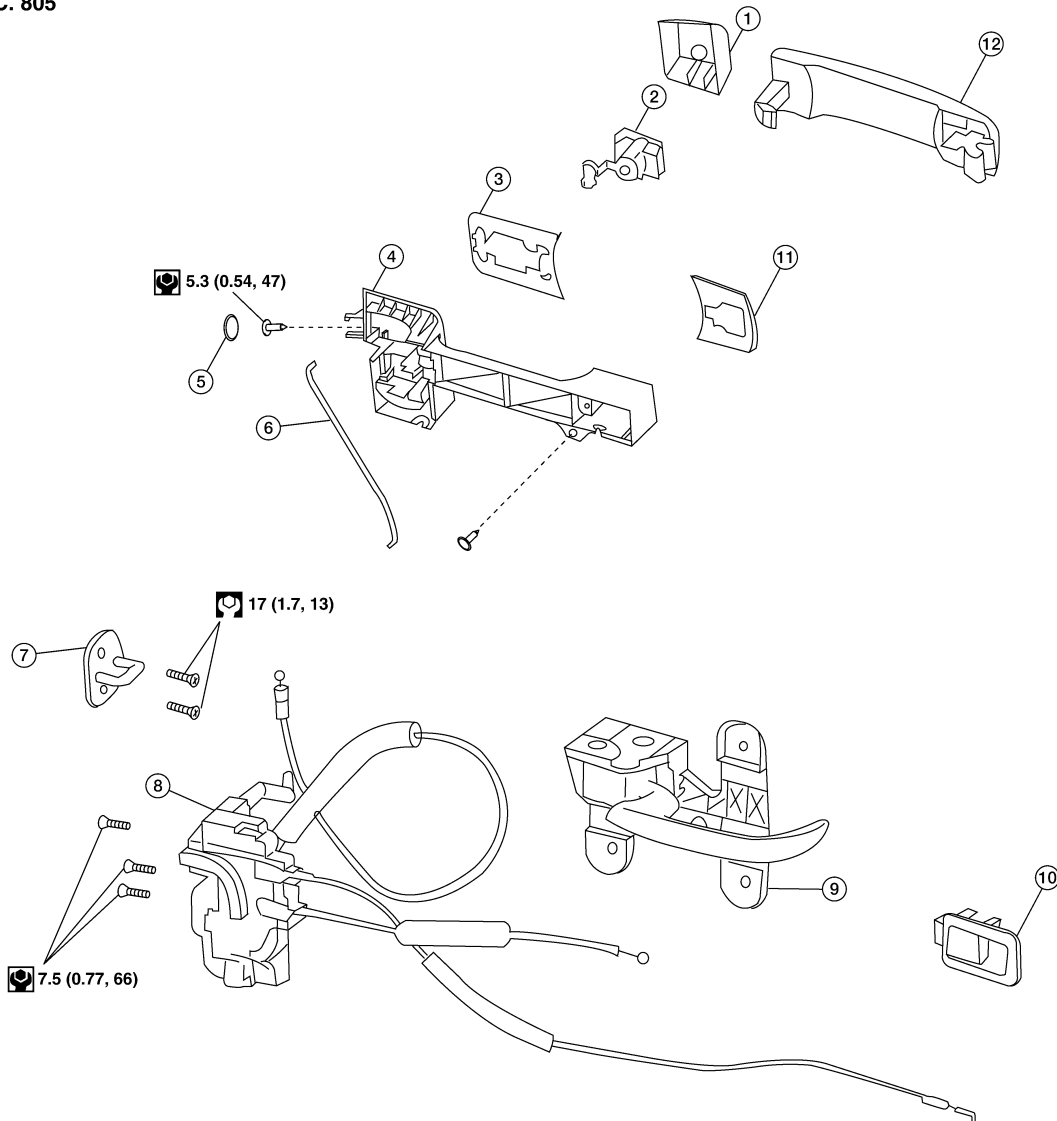
[WITH INTELLIGENT KEY SYSTEM]

## FRONT DOOR LOCK

### Component Structure

INFOID:000000001542671

SEC. 805



ALKIA0898GB

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

### Removal and Installation

INFOID:000000001542672

#### REMOVAL

1. Remove the front door window regulator. Refer to [GW-9, "Removal and Installation"](#).
2. Remove the front door window rear glass run.



# FRONT DOOR LOCK

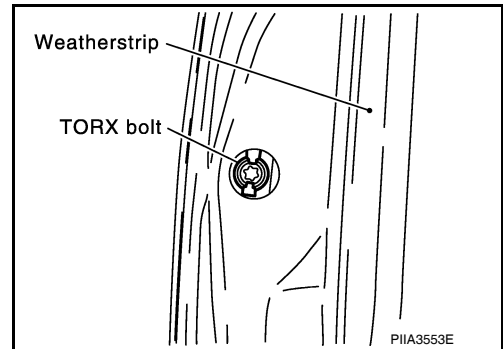
< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

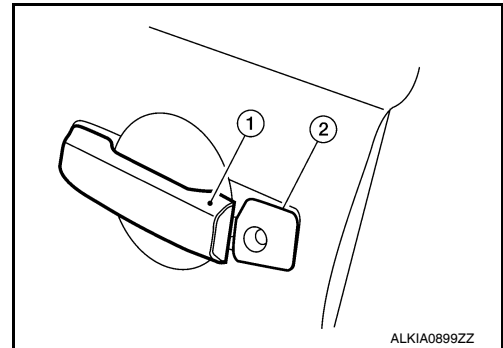
3. Remove the door side grommet, and the bolt (TORX T30) from the grommet hole.

**Torx bolt**

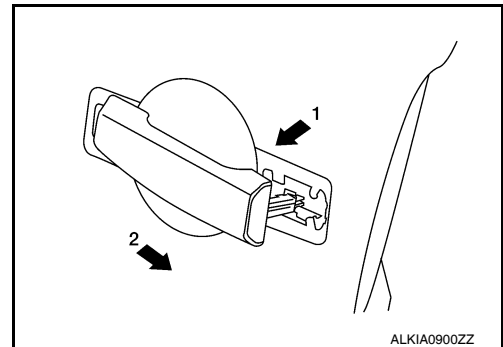
**5.3 N·m (0.54 kg-m, 47 in-lb)**



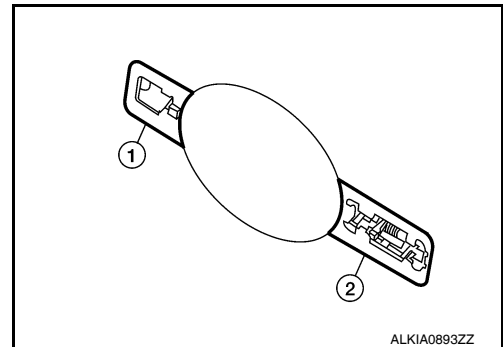
4. While pulling the outside handle (1), remove the door key cylinder assembly or outside handle escutcheon (2).



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



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



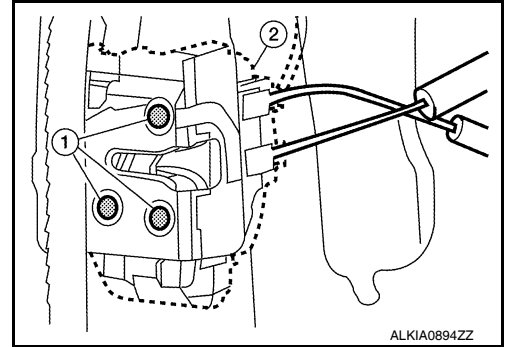
## FRONT DOOR LOCK

< ON-VEHICLE REPAIR >

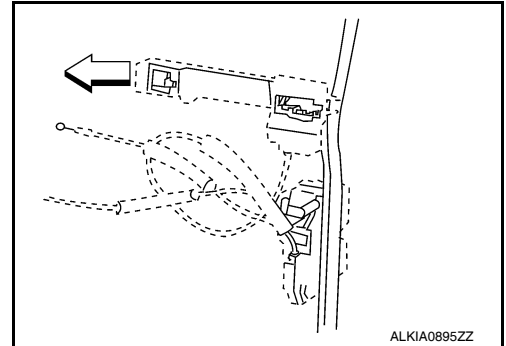
[WITH INTELLIGENT KEY SYSTEM]

8. Remove the TORX bolts (T30) (1), and separate the door lock assembly (2) from the door.

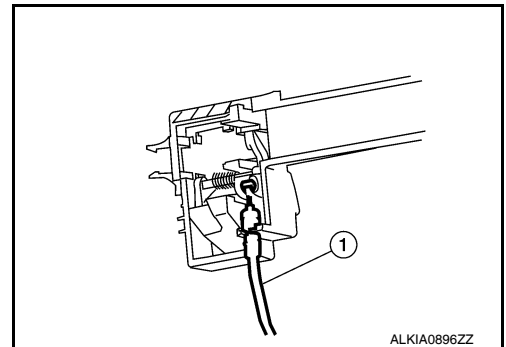
**Door lock assembly bolts 7.5 N·m (0.77 kg-m, 66 in-lb)**



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



10. Disconnect the door lock actuator electrical connector.
11. Separate the outside handle cable connection (1) from the outside handle bracket.



### INSTALLATION

Installation is in the reverse order of removal.

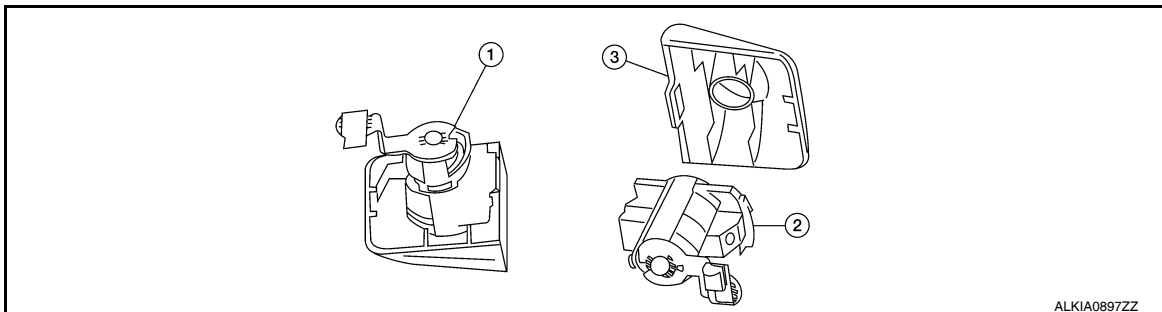
#### **CAUTION:**

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

### Disassembly and Assembly

INFOID:000000001542673

### DOOR KEY CYLINDER ASSEMBLY



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

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

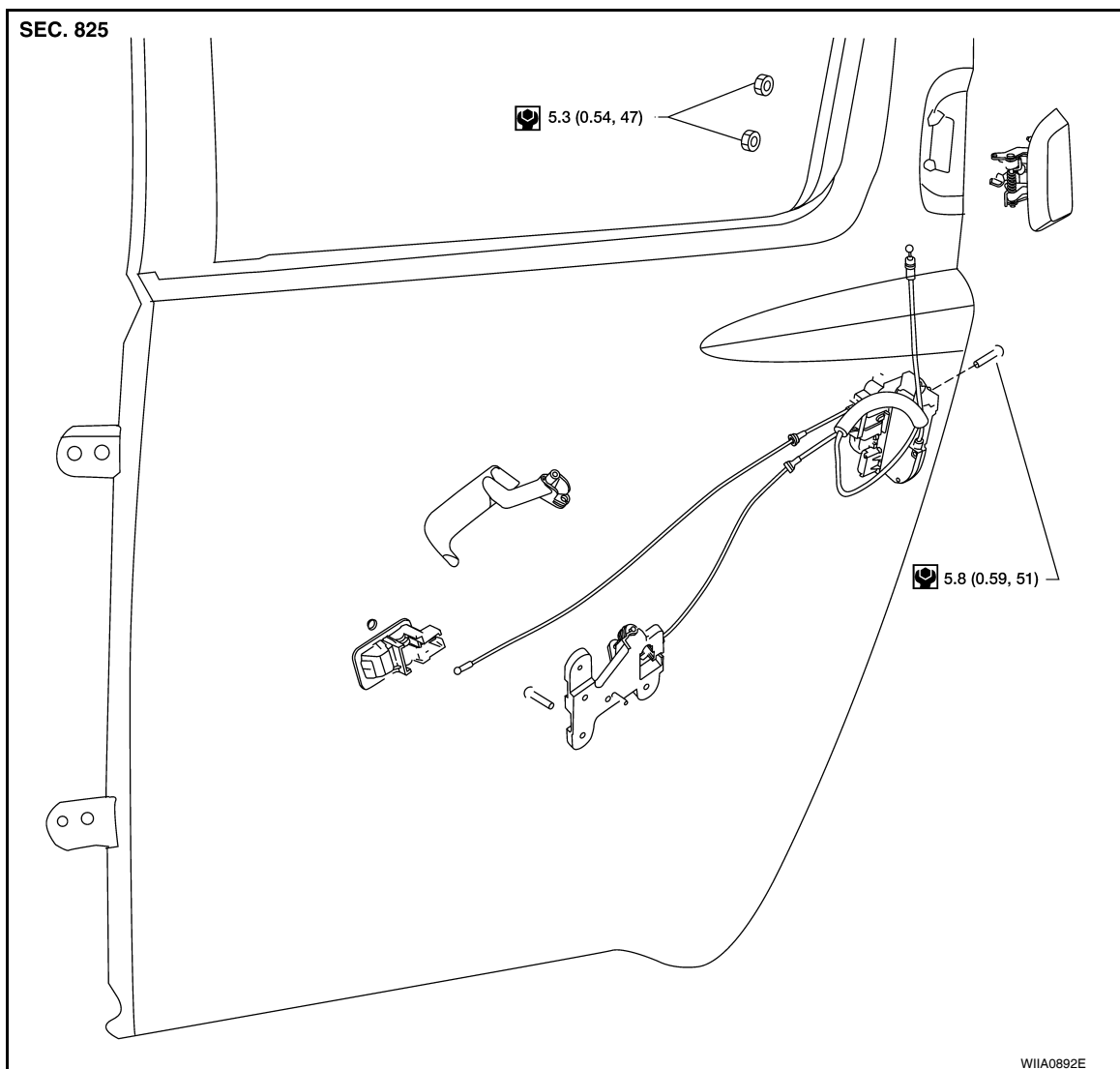
# REAR DOOR LOCK

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

## REAR DOOR LOCK

### Component Structure



### Removal and Installation

INFOID:000000001539093

#### REMOVAL

1. Remove the rear door window and rear door module assembly. Refer to [GW-13. "Removal and Installation"](#).
2. Remove door grommets, and remove outside handle nuts from grommet hole.
3. Remove outside handle.
4. Disconnect the door lock actuator connector.
5. Reach to separate outside handle rod connection.

#### INSTALLATION

Installation is in the reverse order of removal.

# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

[WITH INTELLIGENT KEY SYSTEM]

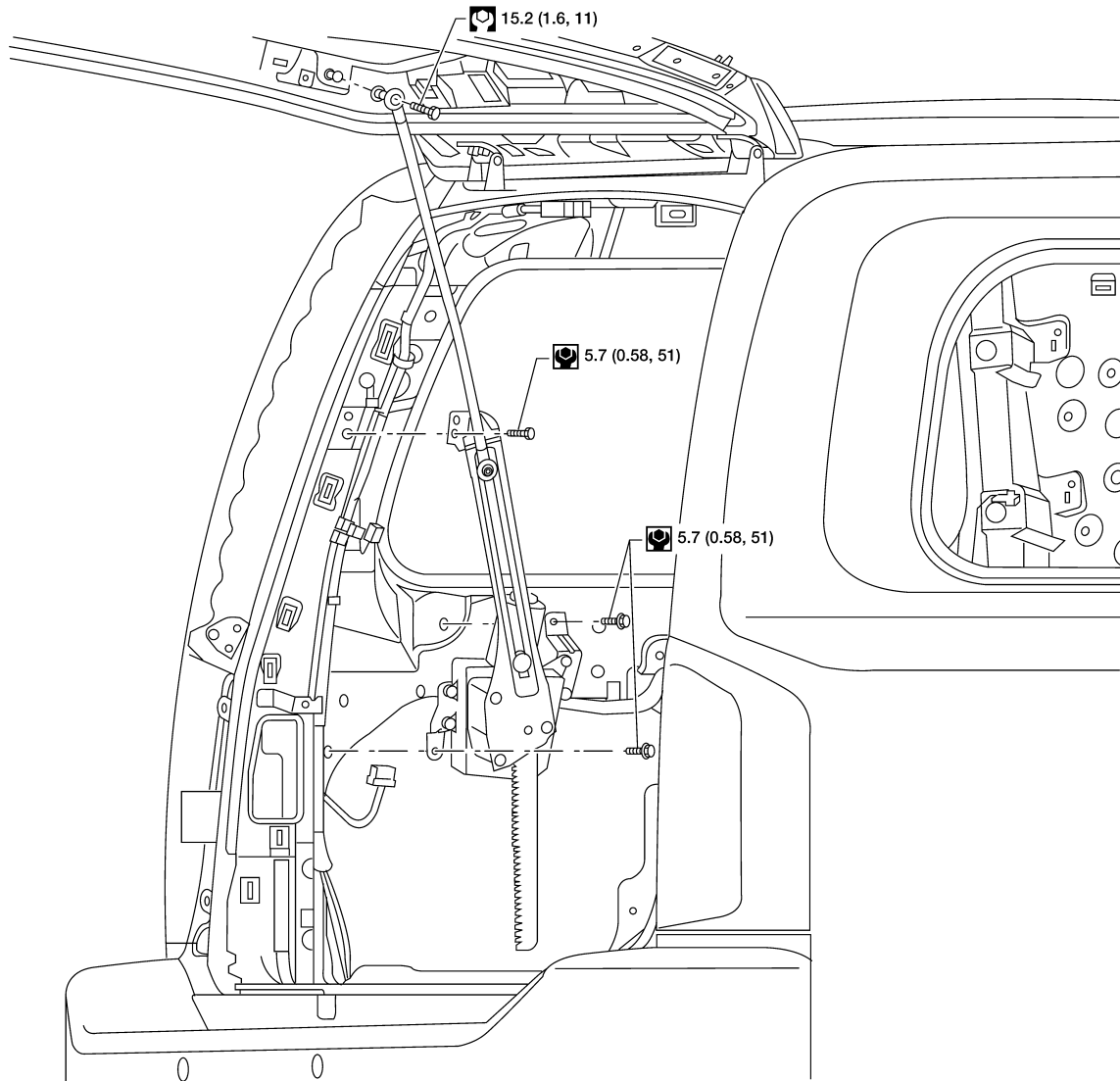
## BACK DOOR LOCK

### Power Back Door Opener

INFOID:000000001539094

#### Removal

SEC. 905



WIIA0893E

1. Remove the LH luggage side upper. Refer to [INT-19, "Removal and Installation"](#).
2. Disconnect the power back door motor electrical connector.
3. Disconnect the ball socket from the back door.
4. Remove the power back door motor assembly.

#### Installation

Installation is in the reverse order of removal.

# BACK DOOR LOCK

< ON-VEHICLE REPAIR >

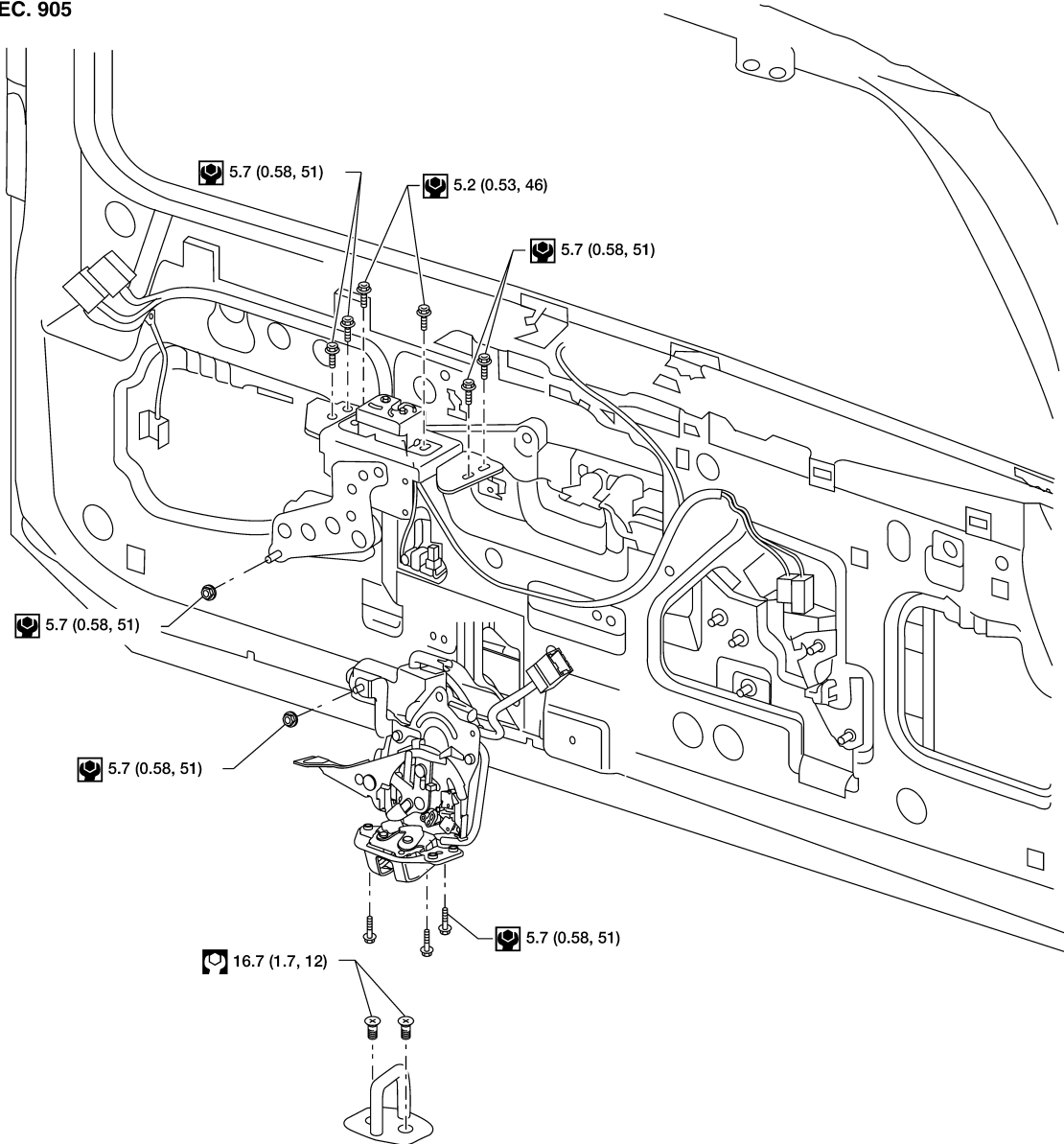
[WITH INTELLIGENT KEY SYSTEM]

INFOID:000000001539095

## Door Lock Assembly

### Removal

SEC. 905



WIA0894E

1. Remove the lower back door trim panel. Refer to [INT-21, "Removal and Installation"](#).
2. Remove the weathershields.
3. Disconnect the back door lock electrical connectors.
4. Remove the back door lock assembly.
5. Disconnect the back door glass lock electrical connector.
6. Remove the back door glass lock.

### Installation

Installation is in the reverse order of removal.