

# SECTION PWC

## POWER WINDOW CONTROL SYSTEM

### CONTENTS

<b>BASIC INSPECTION</b> .....	3	POWER WINDOW MAIN SWITCH : Component Function Check .....	10
<b>DIAGNOSIS AND REPAIR WORKFLOW</b> .....	3	POWER WINDOW MAIN SWITCH : Diagnosis Procedure .....	10
WorkFlow .....	3	POWER WINDOW MAIN SWITCH : Component Inspection .....	14
<b>INSPECTION AND ADJUSTMENT</b> .....	4	POWER WINDOW MAIN SWITCH : Special Repair Requirement .....	15
<b>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</b> .....	4	<b>FRONT POWER WINDOW SWITCH</b> .....	15
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description .....	4	FRONT POWER WINDOW SWITCH : Description .....	15
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement .....	4	FRONT POWER WINDOW SWITCH : Component Function Check .....	15
<b>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</b> .....	4	FRONT POWER WINDOW SWITCH : Diagnosis Procedure .....	16
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description .....	4	FRONT POWER WINDOW SWITCH : Component Inspection .....	17
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement .....	4	<b>REAR POWER WINDOW SWITCH</b> .....	17
<b>FUNCTION DIAGNOSIS</b> .....	6	REAR POWER WINDOW SWITCH : Description .....	17
<b>POWER WINDOW SYSTEM</b> .....	6	REAR POWER WINDOW SWITCH : Component Function Check .....	17
System Diagram .....	6	REAR POWER WINDOW SWITCH : Diagnosis Procedure .....	18
System Description .....	6	REAR POWER WINDOW SWITCH : Component Inspection .....	19
Component Parts Location .....	7	<b>POWER WINDOW MOTOR CIRCUIT</b> .....	21
Component Description .....	8	<b>DRIVER SIDE</b> .....	21
<b>DIAGNOSIS SYSTEM (BCM)</b> .....	9	DRIVER SIDE : Description .....	21
<b>COMMON ITEM</b> .....	9	DRIVER SIDE : Component Function Check .....	21
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM) .....	9	DRIVER SIDE : Diagnosis Procedure .....	21
<b>COMPONENT DIAGNOSIS</b> .....	10	DRIVER SIDE : Component Inspection .....	22
<b>POWER SUPPLY AND GROUND CIRCUIT</b> .....	10	DRIVER SIDE : Special Repair Requirement .....	22
<b>POWER WINDOW MAIN SWITCH</b> .....	10	<b>PASSENGER SIDE</b> .....	22
POWER WINDOW MAIN SWITCH : Description .....	10	PASSENGER SIDE : Description .....	22
		PASSENGER SIDE : Component Function Check .....	22
		PASSENGER SIDE : Diagnosis Procedure .....	23

PASSENGER SIDE : Component Inspection .....	24	Diagnosis Procedure .....	73
<b>REAR LH .....</b>	<b>24</b>	<b>DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE .....</b>	<b>74</b>
REAR LH : Description .....	24	Diagnosis Procedure .....	74
REAR LH : Component Function Check .....	24	<b>FRONT PASSENGER SIDE POWER WIN- DOW ALONE DOES NOT OPERATE .....</b>	<b>75</b>
REAR LH : Diagnosis Procedure .....	24	Diagnosis Procedure .....	75
REAR LH : Component Inspection .....	25	<b>REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE .....</b>	<b>76</b>
<b>REAR RH .....</b>	<b>26</b>	Diagnosis Procedure .....	76
REAR RH : Description .....	26	<b>REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE .....</b>	<b>77</b>
REAR RH : Component Function Check .....	26	Diagnosis Procedure .....	77
REAR RH : Diagnosis Procedure .....	26	<b>ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) .....</b>	<b>78</b>
REAR RH : Component Inspection .....	27	Diagnosis Procedure .....	78
<b>ENCODER CIRCUIT .....</b>	<b>28</b>	<b>AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE) .....</b>	<b>79</b>
<b>DRIVER SIDE .....</b>	<b>28</b>	Diagnosis Procedure .....	79
DRIVER SIDE : Description .....	28	<b>POWER WINDOW LOCK SWITCH DOES NOT FUNCTION .....</b>	<b>80</b>
DRIVER SIDE : Component Function Check .....	28	Diagnosis Procedure .....	80
DRIVER SIDE : Diagnosis Procedure .....	28	<b>PRECAUTION .....</b>	<b>81</b>
<b>POWER WINDOW LOCK SWITCH .....</b>	<b>31</b>	<b>PRECAUTIONS .....</b>	<b>81</b>
Description .....	31	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN- SIONER" .....	81
Component Function Check .....	31	<b>ON-VEHICLE MAINTENANCE .....</b>	<b>82</b>
Special Repair Requirement .....	31	<b>PRE-INSPECTION FOR DIAGNOSTIC .....</b>	<b>82</b>
<b>ECU DIAGNOSIS .....</b>	<b>32</b>	Basic Inspection .....	82
<b>BCM (BODY CONTROL MODULE) .....</b>	<b>32</b>	<b>ON-VEHICLE REPAIR .....</b>	<b>83</b>
Reference Value .....	32	<b>POWER WINDOW MAIN SWITCH .....</b>	<b>83</b>
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) - .....	47	Exploded View .....	83
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) - .....	52	Removal and Installation .....	83
Fail Safe .....	57		
DTC Inspection Priority Chart .....	58		
DTC Index .....	59		
<b>POWER WINDOW MAIN SWITCH .....</b>	<b>60</b>		
Reference Value .....	60		
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) - .....	61		
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) - .....	66		
Fail Safe .....	71		
<b>SYMPTOM DIAGNOSIS .....</b>	<b>73</b>		
<b>NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH .....</b>	<b>73</b>		

# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

WorkFlow

INFOID:000000000990477

DETAILED FLOW

#### 1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in.

>> GO TO 2.

#### 2.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.  
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

#### 3.PERFORM "BASIC INSPECTION"

Perform the basic inspection.  
Refer to [PWC-82, "Basic Inspection"](#).

>> GO TO 4.

#### 4.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

Use "Symptom diagnosis" from the symptom inspection result in step 2. Then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 5.

#### 5.IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 6.

#### 6.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 7.

#### 7.FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.  
NO >> GO TO 3.

## INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

### INSPECTION AND ADJUSTMENT

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

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

INFOID:000000000990478

Initial setting is necessary.

- When the power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of glass.
- Removal and installation of door glass run.

#### NOTE:

The following specified operations are not performed under the non-initialized condition.

- Auto-up operation
- Anti-pinch function

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

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

INFOID:000000000990479

#### INITIALIZATION PROCEDURE

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

#### CHECK ANTI-PINCH FUNCTION

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

#### CAUTION:

- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Do not check with hands and other body parts because they may be pinched. Do not get pinched.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to [PWC-71, "Fail Safe"](#).
- Finish initial setting. Otherwise, next operation cannot be done.

1. Auto-up operation
2. Anti-pinch function

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

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

INFOID:000000000990480

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

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

INFOID:000000000990481

## INSPECTION AND ADJUSTMENT

### < BASIC INSPECTION >

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#) for initialization procedure and check anti-pinch function.

A

B

C

D

E

F

G

H

I

J

PWC

L

M

N

O

P

# POWER WINDOW SYSTEM

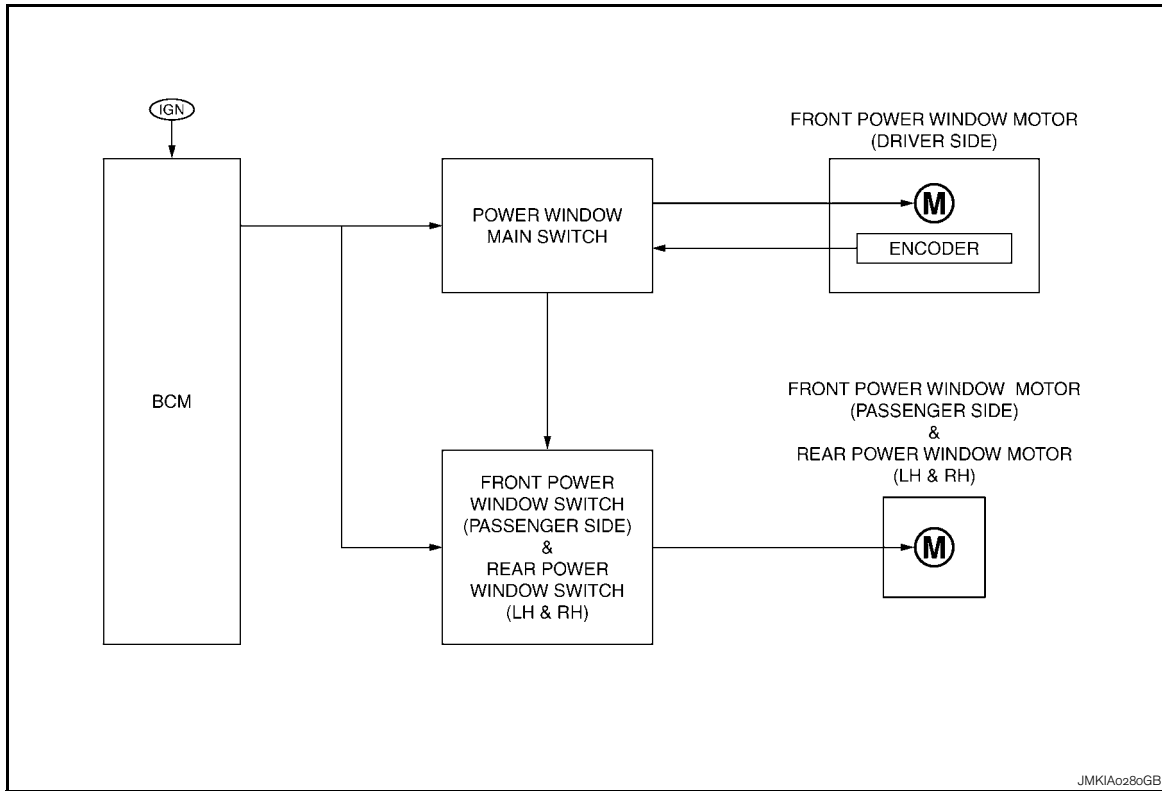
< FUNCTION DIAGNOSIS >

## FUNCTION DIAGNOSIS

### POWER WINDOW SYSTEM

#### System Diagram

INFOID:000000000990482



#### System Description

INFOID:000000000990483

#### POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator
Encoder	Encoder pulse signal	Power window control	Front power window motor (driver side)
Power window main switch	Front power window motor (driver side) UP/DOWN signal		
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal		Front power window motor (passenger side)
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor (LH & RH)

#### FRONT POWER WINDOW SWITCH (PASSENGER SIDE) & REAR POWER WINDOW SWITCH (LH & RH)

#### INPUT/OUTPUT SIGNAL CHART

# POWER WINDOW SYSTEM

## < FUNCTION DIAGNOSIS >

Item	Input signal to front power window switch (passenger side) & rear power window switch (LH & RH)	Front power window switch (passenger side) & rear power window switch (LH & RH) function	Actuator
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	Front power window motor (passenger side)
Rear power window switch (LH & RH)	Rear power window motor (LH & RH) UP/DOWN signal		Rear power window motor (LH & RH)

### POWER WINDOW OPERATION

- Power window main switch (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.

### POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE)

- AUTO UP/DOWN operation can be performed when power window main switch turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- Power window motor is operable in case encoder is malfunctioning.

### POWER WINDOW LOCK

Ground circuit inside power window main switch shuts off when power window lock switch is ON. This inhibits power window switch operation except with the power window main switch.

### ANTI-PINCH OPERATION (FRONT DRIVER SIDE)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150mm or 2 seconds when detected.
- Encoder continues detecting the movement of front power window motor (driver side) and transmits to power window main switch as the encoder pulse signal while front power window motor (driver side) is operating.
- Resistance is applied to the front power window motor (driver side) rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window main switch controls to lower the window glass for 150mm or 2 seconds after it detects encoder pulse signal frequency change.

### OPERATION CONDITION

- When front door glass (driver side) AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

#### NOTE:

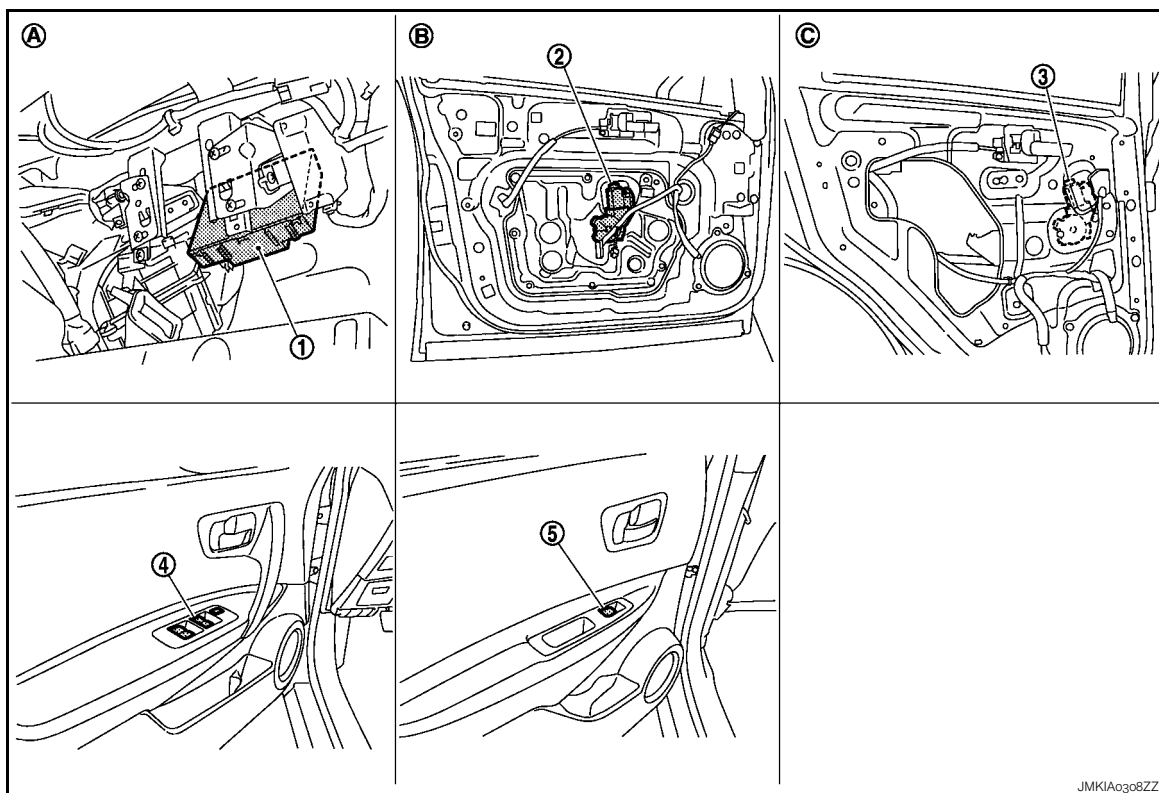
Depending on environment and driving conditions, if a similar impact or load is applied to the door glass, it may lower.

### Component Parts Location

INFOID:000000000990484

# POWER WINDOW SYSTEM

## < FUNCTION DIAGNOSIS >



- |   |  |  |
|---|--|--|
| 1. BCM<br>M65, M66, M67                                   | 2. Front power window motor (driver side)<br>LHD:D7<br>RHD:D27 | 3. Rear power window motor LH<br>LHD:D82<br>RHD:D112 |
| 4. Power window main switch<br>LHD:D5, D6<br>RHD:D25, D26 | 5. Rear power window switch LH<br>LHD:D83<br>RHD:D113          |  |

- |   |  |   |
|---|--|---|
| A. View with dash side lower (passenger side) | B. View with front door finisher removed | C. View with rear door finisher removed |
|---|--|---|

## Component Description

INFOID:000000000990485

Component	Function
BCM	<ul style="list-style-type: none"> <li>Supplies power supply to power window switch.</li> <li>Controls retained power.</li> </ul>
Power window main switch	<ul style="list-style-type: none"> <li>Directly controls all power window motor of all doors.</li> <li>Controls anti-pinch operation of power window.</li> </ul>
Front power window switch	Controls power window motor of front passenger side door.
Rear power window switch (LH & RH)	Controls power window motor of rear right and left doors.
Front power window motor (driver side)	<ul style="list-style-type: none"> <li>Integrates the encoder and power window motor.</li> <li>Starts operating with signals from power window main switch.</li> <li>Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.</li> </ul>
Front door window motor (passenger side)	Starts operating with signals from power window main switch & front power window switch (passenger side).
Rear power window motor (LH & RH)	Starts operating with signals from power window main switch & rear power window switch (LH & RH).



## DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

### DIAGNOSIS SYSTEM (BCM)

#### COMMON ITEM

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

INFOID:000000001116527

#### 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-61, "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	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER		×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY		×	
Combination switch	COMB SW		×	
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
Signal buffer system	SIGNAL BUFFER		×	×
PTC heater system	PTC HEATER		×	×

# POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

## COMPONENT DIAGNOSIS

### POWER SUPPLY AND GROUND CIRCUIT

#### POWER WINDOW MAIN SWITCH

##### POWER WINDOW MAIN SWITCH : Description

INFOID:000000000990487

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when power window main switch is operated.

##### POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000000990488

###### Power Window Main Switch

###### 1. CHECK POWER WINDOW MAIN SWITCH FUNCTION

Does power window motor operate with power window main switch operation?

Is the inspection result normal?

- YES >> Power window main switch power supply and ground circuit are OK.  
NO >> Refer to [PWC-10, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"](#).

##### POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000000990489

###### Power Window Main Switch Power Supply Circuit Check

###### 1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window main switch connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Power window main switch connector	Terminal	
D5 (D25)	10	Battery voltage
D6 (D26)	19	

():RHD models

Is the inspection result normal?

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

###### 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector and power window main switch connector.
3. Check continuity between BCM connector and power window main switch connector.

BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M67	53	D5 (D25)	10	Existed
	58	D6 (D26)	19	

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53		Not existed
	58		

():RHD models

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

### Is the inspection result normal?

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

### 3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector.
3. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D6 (D26)	17		Existed

( ):RHD models

### Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).  
NO >> Repair or replace harness.

### 4.CHECK BCM OUTPUT SIGNAL

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

Terminals			Voltage (V) (Approx.)
(+)	(-)		
BCM connector	Terminal		
M67	53	Ground	Battery voltage
	58		

### Is the inspection result normal?

- YES >> Check power window main switch output signal (front power window switch driver side) GO TO 5.  
YES >> Check power window main switch output signal (front power window switch passenger side) GO TO 6.  
YES >> Check power window main switch output signal (rear power window switch LH) GO TO 7.  
YES >> Check power window main switch output signal (rear power window switch RH) GO TO 8.  
NO >> Replace BCM. Refer to [BCS-64, "Exploded View"](#).

### 5.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH DRIVER SIDE)

1. Turn ignition switch ON.
2. Check voltage between power window main switch and ground.

Terminal			Window condition	Voltage (V) (Approx.)
(+)		(−)		
Power window main switch connector	Terminal			
D5 (D25)	16	Ground	UP	Battery voltage
			DOWN	0
	12		UP	0
			DOWN	Battery voltage

( ):RHD models

### Is the inspection result normal?

- YES >> Power window main switch is OK.  
NO >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

### 6.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH PAS-

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

### SENGER SIDE)

1. Turn ignition switch ON.
2. Check voltage between power window main switch and ground.

Terminal			Window condition	Voltage (V) (Approx.)
(+)		(–)		
Power window main switch connector	Terminal			
D5 (D25)	8	Ground	UP	Battery voltage
			DOWN	0
	11		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 9.

NO >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

## 7.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch ON.
2. Check voltage between power window main switch and ground.

Terminal			Window condition	Voltage (V) (Approx.)
(+)		(-)		
Power window main switch connector	Terminal			
D5 (D25)	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 10.

NO >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

## 8.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch ON.
2. Check voltage between power window main switch and ground.

Terminal			Window condition	Voltage (V) (Approx.)
(+)		(−)		
Power window main switch connector	Terminal			
D5 (D25)	7	Ground	UP	Battery voltage
			DOWN	0
	5		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 11.

## POWER SUPPLY AND GROUND CIRCUIT

### < COMPONENT DIAGNOSIS >

NO >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

### 9.CHECK HARNESS CONTINUITY (FRONT POWER WINDOW SWITCH PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.
3. Check continuity between power window main switch connector and rear power window switch LH connector.

Power window main switch connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
D5 (D25)	8	D45 (D65)	2	Existed
	11		3	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	8	Ground	Not existed
	11		

( ):RHD models

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair or replace harness.

### 10.CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector.
3. Check continuity between power window main switch connector and rear power window switch LH connector.

Power window main switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D5 (D25)	1	D83 (D113)	2	Existed
	3		3	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	1	Ground	Not existed
	3		

( ):RHD models

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair or replace harness.

### 11.CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH connector.
3. Check continuity between power window main switch connector and rear power window switch RH connector.

Power window main switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D5 (D25)	5	D103 (D93)	3	Existed
	7		2	

4. Check continuity between power window main switch connector and ground.

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	5		Not existed
	7		

( ):RHD models

Is the inspection result normal?

YES >> GO TO 12.

NO >> Repair or replace harness.

## 12.CHECK POWER WINDOW MAIN SWITCH

Check power window main switch.

Refer to [PWC-14. "POWER WINDOW MAIN SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> Replace power window main switch. Refer to [PWC-83. "Exploded View"](#). After that, [PWC-15. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

## POWER WINDOW MAIN SWITCH : Component Inspection

INFOID:000000000990490

## 1.CHECK POWER WINDOW MAIN SWITCH

1. Check power window main switch.

Power window main switch	Terminal		Power window main switch condition		Continuity
D5 (D25)	10	8	Passenger side	UP	Existed
	10	1	LH		
	10	7	RH		
	8	11	Passenger side	NEUTRAL	
	1	3	LH		
	5	7	RH		
	10	11	Passenger side	DOWN	
	10	3	LH		
	10	5	RH		

2. Check continuity power window main switch (power window lock switch). (Lock operation).

Power window main switch	Terminal		Power window main switch condition		Continuity
D5 (D25) D6 (D26)	11	17	Passenger side	UP	Not existed
	3		LH		
	5		RH		
	8		Passenger side	NEUTRAL	
	11				
	1				
	3				
	5		RH		
	7				
	8		Passenger side	DOWN	
	1		LH		
	7		RH		

3. Check continuity power window main switch (power window lock switch). (Unlock operation).

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

Power window main switch	Terminal		Power window main switch condition		Continuity
D5 (D25) D6 (D26)	11	17	Passenger side	UP	Existed
	3		LH		
	5		RH		
	8		Passenger side	NEUTRAL	
	11				
	1				
	3				
	5				
	7				
	8		Passenger side	DOWN	
	1				
	7				

():RHD models

Is the inspection result normal?

YES >> Power window main switch is OK.

NO >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

## POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:000000000990491

### 1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

### 2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to [PWC-28, "DRIVER SIDE : Component Function Check"](#)

## FRONT POWER WINDOW SWITCH

### FRONT POWER WINDOW SWITCH : Description

INFOID:000000000990492

- BCM supplies power.
- Front power window motor (passenger side) will be operated if front power window switch (passenger side) is operated.

### FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:000000000990493

Front Power Window Switch

#### 1. CHECK POWER WINDOW MOTOR FUNCTION

Does front power window motor (passenger side) operate with front power window switch (passenger side) operation?

Is the inspection result normal?

YES >> Front power window switch power supply and ground circuit are OK.

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

NO >> Refer to [PWC-16. "FRONT POWER WINDOW SWITCH : Diagnosis Procedure"](#).

## FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000990494

### Front Power Window Switch Power Supply Circuit Check

#### 1.CHECK POWER SUPPLY CIRCUIT

Check voltage between front power window switch (passenger side) connector and ground.

Terminal		Condition	Voltage (V) (Approx.)
(+)	(-)		
Front power window switch (passenger side) connector	Terminal		
D45 (D65)	1	Ignition switch ON	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

#### 2.CHECK HARNESS CONTINUITY (FRONT POWER WINDOW SWITCH)(PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and front power window switch (passenger side) connector.
3. Check continuity between power window main switch connector and front power window switch (passenger side) connector.

Power window main switch connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
D5 (D25)	8	D45 (D65)	2	Existed
	11		3	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	8		Not existed
	11		

():RHD models

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

#### 3.CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM connector and front power window switch (passenger side) connector.
3. Check continuity between BCM connector and front power window switch (passenger side) connector.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M67	53	D45 (D65)	1	Existed

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53		Not existed

():RHD models



## POWER SUPPLY AND GROUND CIRCUIT

### < COMPONENT DIAGNOSIS >

#### Is the inspection result normal?

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

#### 4.CHECK BCM OUTPUT SIGNAL

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

BCM connector	Terminal	Ground	Voltage (V) (Approx.)
M67	53		Battery voltage

( ):RHD models

#### Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).  
NO >> Replace BCM. Refer to [BCS-64, "Exploded View"](#).

#### 5.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to [PWC-17, "FRONT POWER WINDOW SWITCH : Component Inspection"](#).

#### Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).  
NO >> Replace front power window switch (passenger side). Refer to [PWC-83, "Exploded View"](#).

### FRONT POWER WINDOW SWITCH : Component Inspection

INFOID:000000000990495

#### COMPONENT INSPECTION

#### 1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Front power window switch (passenger side)	Terminal		Power window switch condition	Continuity
D45 (D65)	1	5	UP	Existed
	3	4		
	3	4	NEUTRAL	
	5	2		
	1	4	DOWN	
	5	2		

( ):RHD models

#### Is the inspection result normal?

- YES >> Front power window switch (passenger side) is OK.  
NO >> Replace front power window switch (passenger side). Refer to [PWC-83, "Exploded View"](#).

### REAR POWER WINDOW SWITCH

#### REAR POWER WINDOW SWITCH : Description

INFOID:000000000990496

- BCM supplies power.
- Rear power window motor will be operated if rear power window switch is operated.

#### REAR POWER WINDOW SWITCH : Component Function Check

INFOID:000000000990497

Rear Power Window Switch

#### 1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation?

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

### Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to [PWC-18. "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

## REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000990498

### Rear Power Window Switch Power Supply Circuit Check

#### 1.CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

Terminal				Condition	Voltage (V) (Approx.)
(+)		Terminal	(−)		
Rear power window switch connector					
LH	D83 (D113)	1	Ground	Ignition switch ON	Battery voltage
RH	D103 (D93)				

( ):RHD models

### Is the measurement value within the specification?

YES >> GO TO 2. (Rear power window switch LH)

YES >> GO TO 3. (Rear power window switch RH)

NO >> GO TO 4.

#### 2.CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and rear power window switch LH connector.
3. Check continuity between power window main switch connector and rear power window switch LH connector.

Power window main switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D5 (D25)	1	D83 (D113)	2	Existed
	3		3	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	1		Not existed
	3		

( ):RHD models

### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

#### 3.CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and rear power window switch RH connector.
3. Check continuity between power window main switch connector and rear power window switch RH connector.

Power window main switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D5 (D25)	5	D103 (D93)	3	Existed
	7		2	

4. Check continuity between power window main switch connector and ground.

# POWER SUPPLY AND GROUND CIRCUIT

## < COMPONENT DIAGNOSIS >

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	5		Not existed
	7		

() : RHD models

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### 4. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector and rear power window switch connector.
2. Check continuity between BCM connector and rear power window switch connector.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M67	53	LH	D83 (D113)	1	Existed
		RH	D103 (D93)		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	3		Not existed

() : RHD models

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

### 5. CHECK BCM OUTPUT SIGNAL

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

BCM connector	Terminal	Ground	Voltage (V) (Approx.)
M67	3		Battery voltage

() : RHD models

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace BCM. Refer to [BCS-64, "Exploded View"](#).

### 6. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-19, "REAR POWER WINDOW SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window switch. Refer to [PWC-83, "Exploded View"](#).

## REAR POWER WINDOW SWITCH : Component Inspection

INFOID:000000000990499

### COMPONENT INSPECTION

#### 1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

## POWER SUPPLY AND GROUND CIRCUIT

### < COMPONENT DIAGNOSIS >

Rear power window switch	Terminal		Power window switch condition	Continuity
LH:D83 (D113) RH:D103 (D93)	1	5	UP	Existed
	3	4		
	3	4	NEUTRAL	
	5	2		
	1	4	DOWN	
	5	2		

( ):RHD models

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to [PWC-83, "Exploded View"](#).

# POWER WINDOW MOTOR CIRCUIT

< COMPONENT DIAGNOSIS >

## POWER WINDOW MOTOR CIRCUIT DRIVER SIDE

### DRIVER SIDE : Description

INFOID:000000000990500

Door glass moves UP/DOWN by receiving the signal from power window main switch.

### DRIVER SIDE : Component Function Check

INFOID:000000000990501

#### 1. CHECK POWER WINDOW MOTOR CIRCUIT

Does power window motor operate with operating power window main switch?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to [PWC-21, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:000000000990502

#### Power Window Motor Circuit Check

##### 1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Disconnect front power window motor (driver side) connector.
2. Turn ignition switch ON.
3. Check voltage between power window motor (driver side) connector and ground.

Terminal			Power window main switch Condition	Voltage (V) (Approx.)
(+)		(−)		
Power window motor (driver side) connector	Terminal			
D7 (D27)	3	Ground	UP	Battery voltage
			DOWN	0
	4		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

##### 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and front power window motor (driver side) connector.
3. Check continuity between power window main switch connector and front power window motor (driver side).

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	16	D7 (D27)	3	Existed
	12		4	

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	16		Not existed
	12		

():RHD models

Is the inspection result normal?

# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

- YES >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

### 3.CHECK POWER WINDOW MOTOR

Check front power window motor (driver side).

Refer to [PWC-22, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
- NO >> Replace power window motor (driver side). Refer to [GW-22, "Exploded View"](#) and [GW-22, "Removal and Installation"](#). After that, Refer to [PWC-22, "DRIVER SIDE : Special Repair Requirement"](#).

## DRIVER SIDE : Component Inspection

INFOID:000000000990503

### COMPONENT INSPECTION

#### 1.CHECK POWER WINDOW MOTOR

Does motor operate by connecting the battery voltage directly to power window motor connector?

Front power window motor (driver side) connector	Terminal		Motor condition
	(+)	(-)	
D7 (D27)	4	3	DOWN
	3	4	UP

():RHD models

Is the inspection result normal?

- YES >> Power window motor is OK.
- NO >> Replace front power window motor (driver side). Refer to [GW-22, "Exploded View"](#) and [GW-22, "Removal and Installation"](#). After that, Refer to [PWC-22, "DRIVER SIDE : Special Repair Requirement"](#).

## DRIVER SIDE : Special Repair Requirement

INFOID:000000000990504

#### 1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

#### 2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Refer to [PWC-28, "DRIVER SIDE : Component Function Check"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:000000000990505

Door glass moves UP/DOWN by receiving the signal from power window main switch or front power window switch (passenger side).

### PASSENGER SIDE : Component Function Check

INFOID:000000000990506

# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

### 1. CHECK POWER WINDOW MOTOR CIRCUIT

Does power window motor operate with operating power window main switch or front power window switch (passenger side)?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to [PWC-23. "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:000000000990507

#### Front Power Window Motor (Passenger Side) Circuit Check

### 1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) OUTPUT SIGNAL

1. Disconnect front power window motor (passenger side) connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor (passenger side) connector and ground.

Terminal		Front power window motor (passenger side) condition	Voltage (V) (Approx.)
(+)	(-)		
Front power window motor (passenger side) connector	Terminal		
D46 (D66)	2	UP	Battery voltage
		DOWN	0
	1	UP	0
		DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.
3. Check continuity between front power window switch (passenger side) connector and front power window motor (passenger side) connector.

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D45 (D65)	4	D46 (D66)	1	Existed
	5		2	

4. Check continuity between front power window switch (passenger side) connector and ground.

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D45 (D65)	4		Not existed
	5		

():RHD models

Is the inspection result normal?

YES >> Check front power window switch (passenger side). Refer to [PWC-15. "FRONT POWER WINDOW SWITCH : Component Function Check"](#).

NO >> Repair or replace harness.

### 3. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

Refer to [PWC-24. "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> Replace front power window motor (passenger side). Refer to [GW-22. "Exploded View"](#) and [GW-22. "Removal and Installation"](#).

## PASSENGER SIDE : Component Inspection

INFOID:000000000990508

### COMPONENT INSPECTION

#### 1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Does motor operate by connecting the battery voltage directly to front power window motor (passenger side) connector?

Front power window motor (passenger side) connector	Terminal		Motor condition
	(+)	(-)	
D46 (D66)	1	2	DOWN
	2	1	UP

():RHD models

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor (passenger side). Refer to [GW-22. "Exploded View"](#) and [GW-22. "Removal and Installation"](#).

## REAR LH

### REAR LH : Description

INFOID:000000000990509

Door glass moves UP/DOWN by receiving the signal from power window main switch or rear power window switch LH.

### REAR LH : Component Function Check

INFOID:000000000990510

#### 1.CHECK POWER WINDOW MOTOR CURCUIT

Does rear power window motor LH operate with operating power window main switch or rear power window switch LH?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to [PWC-24. "REAR LH : Diagnosis Procedure"](#)

### REAR LH : Diagnosis Procedure

INFOID:000000000990511

#### Power Window Motor Circuit Check

#### 1.CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

1. Disconnect rear power window motor LH connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor LH connector and ground.



# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

Terminal		Window condition	Voltage (V) (Approx.)
(+)	(-)		
Rear power window motor LH connector	Terminal		
D82 (D112)	2	UP	Battery voltage
		DOWN	0
	1	UP	0
		DOWN	Battery voltage

() : RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH connector and rear power window motor LH connector.
3. Check continuity between rear power window switch LH connector and rear power window motor LH connector.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D83 (D113)	4	D82 (D112)	1	Existed
	5		2	

4. Check continuity between rear power window switch LH connector and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D83 (D113)	4	Ground	Not existed
	5		

() : RHD models

Is the inspection result normal?

YES >> Check rear power window switch. Refer to [PWC-17, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

NO >> Repair or replace harness.

## 3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-25, "REAR LH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window motor LH. Refer to [GW-28, "Exploded View"](#) and [GW-28, "Removal and Installation"](#).

## REAR LH : Component Inspection

INFOID:0000000000990512

## COMPONENT INSPECTION

### 1. CHECK POWER WINDOW MOTOR

Does motor operate by connecting the battery voltage directly to rear power window motor LH connector?

# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

Rear power window motor LH connector	Terminal		Motor condition
	(+)	(-)	
D82 (D112)	1	2	DOWN
	2	1	UP

():RHD models

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor LH. Refer to [GW-28. "Exploded View"](#) and [GW-28. "Removal and Installation"](#).

## REAR RH

### REAR RH : Description

INFOID:000000000990513

Door glass moves UP/DOWN by receiving the signal from power window main switch or rear power window switch RH.

### REAR RH : Component Function Check

INFOID:000000000990514

#### 1. CHECK POWER WINDOW MOTOR CIRCUIT

Does rear power window motor RH operate with operating power window main switch or rear power window switch RH?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to [PWC-26. "REAR RH : Diagnosis Procedure"](#).

### REAR RH : Diagnosis Procedure

INFOID:000000000990515

#### Rear Power Window Motor RH Circuit Check

##### 1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window motor RH connector.
2. Turn ignition switch ON.
3. Check voltage between rear power window motor RH connector and ground.

Terminal			Rear power window switch RH condition	Voltage (V) (Approx.)
(+)		(−)		
Rear power window motor RH connector	Terminal			
D102 (D92)	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

#### 2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH connector and rear power window motor RH connector.
3. Check continuity between rear power window switch RH connector and rear power window motor RH connector.

# POWER WINDOW MOTOR CIRCUIT

## < COMPONENT DIAGNOSIS >

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D103 (D93)	4	D102 (D92)	1	Existed
	5		2	

4. Check continuity between rear power window switch RH connector and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D103 (D93)	4	Ground	Not existed
	5		

():RHD models

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to [PWC-17, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

NO >> Repair or replace harness.

### 3.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to [PWC-27, "REAR RH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window motor RH. Refer to [GW-28, "Exploded View"](#) and [GW-28, "Removal and Installation"](#).

## REAR RH : Component Inspection

INFOID:000000000990516

### COMPONENT INSPECTION

#### 1.CHECK REAR POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to rear power window motor RH connector?

Rear power window motor RH connector	Terminal		Motor condition
	(+)	(-)	
D102 (D92)	1	2	DOWN
	2	1	UP

():RHD models

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to [GW-28, "Exploded View"](#) and [GW-28, "Removal and Installation"](#).

# ENCODER CIRCUIT

< COMPONENT DIAGNOSIS >

## ENCODER CIRCUIT

### DRIVER SIDE

#### DRIVER SIDE : Description

INFOID:000000000990517

Detects condition of the front power window motor (driver side) operation and transmits to power window main switch as pulse signal.

#### DRIVER SIDE : Component Function Check

INFOID:000000000990518

#### 1.CHECK ENCODER OPERATION

Does front driver side door glass perform AUTO open/close operation normally when operating power window main switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to [PWC-28. "DRIVER SIDE : Diagnosis Procedure"](#)

#### DRIVER SIDE : Diagnosis Procedure

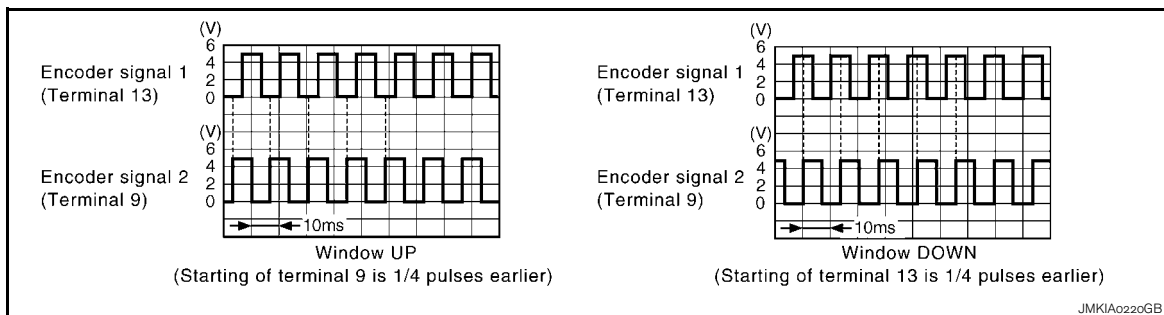
INFOID:000000000990519

#### Encoder Circuit Check

#### 1.CHECK ENCODER OPERATION

1. Connect front power window motor (driver side) connector.
2. Turn ignition switch ON.
3. Check signal between power window main switch connector and ground with oscilloscope.

Terminals		Signal (Reference value)
(+)	(-)	
Power window main switch connector	Terminal	
D5 (D25)	9	Ground
	13	
		Refer to following signal



():RHD models

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> GO TO 2.

#### 2.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between front power window motor (driver side) connector and ground.

# ENCODER CIRCUIT

## < COMPONENT DIAGNOSIS >

Terminal			Voltage (V) (Approx.)
(+)		(−)	
Front power window motor (driver side) connector	Terminal		
D7 (D27)	5	Ground	10

() : RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

### 3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window main switch connector and front power window motor (driver side) connector.
3. Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	15	D7 (D27)	5	Existed

4. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	15		Not existed

() : RHD models

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, Refer to [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

### 4. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect front power window motor (driver side) connector.
3. Check continuity between front power window motor (driver side) connector and ground.

Front power window motor (driver side) connector	Terminal	Ground	Continuity
D7 (D27)	2		Existed

() : RHD models

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

### 5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	2	D7 (D27)	2	Existed

() : RHD models

Is the inspection result normal?

## ENCODER CIRCUIT

### < COMPONENT DIAGNOSIS >

- YES >> Replace power window main switch. Refer to [PWC-83. "Exploded View"](#). After that, Refer to [PWC-15. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

### 6. CHECK HARNESS CONTINUITY 3

1. Disconnect power window main switch connector.
2. Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	9	D7 (D27)	1	Existed
	13		6	

3. Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal	Ground	Continuity
D5 (D25)	9	Ground	Not existed
	13		

( ): RHD models

Is the inspection result normal?

- YES >> Replace front power window motor (driver side). Refer to [GW-22. "Exploded View"](#) and [GW-22. "Removal and Installation"](#). After that, Refer to [PWC-22. "DRIVER SIDE : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

# POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

## POWER WINDOW LOCK SWITCH

### Description

INFOID:000000000990520

Ground circuit of power window main switch shuts off if power window lock switch of power window main switch is operated. This inhibits all operation, except for the main switch.

### Component Function Check

INFOID:000000000990521

#### 1.CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal power window main switch, and operation is checked.

Does power window lock operate?

YES >> Replace power window main switch. Refer to [PWC-83, "Exploded View"](#). After that, [PWC-31, "Special Repair Requirement"](#)

NO >> Check condition of harness and connector.

### Special Repair Requirement

INFOID:000000000990522

#### 1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

#### 2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to [PWC-28, "DRIVER SIDE : Component Function Check"](#)

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

PWC

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## ECU DIAGNOSIS

### BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000001116528

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition		Value/Status
ACC ON SW	Ignition switch OFF		OFF
	Ignition switch ACC or ON		ON
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
BATTERY VOLT <b>NOTE:</b> Diesel engine models only	Ignition switch ON		Approximately the same as power supply voltage
BUCKLE SW	Driver's seat belt unfastened		OFF
	Driver's seat belt fastened		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	Passenger door closed		OFF
	Passenger door opened		ON
DOOR SW-DR	Driver door closed		OFF
	Driver door opened		ON
DOOR SW-RL	Rear LH door closed		OFF
	Rear LH door opened		ON
DOOR SW-RR	Rear RH door closed		OFF
	Rear RH door opened		ON
ELEC PWR CUT <b>NOTE:</b> Diesel engine models only	Engine running	Fan switch ON (when engine coolant is cool) <b>NOTE:</b> Depending on the ambient temperature, battery voltage, etc.	OFF
		The current status maintained with the signal from ECM received.	FREEZ
		<ul style="list-style-type: none"> <li>Fan switch OFF</li> <li>Fan switch ON after engine warming UP</li> </ul> <b>NOTE:</b> Depending on the engine coolant temperature, ambient temperature, battery voltage, etc.	INHBT



# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
ENG COOLNT T <b>NOTE:</b> Diesel engine models only	Engine running	Approximately the same as water temperature gauge reading
ENGINE RPM <b>NOTE:</b> Diesel engine models only	Engine running	Approximately the same as tachometer reading
ENGINE RUN	Engine stopped	OFF
	Engine running	ON
ENGINE STATUS <b>NOTE:</b> Diesel engine models only	Engine stopped	STOP
	While the engine stalls	STALL
	Engine running	RUN
	At engine cranking	CRA
FAN ON SIG	Fan switch OFF	OFF
	Fan switch ON	ON
FR FOG SW	Front fog lamp switch OFF	OFF
	Front fog lamp switch ON	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
FR WIPER LOW	Front wiper switch OFF	OFF
	Front wiper switch LO	ON
FR WIPER HI	Front wiper switch OFF	OFF
	Front wiper switch HI	ON
FR WIPER INT	Front wiper switch OFF	OFF
	Front wiper switch INT	ON
FR WIPER STOP	Any position other than front wiper stop position	OFF
	Front wiper stop position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
HEAD LAMP SW 1	Lighting switch OFF	OFF
	Lighting switch 2ND	ON
HEAD LAMP SW 2	Lighting switch OFF	OFF
	Lighting switch 2ND	ON
HI BEAM SW	Lighting switch OFF	OFF
	Lighting switch HI	ON
HOOD SW	Close the hood <b>NOTE:</b> Vehicles without theft warning system are OFF-fixed	OFF
	Open the hood	ON
H/L WASH SW	<b>NOTE:</b> The item is indicated, but not monitored	OFF
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

A

B

C

D

E

F

G

H

I

J

PWC

L

M

N

O

P

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
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
KEYLESS LOCK	LOCK button of key fob is not pressed	OFF
	LOCK button of key fob is pressed	ON
KEYLESS UNLOCK	UNLOCK button of key fob is not pressed	OFF
	UNLOCK button of key fob is pressed	ON
LIT-SEN FAIL	Light & rain sensor is in normal condition	OK
	Light & rain sensor is with internal error	NOTOK
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
OUT SIDE TEMP <b>NOTE:</b> Diesel engine models	Ignition switch ON	Approximately the same as outside air temperature
PASSING SW	Other than lighting switch PASS	OFF
	Lighting switch PASS	ON
PUSH SW	Return to ignition switch to LOCK position	OFF
	Press ignition switch	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
RKE LOCK AND UN-LOCK	<b>NOTE:</b> The item is indicated, but not monitored	OFF
		ON
RR FOG SW	Rear fog lamp switch OFF	OFF
	Rear fog lamp 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
SHOCK SENSOR	Ignition switch ON	NOMAL
	After the reception of air bag deployment signal from air bag diagnosis sensor unit	OFF
	During the reception of air bag deployment signal from air bag diagnosis sensor unit	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

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
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
UNLOCK WITH DR	<b>NOTE:</b> The item is indicated, but not monitored	OFF
		ON
UNLOCK SHOCK	Other than the following	OFF
	During the unlock operation interlocked with air bag	ON
VEHICLE SPEED	While driving	Equivalent to speedometer reading

A

B

C

D

E

F

G

H

I

J

PWC

L

M

N

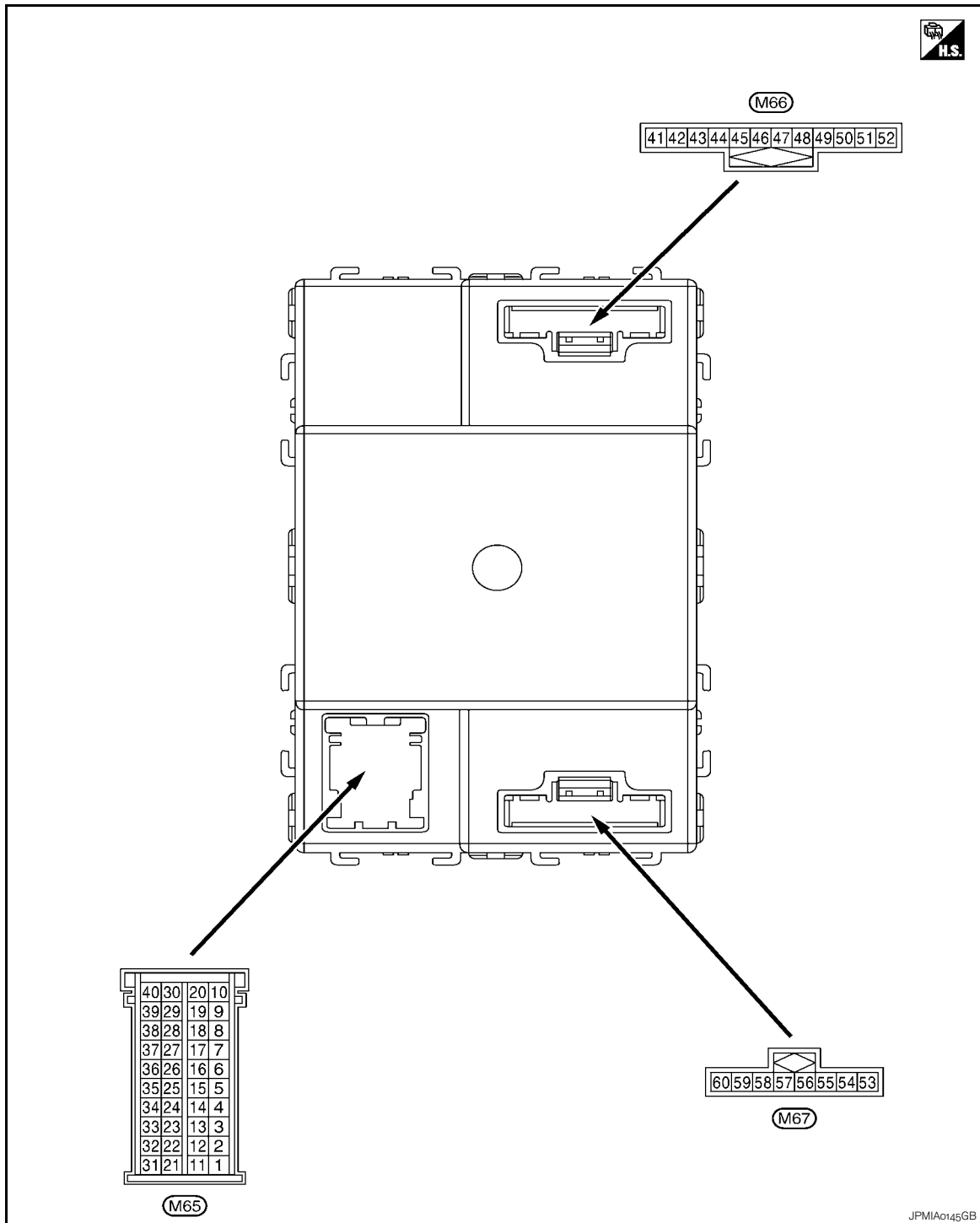
O

P

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## TERMINAL LAYOUT



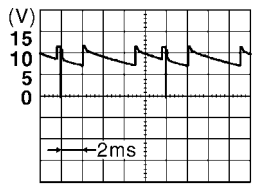
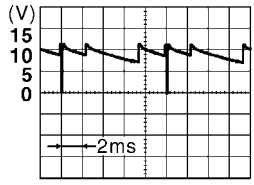
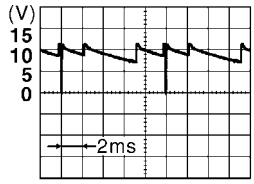
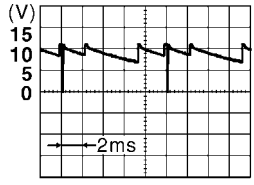
## PHYSICAL VALUES

### CAUTION:

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT -III. Refer to [BCS-26, "COMB SW : CONSULT-III Function \(BCM - COMB SW\)"](#).
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to [BCS-7, "System Description"](#).

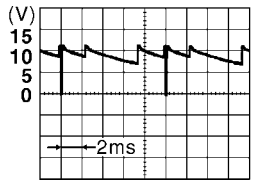
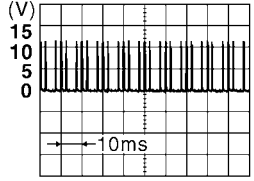
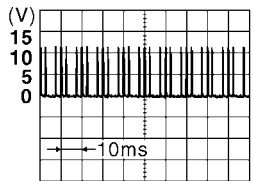
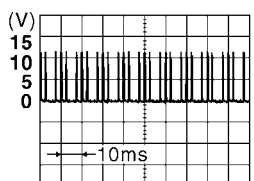
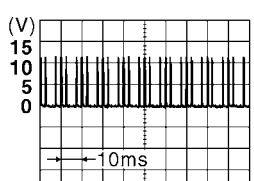
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
1 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front wiper switch HI (Wiper intermittent dial 4)	 <p>9.1 V</p>
					Rear wiper switch INT (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
					<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 3</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>	
2 (Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 2ND	 <p>9.3 V</p>
					Lighting switch PASS	
					Front fog lamp switch ON	
					Turn signal switch LH	
3 (LG)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch AUTO	 <p>9.3 V</p>
					Rear fog lamp switch OFF	
					Front wiper switch MIST	
					Front wiper switch INT	
					Front wiper switch LO	
4 (R)	Ground	Combination switch OUTPUT 2	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	 <p>9.1 V</p>
					Rear wiper switch ON (Wiper intermittent dial 4)	
					Rear washer switch ON (Wiper intermittent dial 4)	
					Any of the condition below with all switch OFF	
					<ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 5</li> <li>• Wiper intermittent dial 6</li> </ul>	

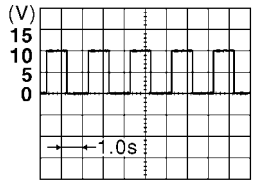
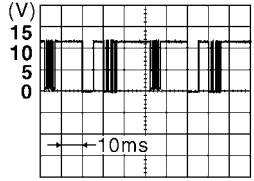
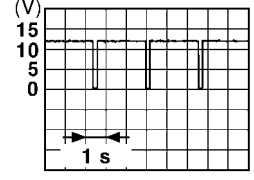
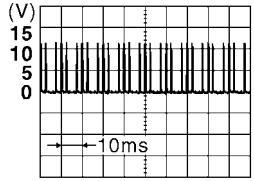
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
5 (W)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF	0 V
					Lighting switch 1ST	 <p>9.1 V</p>
					Lighting switch 2ND	
					Lighting switch HI	
					Turn signal switch RH	
7 (P)	Ground	Door lock/unlock switch (Lock)	Output	Door lock/un- lock switch	Not pressed	 <p>1.2 V</p>
					Pressed to the lock side	0 V
8 (LG)	Ground	Hazard switch	Output	Hazard switch	Not pressed	 <p>1.3 V</p>
					Pressed	0 V
9 (BR)	Ground	Door lock/unlock switch (Unlock)	Output	Door lock/un- lock switch	Not pressed	 <p>1.2 V</p>
					Pressed to the unlock side	0 V
12 (P)	Ground	Back door opener switch	Output	Back door opener switch	Not pressed	 <p>1.2 V</p>
					Pressed	0 V

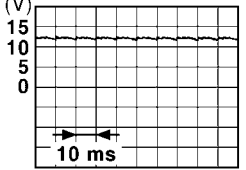
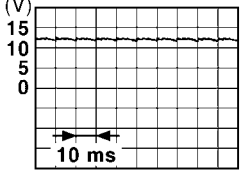
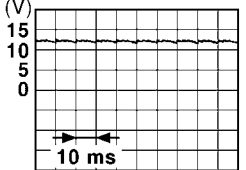
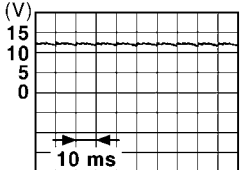
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
13 (R)	Ground	Shock detect sensor	Input	Ignition switch OFF or ACC		0 V
				Ignition switch ON		 <p>6.0 V</p> <p>JPMIA0155GB</p>
14 (L/R)	Ground	A/C switch	Output	A/C switch	Not pressed	Battery voltage
					Pressed	0 V
15 (LG/B)	Ground	Fan switch	Output	Fan switch	Not pressed	Battery voltage
					Pressed	0 V
16 (GR)	Ground	Alarm link	Input	—		—
17 (BR)	Ground	Light & rain sensor serial link	Output	Ignition switch OFF or ACC		Battery voltage
				Ignition switch ON		 <p>8.7 V</p> <p>JPMIA0156GB</p>
18 (SB)	Ground	Security indicator	Output	Security indicator	ON	0 V
					Blinking	 <p>10.3 V</p> <p>JPMIA0014GB</p>
					OFF	Battery voltage
19 (L)	—	CAN-H	Input/ Output	—		—
20 (P)	—	CAN-L	Input/ Output	—		—
21 (SB)	Ground	Rear window defog- ger switch	Output	Rear window defogger switch	Not pressed	 <p>1.1 V</p> <p>JPMIA0154GB</p>
					While pressing	0 V

# BCM (BODY CONTROL MODULE)

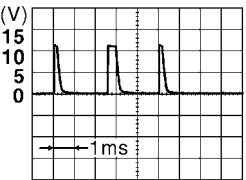
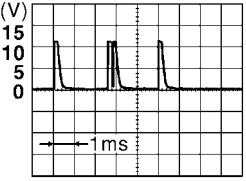

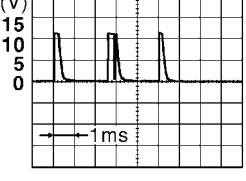
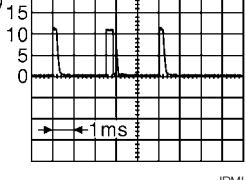
## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
24 (GR)	Ground	Door lock status indicator	Output	Door lock status indicator	ON	Battery voltage
					OFF	0 V
25 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	 11.2 V
					ON (When rear door LH opened)	0 V
26 (R)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	 11.2 V
					ON (When driver door opened)	0 V
27 (BR)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	 11.2 V
					ON (When passenger door opened)	0 V
28 (G)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	Battery voltage
					ON (When back door opened)	0 V
29 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	 11.2 V
					ON (When rear door RH opened)	0 V
30 (SB)	Ground	Audio link	Output	—	—	—



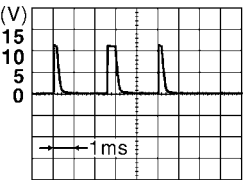
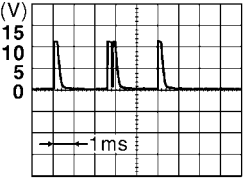
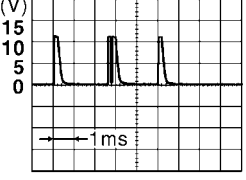
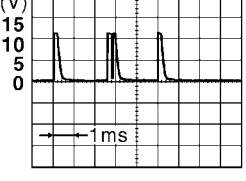
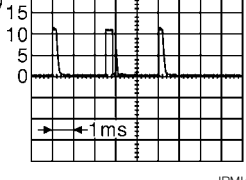
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
31 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	<p>All switch OFF (Wiper intermittent dial 4)</p>  <p>1.3 V</p> <p>JPMIA0165GB</p>
					<p>Front fog lamp switch ON (Wiper intermittent dial 4)</p>  <p>1.3 V</p> <p>JPMIA0167GB</p>
					<p>Rear fog lamp switch ON (Wiper intermittent dial 4)</p>  <p>1.3 V</p> <p>JPMIA0168GB</p>
					<p>Rear wiper switch ON (Wiper intermittent dial 4)</p>  <p>1.3 V</p> <p>JPMIA0169GB</p>
					<p>Any of the condition below with all switch OFF</p> <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 2</li> <li>• Wiper intermittent dial 6</li> <li>• Wiper intermittent dial 7</li> </ul>  <p>1.3 V</p> <p>JPMIA0196GB</p>

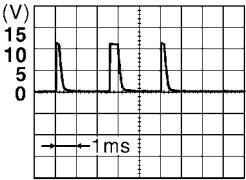
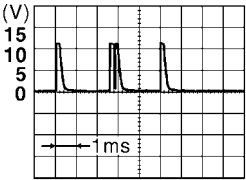
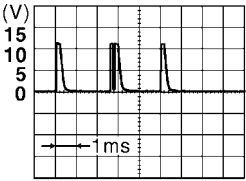
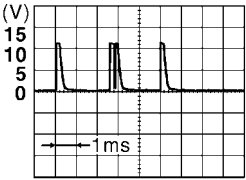
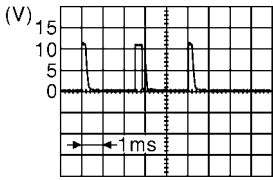
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
32 (G)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	 <p>1.4 V</p> <p>JPMIAor165GB</p>
					 <p>1.3 V</p> <p>JPMIAor167GB</p>
					 <p>1.3 V</p> <p>JPMIAor166GB</p>
					 <p>1.3 V</p> <p>JPMIAor168GB</p>
					 <p>1.3 V</p> <p>JPMIAor196GB</p>

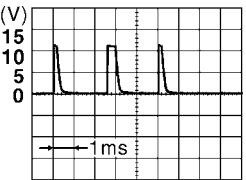
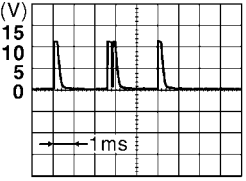
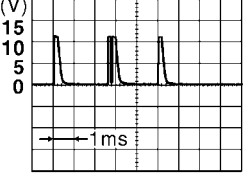
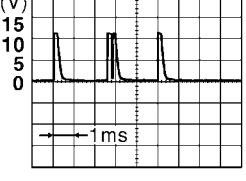
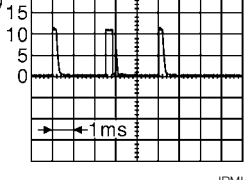
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
33 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	<p>All switch OFF</p>  <p>1.4 V</p>
					<p>Turn signal switch LH</p>  <p>1.3 V</p>
					<p>Turn signal switch RH</p>  <p>1.3 V</p>
					<p>Front wiper switch LO</p>  <p>1.3 V</p>
					<p>Front washer switch ON</p>  <p>1.3 V</p>

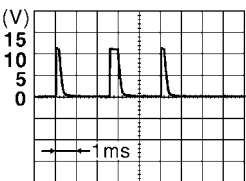
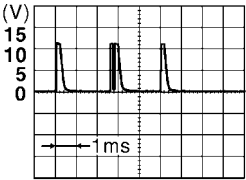
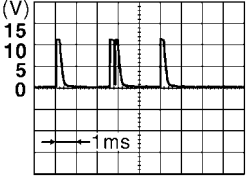
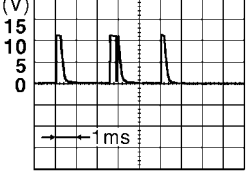
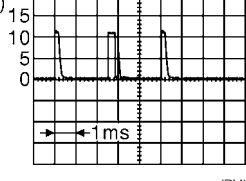
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
34 (GR)	Ground	Combination switch INPUT 4	Input	Combination switch	<p>All switch OFF (Wiper intermittent dial 4)</p>  <p>1.4 V</p>
					<p>Lighting switch AUTO (Wiper intermittent dial 4)</p>  <p>1.3 V</p>
					<p>Lighting switch 1ST (Wiper intermittent dial 4)</p>  <p>1.3 V</p>
					<p>Rear wiper INT (Wiper intermittent dial 4)</p>  <p>1.3 V</p>
					<p>Any of the condition below with all switch OFF</p> <ul style="list-style-type: none"> <li>• Wiper intermittent dial 1</li> <li>• Wiper intermittent dial 6</li> </ul>  <p>1.3 V</p>

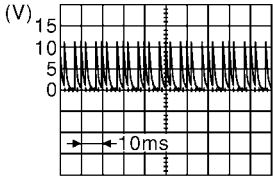
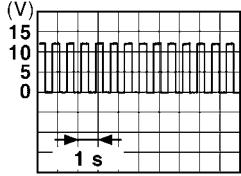
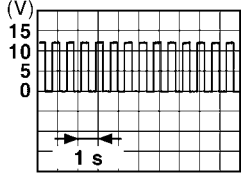
# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	−	Signal name	Input/ Output			
35 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	All switch OFF (Wiper intermittent dial 4)	 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	 1.3 V
					Lighting switch 2ND (Wiper intermittent dial 4)	 1.3 V
					Rear wiper switch ON	 1.3 V
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	 1.3 V
36 (V)	Ground	Key switch	Output	Insert mechanical key into ignition key cylinder	Battery voltage	
				Remove mechanical key from ignition key cylinder	0 V	
37 (R)	Ground	ACC power supply	Output	Ignition switch OFF	0 V	
				Ignition switch ACC or ON	Battery voltage	
38 (W/L)	Ground	Ignition power supply	Output	Ignition switch OFF or ACC	0 V	
				Ignition switch ON	Battery voltage	

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
39 (P)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
40 (LG)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylinder		Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move
41 (V)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
42 (V)	Ground	Interior room lamp power supply	Output	After passing the interior room lamp battery saver operation time		0 V
				Any other time after passing the interior room lamp battery saver operation time		Battery voltage
43 (L)	Ground	Rear wiper motor	Output	Rear wiper switch OFF		0 V
				Rear wiper switch ON		Battery voltage
44 (L/W)	Ground	Rear wiper auto stop	Output	Ignition switch ON	Rear wiper stop position	0 V
					Any position other than rear wiper stop position	 JPMIA0197GB
45 (GR)	Ground	Back door lock actuator	Output	Back door opener switch	Pressed	Battery voltage (300ms)
					Not pressed	0 V
47 (G/Y)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch LH	 PKID0926E 6.5 V
48 (G/B)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch OFF	0 V
					Turn signal switch RH	 PKID0926E 6.5 V
49 (Y)	Ground	Rear fog lamp	Output	Lighting switch 1ST and front fog lamp switch ON	Rear fog lamp switch OFF	0 V
					Rear fog lamp switch ON	Battery voltage
51 (R/W)*1 (R)*2	Ground	Stop lamp switch	Output	Depress the brake pedal		Battery voltage
				Release the brake pedal		0 V

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition		Value (Approx.)
+	-	Signal name	Input/ Output			
52 (R)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage
					ON	0 V
53 (L)	Ground	Power window power supply	Output	Ignition switch	OFF or ACC	0 V
					ON	Battery voltage
54 (O)	Ground	Door unlock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V
55 (B)	Ground	Ground	—	Ignition switch ON		0 V
56 (Y)*1 (SB)*2	Ground	Door lock (All)	Output	Door lock/unlock switch	Pressed to the unlock side	0 V
					Pressed to the lock side	Battery voltage
57 (Y)	Ground	Battery power supply	Output	Ignition switch OFF		Battery voltage
58 (P)	Ground	Power window power supply	Output	Ignition switch OFF		Battery voltage
59 (BR)	Ground	Super lock	Output	When lock button of key fob or Intelligent Key is not pressed		0 V
				When lock button of key fob or Intelligent Key is pressed		Battery voltage
60 (GR)	Ground	Driver door unlock	Output	Door lock/unlock switch	Pressed to the unlock side	Battery voltage
					Pressed to the lock side	0 V

\*1: With Intelligent Key system

\*2: Without Intelligent Key system

## Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) -

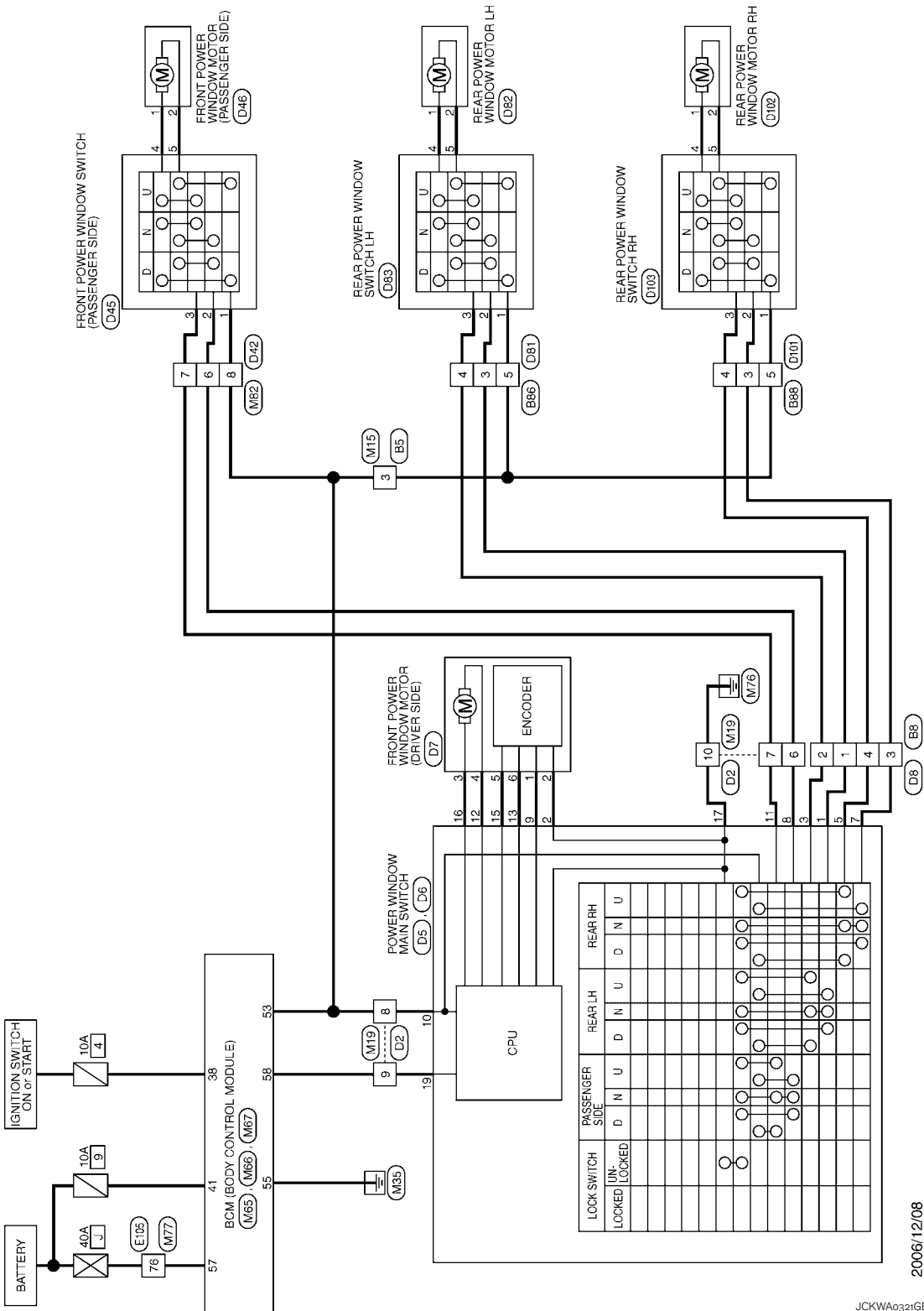
INFOID:000000000990526

PWC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM (LHD MODELS)



2006/12/08

JCKWA0321GB

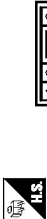


# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3		
4	5	6	7	8

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	NS04MW-CS



1	2	3	4
---	---	---	---

Connector No.	B66
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3		
4	5	6	7	8

Connector No.	B68
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3		
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	Y	-
3	LG	-
4	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



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

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS18FW-CS



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

I5	Y	-
I6	BR	-

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



17	18	19
----	----	----

Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	O	-
5	Y	-
7	LG	-
8	W	-
9	O	-
10	L	-
11	SB	-
12	GR	-
13	LG	-

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-
19	P	-

JCKWA0322GB

POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D7
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	FEAMFB-FHA2



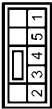
Connector No.	D8
Connector Name	WIRE TO WIRE
Connector Type	NS04FW-CS



Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Connector No.	D45
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-
2	R	-
3	BR	-
4	GR	-
5	Y	-
6	LG	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	O	-
3	LG	-
4	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	SB	-
4	Y	-
5	R	-

Connector No.	D46
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	240PC023SB008



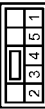
Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Connector No.	D82
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	240PC023SB008



Connector No.	D83
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D102
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	240PC0235S008



Connector No.	D103
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH60MP-NS16-TM4



Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

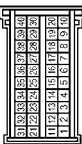
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB



Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC122S1017



Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC083S0017



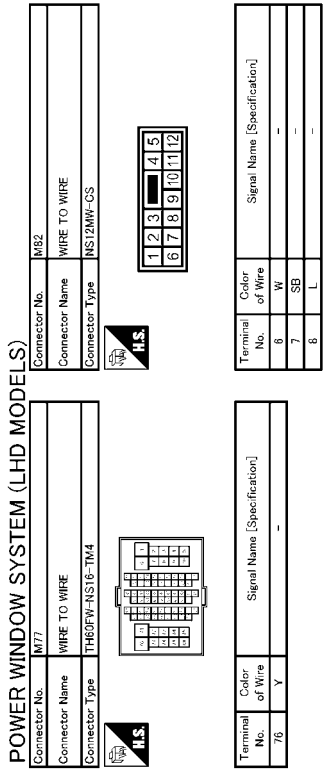
Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Terminal No.	Color of Wire	Signal Name [Specification]
38	W/L	IGN SW

Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(FUSE)

Terminal No.	Color of Wire	Signal Name [Specification]
53	L	POWER WDW PWR SUPPLY(LINKED TO IGN)
55	B	GRD(POWER)
57	Y	BAT(F/L)
58	P	POWER WDW PWR SUPPLY(BAT)

JCKWA0324GB



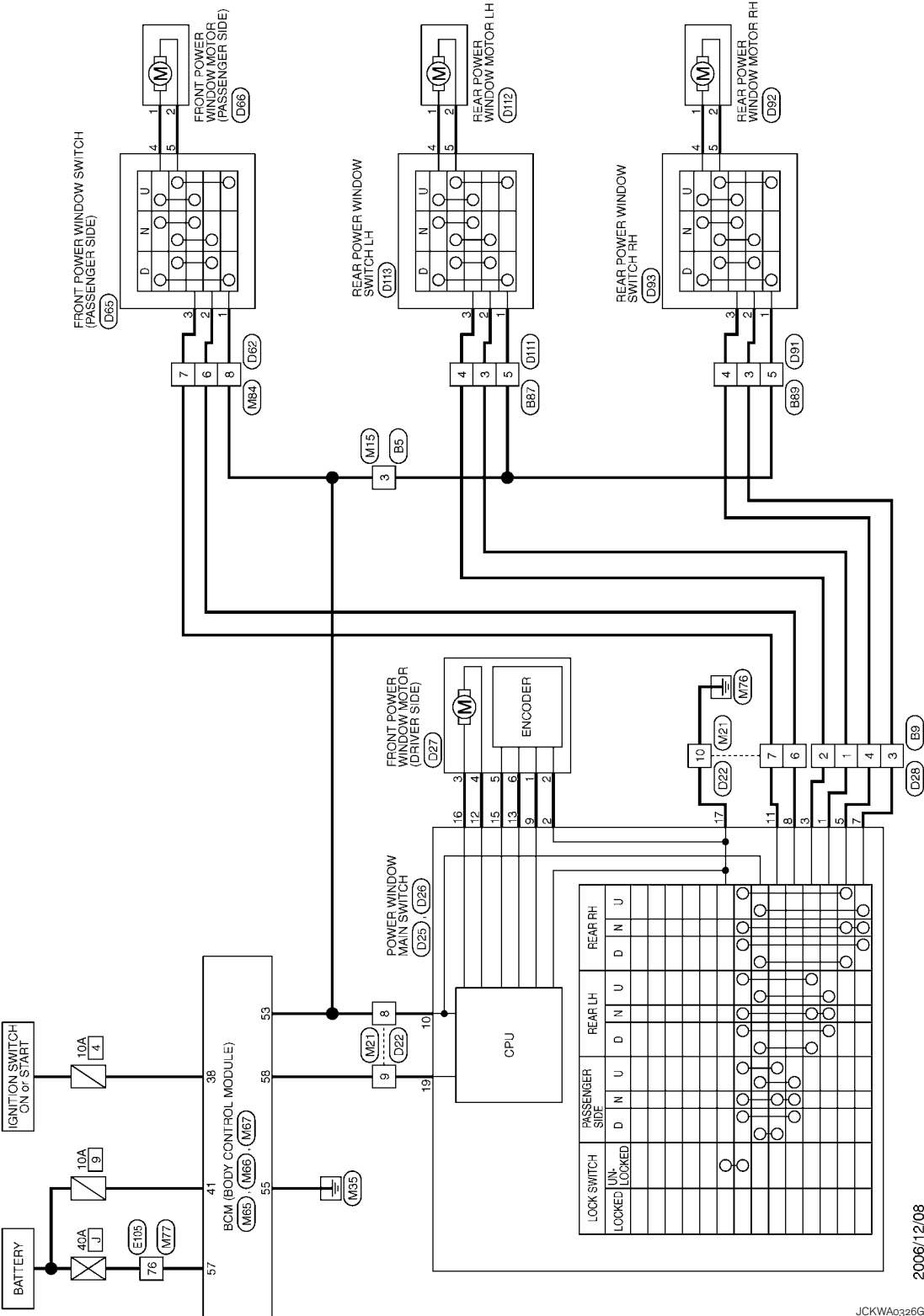
Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) -

INFOID:000000000998708

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM (RHD MODELS)



# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	B5
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3
4	5	6
7	8	

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Type	NS04MW-CS



1	2	3	4
---	---	---	---

Connector No.	B87
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3
4	5	6
7	8	

Connector No.	B89
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



1	2	3
4	5	6
7	8	

Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	Y	-
3	LG	-
4	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



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

Connector No.	D25
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



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

15	Y	-
16	BR	-

Connector No.	D26
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS05FW-CS



17	18	19
----	----	----

Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	O	-
5	Y	-
7	LG	-
8	W	-
9	O	-
10	L	-
11	SB	-
12	GR	-
13	LG	-

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-
19	P	-

JCKWA0327GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D27
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	FEA04FB-FHA2



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-
2	R	-
3	BR	-
4	GR	-
5	Y	-
6	LG	-

Connector No.	D28
Connector Name	WIRE TO WIRE
Connector Type	NS04FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	O	-
3	LG	-
4	Y	-

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-

Connector No.	D65
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08PW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	SB	-
4	Y	-
5	R	-

Connector No.	D66
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	24UPC023S008



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R	-

Connector No.	D91
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



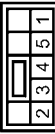
Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D92
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	24UPC023S008



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08PW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

JCKW0328GB

# BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D111
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D112
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	24PQC023S3008



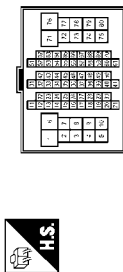
Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D113
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH03MW-NS16-TM4



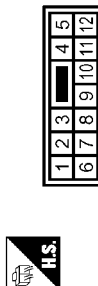
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	JA04UFB



Terminal No.	Color of Wire	Signal Name [Specification]
38	W/L	IGN SW

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FC121PC12S1017



Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BATT(FUSE)

JCKWA0329GB





BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >



POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	M67
Connector Name	BGM (BODY CONTROL MODULE)
Connector Type	FCI 211P00350017



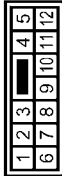

Terminal No.	Color of Wire	Signal Name [Specification]
53	L	POWER WDW PWR SUPPLY(LINKED TO (GN)
55	B	GN2(POWER)
57	Y	BATF(L)
58	P	POWER WDW PWR SUPPLY(BAT)

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80PW-NS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-

Fail Safe

Fail-safe index

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

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

## BCM (BODY CONTROL MODULE)

### < ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	<ul style="list-style-type: none"> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2191: DIFFERENCE OF KEY	<ul style="list-style-type: none"> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC
B2194: DISCORD BCM-I-KEY	<ul style="list-style-type: none"> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2195: ANTI SCANNING	<ul style="list-style-type: none"> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC
B2196: DONGLE NG	<ul style="list-style-type: none"> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC

### REAR WIPER CONTROL

BCM detects a rear wiper stopping position according to a rear wiper auto stop signal.

When a rear wiper auto stop signal is in the condition listed below, BCM stops power supply to rear wiper after rear wiper is activated for five seconds.

Ignition switch	Rear wiper switch	Auto stop signal
ON	OFF	Rear wiper stop position signal cannot be input 5 seconds.
	ON	The signal does not change for 5 seconds.

#### NOTE:

The above operation is repeated when operating the rear wiper switch one minute after the stop of the rear wiper caused by Fail-safe.

### TURN SIGNAL LAMP CONTROL

BCM detects the turn signal lamp circuit status from the terminal voltage.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

The blinking speed is normal while activating the hazard warning lamp.

### LIGHT & RAIN SENSOR MALFUNCTION DETECTION FUNCTION

BCM controls the following items when LIGHT & RAIN sensor has a malfunction.

Auto Light Control

Headlamp is turned ON.

Front Wiper Control

The condition just before the activation of Fail-safe is maintained until the front wiper switch is turned OFF.

### DTC Inspection Priority Chart

INFOID:000000001116530

# BCM (BODY CONTROL MODULE)

## < ECU DIAGNOSIS >

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: DIFFERNCE OF KEY</li> <li>B2192: ID DISCORD BCM-ECM</li> <li>B2193: CHAIN OF BCM-ECM</li> <li>B2194: DISCORD BCM-I-KEY</li> <li>B2195: ANTI SCANNING</li> <li>B2196: DONGLE NG</li> </ul>

## DTC Index

INFOID:000000001116531

### 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.
- PAST: Displays when there is a malfunction that is detected in the past and stored.
- 1 - 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	TIME		Fail-safe	Refer to
No DTC is detected. further testing may be required.	—	—	—	—
U1000: CAN COMM CIRCUIT	0	1 - 39	—	<a href="#">BCS-32</a>
U1010: CONTROL UNIT (CAN)	0	1 - 39	—	<a href="#">BCS-33</a>
B2190: NATS ANTENNA AMP	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-33</a></li> <li>Without Intelligent Key system <a href="#">SEC-174</a></li> </ul>
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-35</a></li> <li>Without Intelligent Key system <a href="#">SEC-176</a></li> </ul>
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-36</a></li> <li>Without Intelligent Key system <a href="#">SEC-177</a></li> </ul>
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-38</a></li> <li>Without Intelligent Key system <a href="#">SEC-178</a></li> </ul>
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	<a href="#">SEC-39</a>
B2195: ANTI SCANNING	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-179</a></li> <li>Without Intelligent Key system <a href="#">SEC-179</a></li> </ul>
B2196: DONGLE NG	CRNT	PAST	×	<ul style="list-style-type: none"> <li>With Intelligent Key system <a href="#">SEC-41</a></li> <li>Without Intelligent Key system <a href="#">SEC-180</a></li> </ul>

# POWER WINDOW MAIN SWITCH

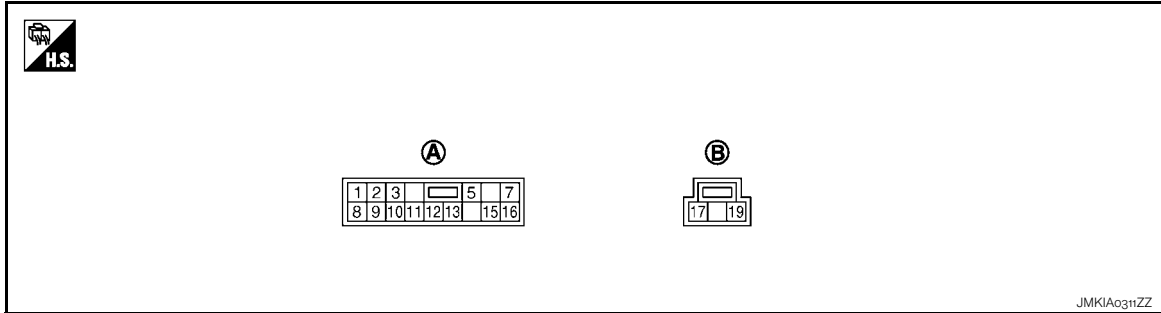
< ECU DIAGNOSIS >

## POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000000990530

### TERMINAL LAYOUT

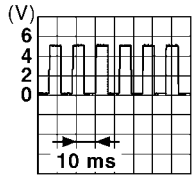


A. LHD:D5  
RHD:D25

B. LHD:D6  
RHD:D26

### PHYSICAL VALUES

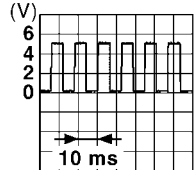
#### POWER WINDOW MAIN SWITCH

Terminal No.		Wire color	Description		Condition	Voltage [V] (Approx.)
+	-		Signal name	Input/ Output		
1	Ground	R	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	Battery voltage
2	Ground	R	Encoder ground	—	—	0
3	Ground	O	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	Battery voltage
5	Ground	Y	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	Battery voltage
7	Ground	LG	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	Battery voltage
8	Ground	W	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is UP at operated.	Battery voltage
9	2	O	Encoder pulse signal 2	Input	When power window motor operates.	
10	Ground	L	IGN power supply	Input	IGN SW ON	Battery voltage
					Other than above	0
11	Ground	SB	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is DOWN at operated.	Battery voltage

JMKIA0070GB

# POWER WINDOW MAIN SWITCH

## < ECU DIAGNOSIS >

Terminal No.		Wire color	Description		Condition	Voltage [V] (Approx.)
+	-		Signal name	Input/ Output		
12	16	GR	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	Battery voltage
13	2	LG	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	
15	Ground	Y	Encoder power supply	Output	When ignition switch ON.	10
16	12	BR	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is UP at operated.	Battery voltage
17	Ground	B	Ground	—	—	0
19	Ground	P	Battery power supply	Input	Ignition switch OFF	Battery voltage

## Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) -

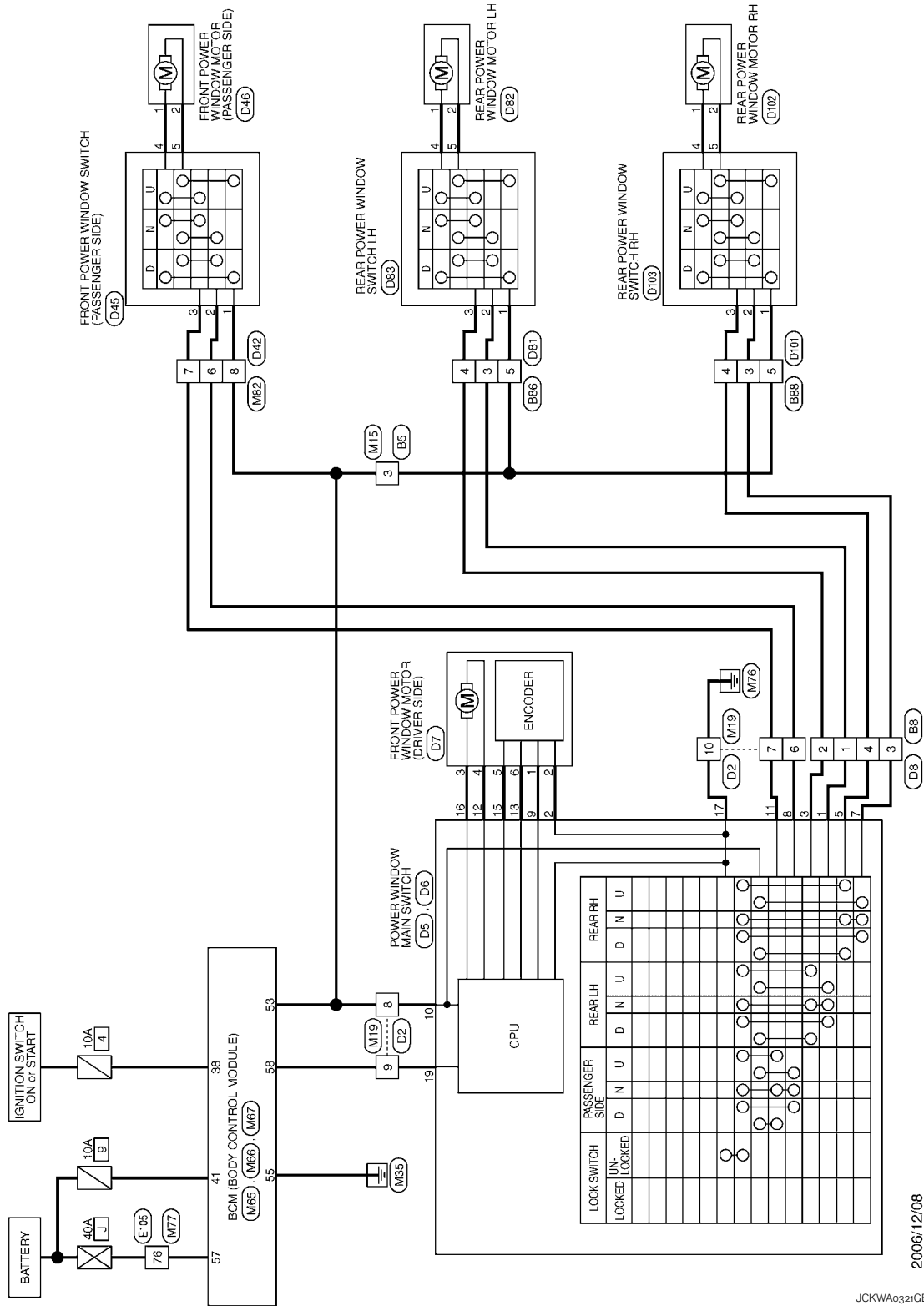
INFOID:000000001125411

PWC

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)



2006/12/08

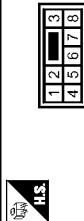
JCKWA0321GB

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



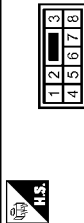
Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Type	NS04MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	Y	-
3	LG	-
4	Y	-

Connector No.	B66
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



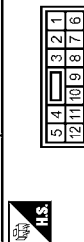
Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	B68
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS18FW-CS



Terminal No.	15	Y
Terminal No.	16	BR

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	O	-
5	Y	-
7	LG	-
8	W	-
9	O	-
10	L	-
11	SB	-
12	GR	-
13	LG	-

Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-
19	P	-

JCKWA0322GB

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D7
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	FEAMFB-FHA2



Connector No.	D8
Connector Name	WIRE TO WIRE
Connector Type	NS04FW-CS



Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Connector No.	D45
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-
2	R	-
3	BR	-
4	GR	-
5	Y	-
6	LG	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	O	-
3	LG	-
4	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	SB	-
4	Y	-
5	R	-

Connector No.	D46
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	240PC023SB008



Connector No.	D81
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Connector No.	D82
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	240PC023SB008



Connector No.	D83
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

JCKWA0323GB



# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (LHD MODELS)

Connector No.	D102
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	240PC0235S008



Connector No.	D103
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH60MP-NS16-TM4



Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

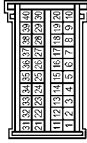
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	AAB40FB



Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC122S1017



Connector No.	M67
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FCI 211PC085S0017



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Terminal No.	Color of Wire	Signal Name [Specification]
38	W/L	IGN SW

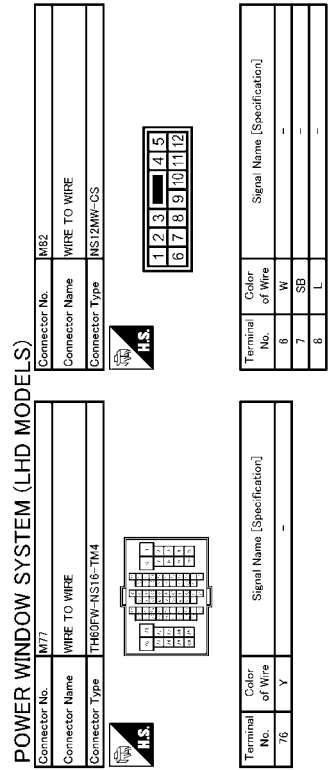
Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BAT(FUSE)

Terminal No.	Color of Wire	Signal Name [Specification]
53	L	POWER WDW PWR SUPPLY(LINKED TO IGN)
55	B	GRD(POWER)
57	Y	BAT(F/L)
58	P	POWER WDW PWR SUPPLY(BAT)

JCKWA0324GB

POWER WINDOW MAIN SWITCH

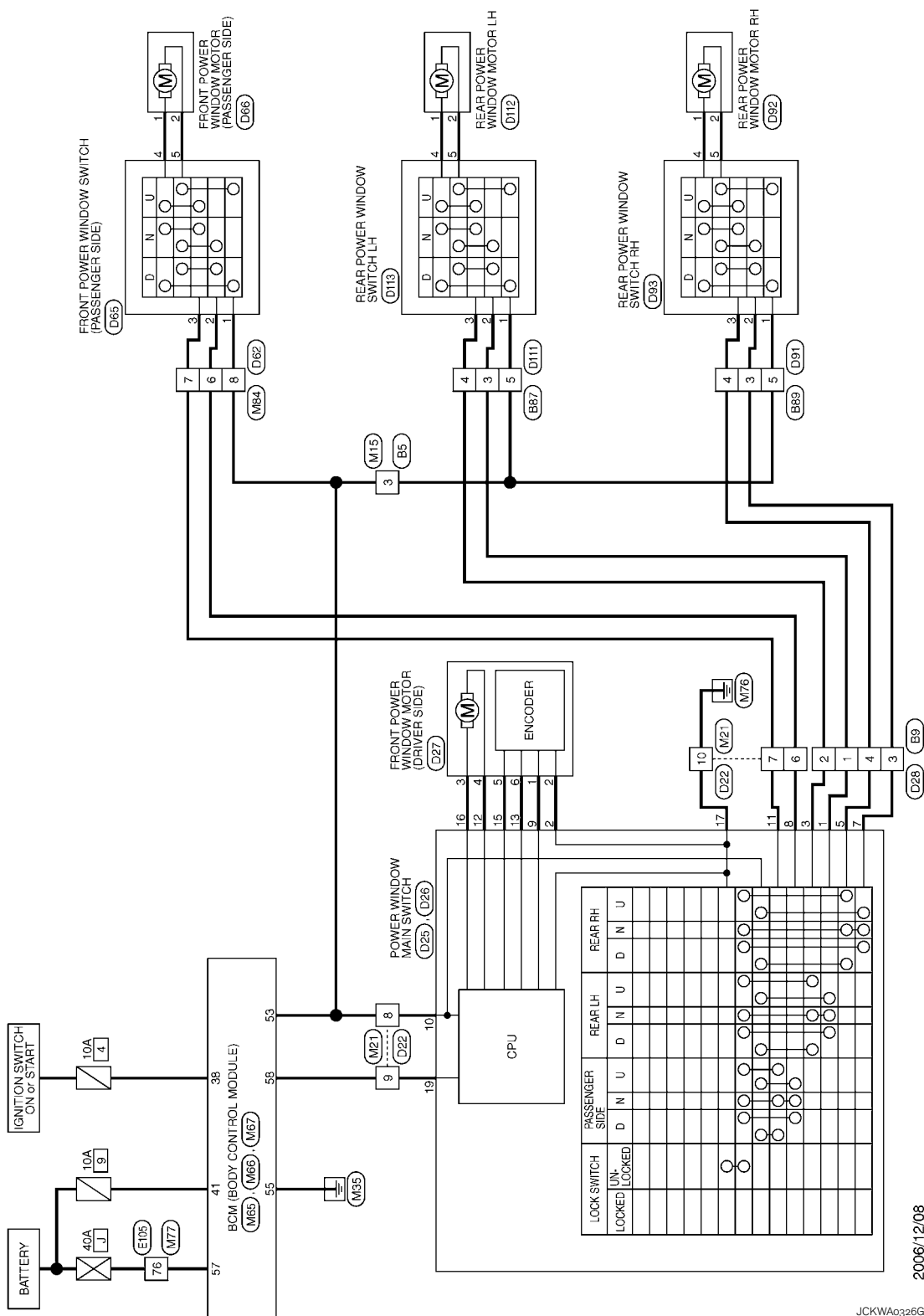
< ECU DIAGNOSIS >



Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) -

INFOID:000000001125413

## < ECU DIAGNOSIS >

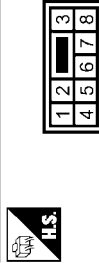


# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	B5
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Type	NS04MW-CS



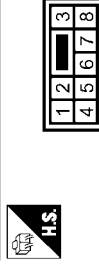
Terminal No.	Color of Wire	Signal Name [Specification]
1	LG	-
2	Y	-
3	LG	-
4	Y	-

Connector No.	B87
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	B89
Connector Name	WIRE TO WIRE
Connector Type	NS08MW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	NS12PW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Connector No.	D25
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	R	-
3	O	-
5	Y	-
7	LG	-
8	W	-
9	O	-
10	L	-
11	SB	-
12	GR	-
13	LG	-

15	Y	-
18	BR	-

Connector No.	D26
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
17	B	-
19	P	-

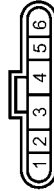
JCKWA0327GB

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D27
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	FEA04FB-FHA2



Terminal No.	Color of Wire	Signal Name [Specification]
1	O	-
2	R	-
3	BR	-
4	GR	-
5	Y	-
6	LG	-

Connector No.	D28
Connector Name	WIRE TO WIRE
Connector Type	NS04FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
2	O	-
3	LG	-
4	Y	-

Connector No.	D62
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-

Connector No.	D65
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08PW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	W	-
3	SB	-
4	Y	-
5	R	-

Connector No.	D66
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	24UPC023S008



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	R	-

Connector No.	D91
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D92
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	24UPC023S008



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08PW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

JCKWA0328GB

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

## POWER WINDOW SYSTEM (RHD MODELS)

Connector No.	D11
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



Terminal No.	Color of Wire	Signal Name [Specification]
3	LG	-
4	Y	-
5	L	-

Connector No.	D12
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	24PQC023S3008



Terminal No.	Color of Wire	Signal Name [Specification]
1	G	-
2	R	-

Connector No.	D13
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



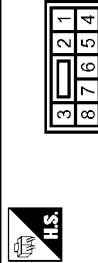
Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
2	LG	-
3	Y	-
4	G	-
5	R	-

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH03MW-NS16-TM4



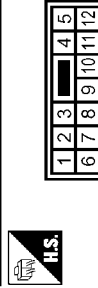
Terminal No.	Color of Wire	Signal Name [Specification]
76	Y	-

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Type	NS08FW-CS



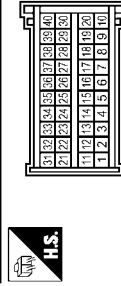
Terminal No.	Color of Wire	Signal Name [Specification]
3	L	-

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



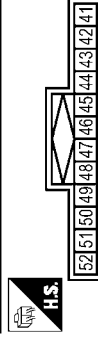
Terminal No.	Color of Wire	Signal Name [Specification]
6	W	-
7	SB	-
8	L	-
9	P	-
10	B	-

Connector No.	M65
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	JA04UB



Terminal No.	Color of Wire	Signal Name [Specification]
38	W/L	IGN SW

Connector No.	M66
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FC121PC12S1017






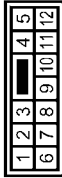


Terminal No.	Color of Wire	Signal Name [Specification]
41	V	BATT(FUSE)

JCKWA0329GB

# POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM (RHD MODELS)			
Connector No.	M67	Connector No.	M77
Connector Name	BGM (BODY CONTROL MODULE)	Connector Name	WIRE TO WIRE
Connector Type	FCI 211P00350017	Connector Type	TH80PW-NS16-TM4
			
			
Terminal No.	Signal Name [Specification]	Terminal No.	Signal Name [Specification]
53	L	76	Y
55	B		
57	Y		
58	P		
	POWER WDW PWR SUPPLY(LINKED TO (GN) GND)(POWER)		
	BATF (L)		
	POWER WDW PWR SUPPLY(BAT)		
Connector No.	M84	Terminal No.	Signal Name [Specification]
Connector Name	WIRE TO WIRE	6	W
Connector Type	NS12MW-CS	7	SB
		8	L
			

## Fail Safe

### FAIL-SAFE CONTROL

Switches to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Switches to fail-safe control when error beyond regulation value is detected between the fully closed position and the actual position of the glass.

## POWER WINDOW MAIN SWITCH

### < ECU DIAGNOSIS >

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors malfunction	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet updated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control.

- Auto-up operation
- Anti-pinch function

Perform initial operation to recover when switched to fail-safe mode. However, it switches back to fail-safe control when malfunction is found in power window main switch or front power window motor (driver side).



# NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

### Diagnosis Procedure

INFOID:000000000990533

#### 1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to [BCS-34, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window switch main power supply and ground circuit.

Refer to [PWC-10, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CHECK POWER WINDOW MAIN SWITCH

Check power window main switch.

Refer to [PWC-10, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

PWC

## DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

---

### DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

#### Diagnosis Procedure

INFOID:000000000990534

#### 1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

---

Check front power window motor.

Refer to [PWC-21, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

# FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

### Diagnosis Procedure

INFOID:000000000990535

#### 1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to [PWC-15, "FRONT POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

Refer to [PWC-22, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

PWC

## REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

---

### REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

#### Diagnosis Procedure

INFOID:000000000990536

#### 1. CHECK REAR POWER WINDOW SWITCH LH

---

Check rear power window switch LH.

Refer to [PWC-17, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CHECK REAR POWER WINDOW MOTOR LH

---

Check rear power window motor LH.

Refer to [PWC-24, "REAR LH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

# REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

### Diagnosis Procedure

INFOID:000000000990537

#### 1.CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-17, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to [PWC-26, "REAR RH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

PWC

# ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

## ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)

### Diagnosis Procedure

INFOID:000000000990538

#### 1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-4. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK DOOR WINDOW SLIDING PART

Check door window sliding part.

- A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-28. "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

# AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

## AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)

### Diagnosis Procedure

INFOID:000000000990539

#### 1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-4, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

#### 2.CHECK ENCODER

Check encoder.

Refer to [PWC-28, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

PWC

## POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

---

### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

#### Diagnosis Procedure

INFOID:000000000990540

#### 1. REPLACE POWER WINDOW MAIN SWITCH

---

Replace power window main switch.

Refer to [PWC-83, "Exploded View"](#). After that, [PWC-15, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).



# PRECAUTIONS

< PRECAUTION >

## PRECAUTION

### PRECAUTIONS

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

INFOID:000000000990541

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 SRS 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 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 SRS 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.

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

PWC

## PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

---

### ON-VEHICLE MAINTENANCE

#### PRE-INSPECTION FOR DIAGNOSTIC

##### Basic Inspection

INFOID:000000000990542

##### BASIC INSPECTION

##### 1.INSPECTION START

---

1. Check the service history.
2. Check the following parts.
  - Fuse/circuit breaker blown.
  - Poor connection, open or short circuit of harness connector.
  - Battery voltage.

##### Is the inspection result normal?

- YES    >> Inspection end.
- NO     >> Repair or replace the malfunctioning parts.

# POWER WINDOW MAIN SWITCH

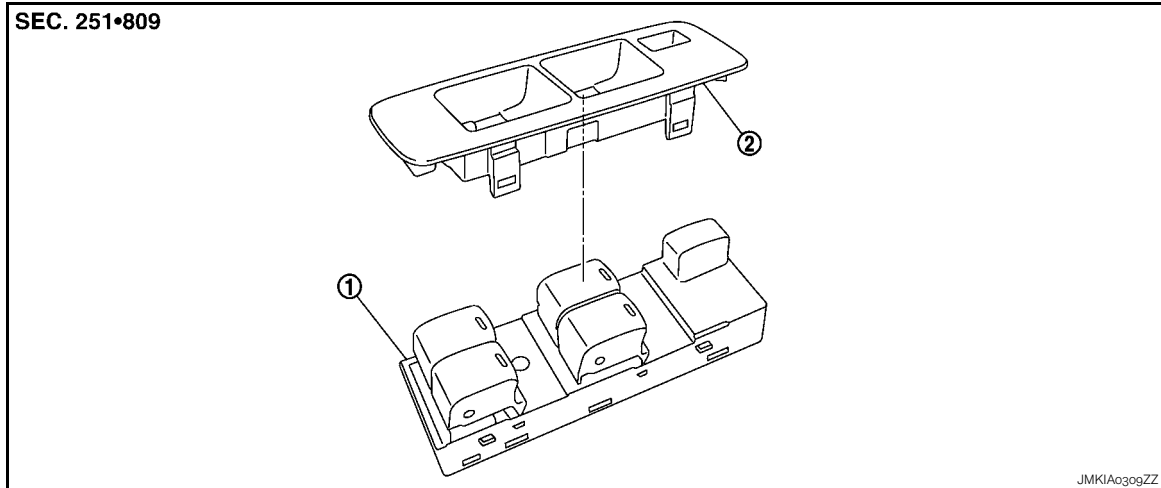
< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### POWER WINDOW MAIN SWITCH

Exploded View

INFOID:000000000990543



1. Power window main switch

2. Power window main switch finisher

#### NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power switch (LH & RH).

Refer to removal and installation procedure. Refer to [PWC-83. "Removal and Installation"](#).

### Removal and Installation

INFOID:000000000990544

#### REMOVAL

1. Remove the power window main switch finisher (2).  
Refer to [INT-10. "FRONT DOOR FINISHER : Exploded View"](#) and [INT-10. "FRONT DOOR FINISHER : Removal and Installation"](#).
2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.

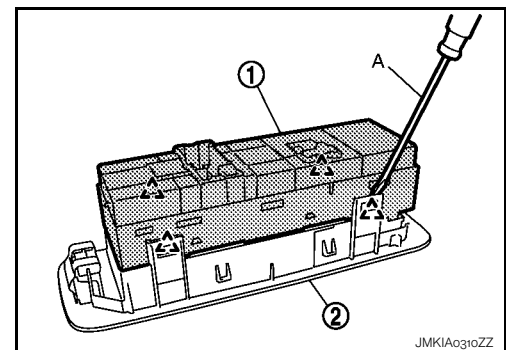
△ : Pawl

#### CAUTION:

**Do not fold the pawl of power window main switch finisher.**

#### NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).



#### INSTALLATION

Install in the reverse order of removal.