# SECTION POWER WINDOW CONTROL SYSTEM

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#### < PRECAUTION >

### PRECAUTION PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### WARNING:

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

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

#### Precaution for Work

INFOID:000000010481307

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

# PREPARATION

#### PREPARATION

#### Special Service Tool

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[LH FRONT ONLY ANTI-PINCH]

#### The actual shapes of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description	C
 (J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components	E
			F

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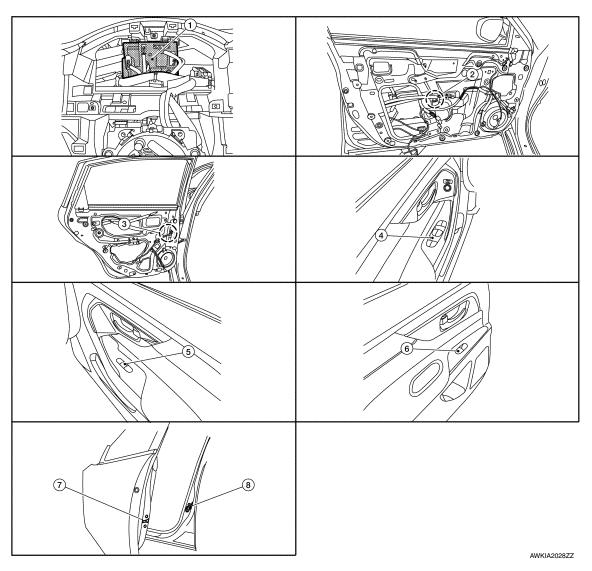
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# < SYSTEM DESCRIPTION > SYSTEM DESCRIPTION COMPONENT PARTS

Component Parts Location

INFOID:000000010481309



1. BCM (view with combination meter removed)

- 4. Main power window and door lock/ 5. unlock switch
- 7. Front door lock assembly LH (key cylinder switch)
- 2. Front power window motor LH (RH similar)
  - Power window and door lock/unlock 6. switch RH
- 8. Front door switch LH (RH similar)
- Rear power window motor LH (RH similar)

3.

Rear power window switch LH (RH similar)

#### **COMPONENT PARTS**

#### < SYSTEM DESCRIPTION >

#### **Component Description**

INFOID:000000010481310

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[LH FRONT ONLY ANTI-PINCH]

Component	Function
BCM	<ul><li>Supplies power to power window switches.</li><li>Controls retained power.</li></ul>
Front power window motor LH	<ul> <li>Integrates the ENCODER POWER and WINDOW MOTOR.</li> <li>Starts operating with signals from main power window and door lock/unlock switch.</li> <li>Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.</li> </ul>
Front power window motor RH	Starts operating with signals from main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
Main power window and door lock/unlock switch	<ul><li>Directly controls all power window motor of all doors.</li><li>Controls anti-pinch operation of front power window LH.</li></ul>
Power window and door lock/unlock switch RH	Controls front power window motor RH.
Rear power window switch	Controls rear power window motors LH and RH.
Rear power window motor	Starts operating with signals from main power window and door lock/unlock switch and rear power window switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

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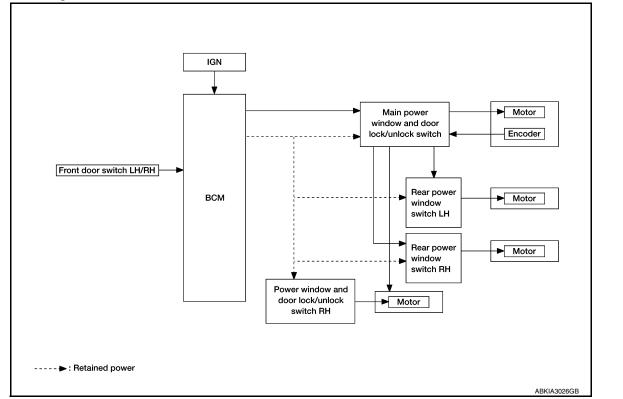
#### < SYSTEM DESCRIPTION >

#### [LH FRONT ONLY ANTI-PINCH]

INFOID:000000010481311

# SYSTEM

System Diagram



#### System Description

INFOID:000000010481312

#### INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator		
Encoder	Encoder pulse signal				
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal		Front nowor window motor		
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control	Front power window motor		
BCM	RAP signal				
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor		

#### POWER WINDOW OPERATION

- Power window system is activated by the power window switch when the ignition switch is in the ON position or during the retained power operation after ignition switch is turned OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Front & rear power window switches can open/close the corresponding windows.
- · Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is more than the specified value and the power window is in the AUTO-UP operation (Front LH), power window will move in the reverse direction (Anti-Pinch Function).

#### POWER WINDOW AUTO-OPERATION (FRONT LH)

• AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch turns to AUTO.

#### SYSTEM

#### < SYSTEM DESCRIPTION >

#### [LH FRONT ONLY ANTI-PINCH]

< SYSTEM DESCRIPTI	ION > [LH FRONT ONLY ANTI-PINCH]
<ul> <li>and door lock/unlock sw</li> <li>Main power window and ation when door glass i</li> </ul>	tecting the movement of power window motor and transmits to main power window witch as the encoder pulse signal while power window motor is operating. In door lock/unlock switch reads the changes of encoder signal and stops AUTO oper- is at fully opened/closed position.
RETAINED POWER O	
<ul> <li>Retained power operation</li> </ul>	ion is an additional power supply function that enables power window system to oper- nds even when ignition switch is turned OFF.
<ul> <li>When ignition switch is</li> <li>When timer time passe</li> </ul>	or switch OFF)→OPEN (door switch ON). ○ ON.
POWER WINDOW LO	CK FUNCTION
	ain power window and door lock/unlock switch shuts off when power window lock ts power window switch operation except with the main power window and door lock/
ANTI-PINCH OPERAT	ION (FRONT LH)
ers the door glass 150r	in the door glass during AUTO-UP operation, and it is the anti-pinch function that low- mm. (5.9 in.) or 2 seconds when detected. tecting the movement of power window motor and transmits to main power window
<ul><li>and door lock/unlock sv</li><li>Resistance is applied to</li></ul>	witch as the encoder pulse signal while power window motor is operating. to the power window motor rotation that changes the frequency of encoder pulse sig- s trapped in the door glass.
	controls to lower the window glass for 150 mm. (5.9 in.) or 2 seconds after it detects equency change.
<ul> <li>When door glass AUTC glass closes and is fully NOTE:</li> </ul>	D-UP operation is performed (anti-pinch function does not operate just before the door y closed)
Depending on environme may lower.	ent and driving conditions, if a similar impact or load is applied to the door glass, it
KEYLESS POWER WI	INDOW DOWN FUNCTION
seconds with the ignition The power window openi	when the unlock button on Intelligent Key is activated and pressed for more than 3 switch OFF. The windows keep opening if the unlock button is continuously pressed. ing stops when the following operations are performed:
	n is pressed for more than 15 seconds. th is turned ON while the power window opening is operated.
<ul> <li>When the unlock buttor</li> </ul>	
Fail-safe	INFOID:0000000010481313
and direction of door glas	- trol when malfunction is detected in the encoder signal that detects UP/DOWN speed ss. Switches to fail-safe control when an error beyond the regulation value is detected position and the actual position of the glass.
Malfunction	Malfunction condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunc-	When the pulse signal that is detected during glass open/close operation detects the opposite con-

tion

malfunction 1

Glass recognition position



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.

dition of power window motor operating direction.

#### SYSTEM

#### < SYSTEM DESCRIPTION >

Malfunction	Malfunction condition
Glass recognition position malfunction 2	When it detects pulse count more that the value of glass full stroke during glass open/close opera- tion.
Malfunction of not yet up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more that the spec- ified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to failsafe control:

Auto-up operation

Anti-pinch function

Retained power 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 switch or in motor.

< SYSTEM DESCRIPTION >	[LH FRONT ONLY ANTI-PINCH]
DIAGNOSIS SYSTEM (BCM) COMMON ITEM	
COMMON ITEM : CONSULT Function (BCM - COM	MON ITEM)
<b>CAUTION:</b> After disconnecting the CONSULT vehicle interface (VI) from th be cycled OFF $\rightarrow$ ON (for at least 5 seconds) $\rightarrow$ OFF. If this step to "sleep mode", potentially causing a discharged battery and	is not performed, the BCM may not go

#### **APPLICATION ITEM**

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description	E
Ecu Identification	The BCM part number is displayed.	
Self Diagnostic Result	The BCM self diagnostic results are displayed.	
Data Monitor	The BCM input/output data is displayed in real time.	F
Active Test	The BCM activates outputs to test components.	
Work support	The settings for BCM functions can be changed.	0
Configuration	<ul><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing BCM.</li></ul>	
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.	ŀ

#### SYSTEM APPLICATION

BCM can perform the following functions.

		Direct Diagnostic Mode									
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr	J PW0		
Door lock	DOOR LOCK		×	×	×	×			- L		
Rear window defogger	REAR DEFOGGER			×	×	×			_		
Warning chime	BUZZER			×	×				M		
Interior room lamp timer	INT LAMP			×	×	×			_		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×			_		
Exterior lamp	HEADLAMP			×	×	×			N		
Wiper and washer	WIPER			×	×	×			_		
Turn signal and hazard warning lamps	FLASHER			×	×				0		
Air conditioner	AIR CONDITIONER			×					_		
Intelligent Key system	INTELLIGENT KEY		×	×	×	×			_		
Combination switch	COMB SW			×					P		
BCM	BCM	×	×			×	×	×	_		
Immobilizer	IMMU		×	×	×				_		
Interior room lamp battery saver	BATTERY SAVER			×	×				_		
Trunk open	TRUNK			×					_		
Vehicle security system	THEFT ALM			×	×	×					

# DIAGNOSIS SYSTEM (BCM)

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#### **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

		Direct Diagnostic Mode									
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr			
RAP system	RETAINED PWR			×							
Signal buffer system	SIGNAL BUFFER			×							
TPMS	AIR PRESSURE MONITOR		×	×	×	×					

#### RETAINED PWR

#### RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:000000011009027

#### CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF  $\rightarrow$  ON (for at least 5 seconds)  $\rightarrow$  OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

#### DATA MONITOR

Monitor Item [Unit]	Description
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

/I (BODY CONTROL MODU	JLE)
of ECU Reference	INFOID:0000000
ECU	Reference
	BCS-32, "Reference Value"
BCM	BCS-51, "Fail Safe"
	BCS-52, "DTC Inspection Priority Chart"
	BCS-53, "DTC Index"

#### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH [LH FRONT ONLY ANTI-PINCH]

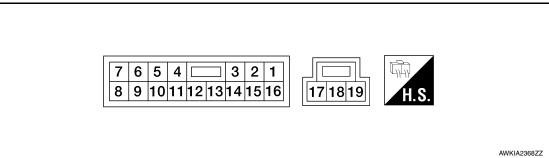
#### < ECU DIAGNOSIS INFORMATION >

#### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### **Reference Value**

INFOID:000000010481317

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	nal No. color)	Description		Condition	Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
1 (B)	Ground	Ground	_	_	0
2 (L)	16 (BR)	Front power window motor RH DOWN signal	Output	When the front RH switch on the main power window and door lock/ unlock switch is operated in the DOWN position.	Battery voltage
4 (BG)	12 (B)	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
5 (R)	12 (B)	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 2 0 10 ms JMKIA0070GB
6 (SB)	Ground	Rear power window motor RH DOWN signal	Output	When the rear RH switch on the main power window and door lock/ unlock switch is operated in the DOWN position.	Battery voltage
7 (V)	Ground	Rear power window motor RH UP signal	Output	When the rear RH switch on the main power window and door lock/ unlock switch is operated in the UP position.	Battery voltage
8 (L)	Ground	Rear power window motor LH DOWN signal	Output	When the rear LH switch on the main power window and door lock/ unlock switch is operated in the DOWN position.	Battery voltage

#### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### < ECU DIAGNOSIS INFORMATION >

[LH FRONT ONLY ANTI-PINCH]

	nal No. color)	Description		Condition	Voltage	A
+	-	Signal name	Input/ Output	Condition	(Approx.)	
9 (Y)	Ground	Rear power window motor LH UP signal	Output	When the rear LH switch on the main power window and door lock/ unlock switch is operated in the UP position.	Battery voltage	B
				IGN SW ON	Battery voltage	0
10	Ground	RAP signal	Input	Within 45 second after ignition switch is turned to OFF.	Battery voltage	D
(BR)				When driver side or passenger side door is opened during retained power operation.	0	E
12 (B)	Ground	Encoder ground	_	—	0	
14 (P)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	F
16 (BR)	2 (L)	Front power window motor RH UP signal	Output	When the front RH switch on the main power window and door lock/ unlock switch is operated in the UP position.	Battery voltage	G
17 (W)	19 (R)	Front power window motor LH UP signal	Output	When the front LH switch on the main power window and door lock/ unlock switch is operated in the UP position.	Battery voltage	Н
18 (LG)	Ground	Battery power supply	Input	—	Battery voltage	
19 (R)	17 (W)	Front power window motor LH DOWN signal	Output	When the front LH switch on the main power window and door lock/ unlock switch is operated in the DOWN position.	Battery voltage	J

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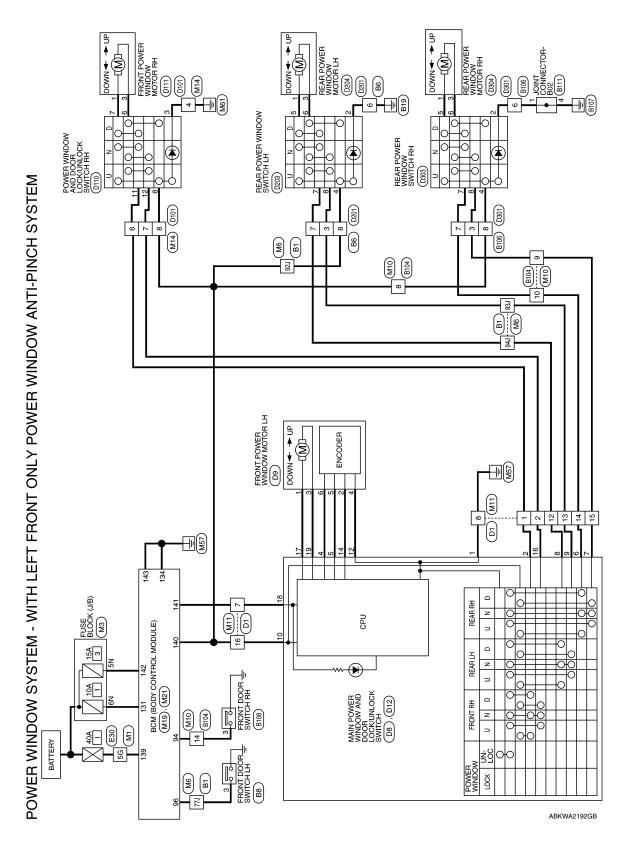
< WIRING DIAGRAM >

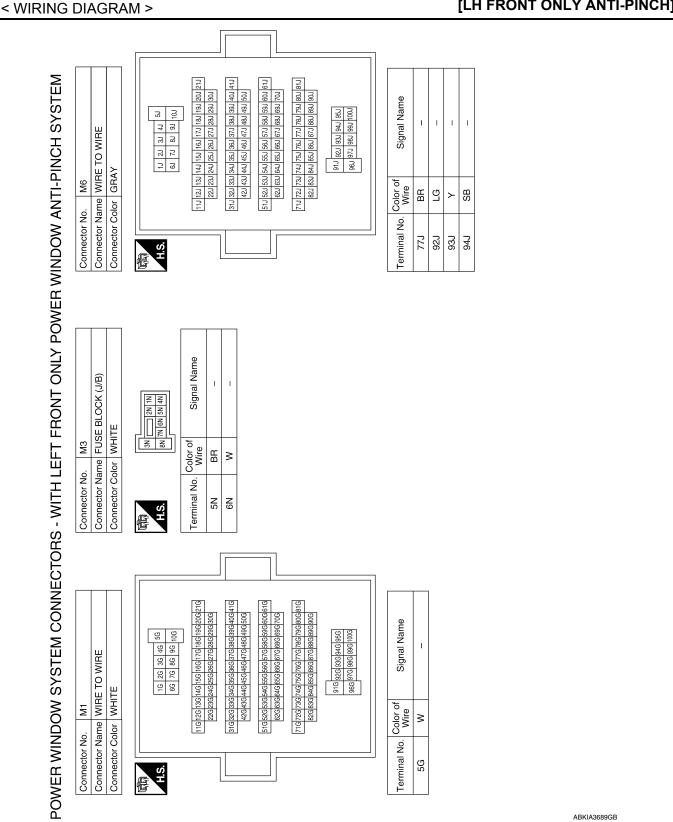
# WIRING DIAGRAM

POWER WINDOW SYSTEM

Wiring Diagram - With Left Front Only Power Window Anti- Pinch

INFOID:000000010481318





# POWER WINDOW SYSTEM

Revision: May 2014

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[LH FRONT ONLY ANTI-PINCH]

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TO WIRE E		Signal Name	1	I	1	I							Signal Name	P/W POWER	
. M14 me WIRE lor WHIT	1 2 4 5 6	Color of Wire	GR	~	>	ГG						Color of	Wire	ГC	
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	品.S.H	Terminal No.	4	9	7	ω							Terminal No. Wire	140	
							-								
l Le to wire Te	3 <b>—</b> 4 5 6 7 10 11 12 13 14 15 16	Signal Name	ı	I	1	I	I	1	1	I	1			Connector Name BCM (BUDY CONTRUL MODULE)	TE
o. M11 ame WIRE T blor WHITE	1 2 3 ■ 8 9 10 11	Color of Wire	≻	>	>	в	SB	≻	BR	>	ГG	M21			lor WHI
Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No.	-	2	7	8	12	13	14	15	16	Connector No.		CONNECTOR INA	Connector Color WHITE
							1					_	- -		
E TO WIRE WN	4         3         2         1           13         12         11         10         9         8	Signal Name	1	I	1	I								Connector Name BCM (BODY CONTHOL	17
M10 me WIRE TC	7 6 5 4 16 15 14 13	Color of Wire	ГG	>	BR	SB	-					M19			lor GRAY
Connector No. M10 Connector Name WIRE TO Connector Color BROWN	HS.	Terminal No. Wire	ω	6	10	14						Connector No.		Connector Na	Connector Color

Signal Name	P/W POWER SUPPLY IGN	P/W POWER SUPPLY BAT	BAT FRONT DOOR	GND1
Color of Wire	ГG	>	BR	в
Terminal No. Wire	140	141	142	143

#### **POWER WINDOW SYSTEM**

< WIRING DIAGRAM >

#### [LH FRONT ONLY ANTI-PINCH]

**BAT POWER F/L** 

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GND2

BAT BCM FUSE Signal Name

≥

131 134 139

AS DOOR SW DR DOOR SW

Signal Name

Color of Wire BB BB

Terminal No. 94 96

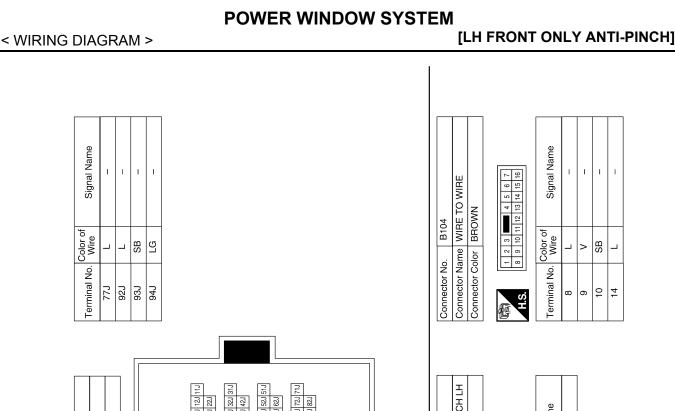
Terminal No. Wire

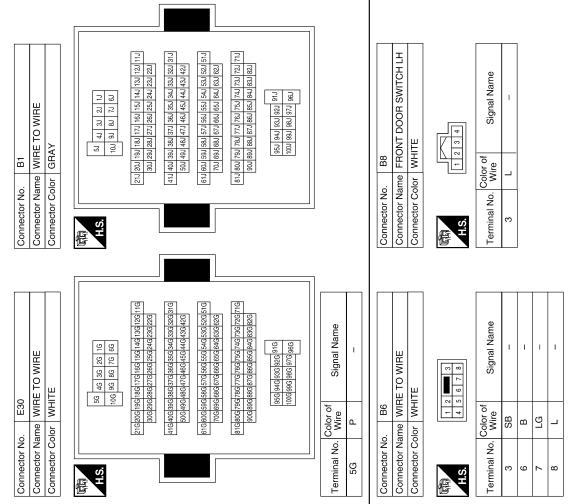
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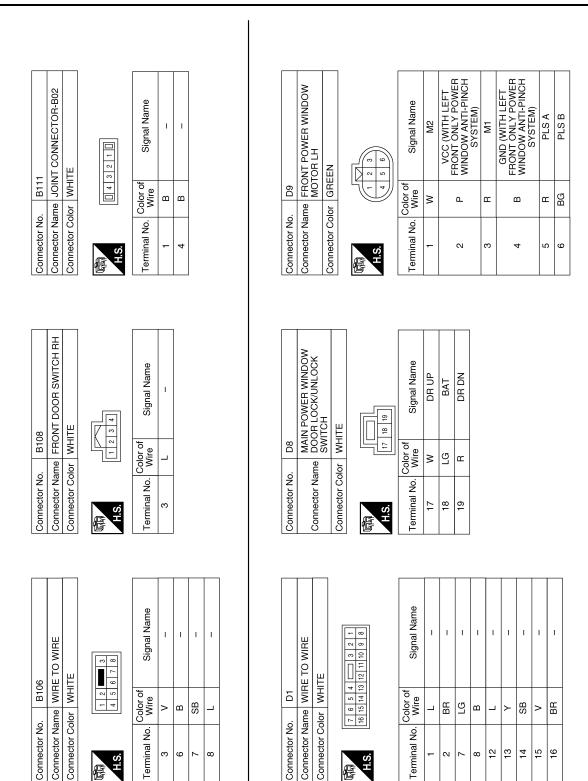
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#### < WIRING DIAGRAM >

#### POWER WINDOW SYSTEM

#### [LH FRONT ONLY ANTI-PINCH]



Revision: May 2014

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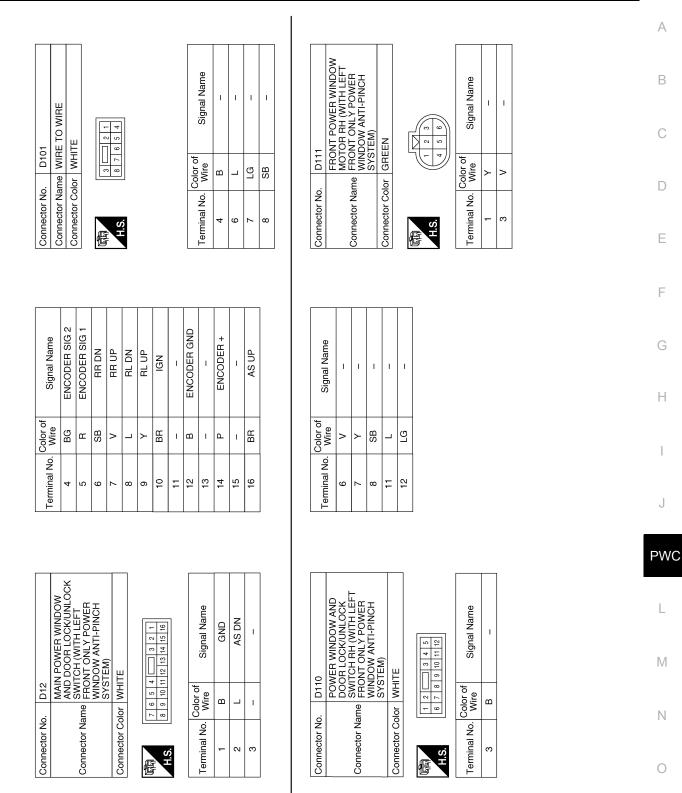
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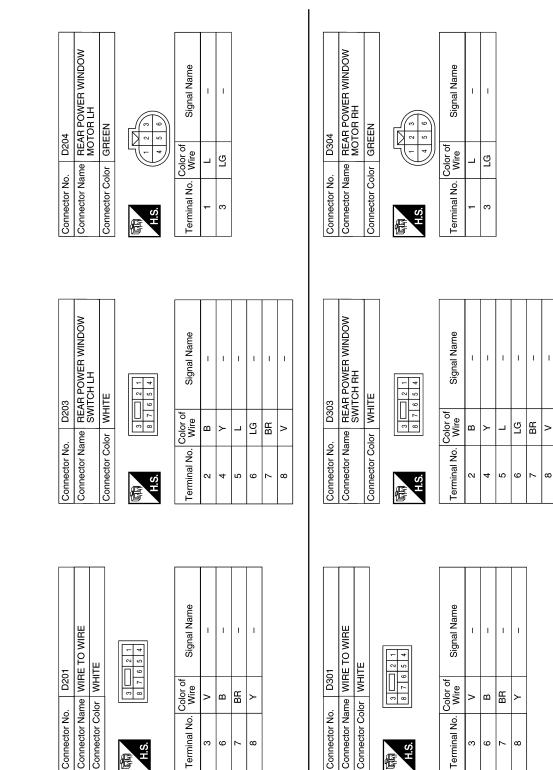
#### POWER WINDOW SYSTEM

#### < WIRING DIAGRAM >

#### [LH FRONT ONLY ANTI-PINCH]



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**POWER WINDOW SYSTEM** 

#### < WIRING DIAGRAM >

[LH FRONT ONLY ANTI-PINCH]

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# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

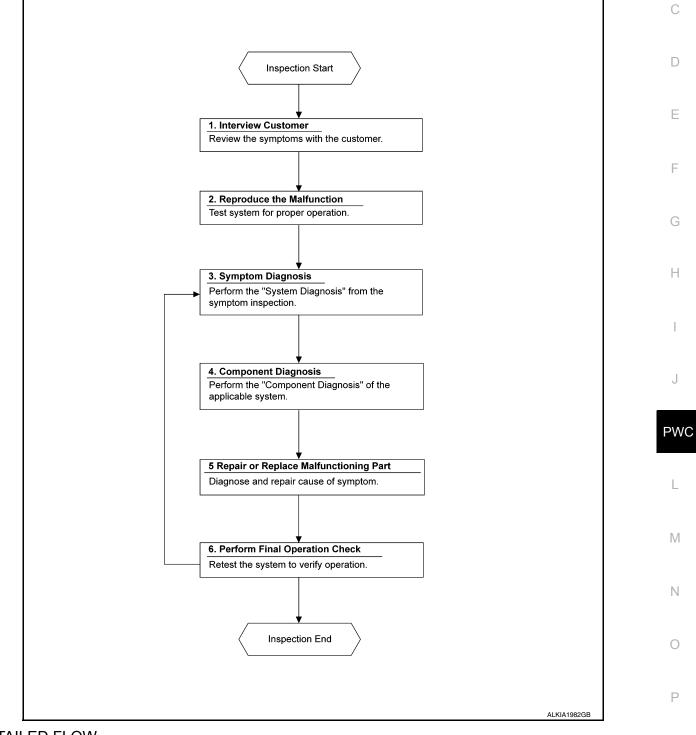
#### Work Flow

INFOID:000000010481319

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[LH FRONT ONLY ANTI-PINCH]

OVERALL SEQUENCE



#### DETAILED FLOW

#### 1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

#### DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

>> GO TO 2.

#### 2. CONFIRM THE SYMPTOM

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.

 $\mathbf{3}$ . IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS

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

>> GO TO 4.

**4.** PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

**5.** REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

**6.** 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.

Are the malfunctions corrected?

YES >> Inspection End. NO >> GO TO 3.

< BASIC INSPECTION >	[LH FRONT ONLY ANTI-PINCH]
INSPECTION AND ADJUSTMENT	
ADDITIONAL SERVICE WHEN REMOVING BAT	TERY NEGATIVE TERMINAL
ADDITIONAL SERVICE WHEN REMOVING BATTI	
scription	INFOID:000000010481320
Initial setting is necessary when battery terminal is disconnected.	
CAUTION: The following specified operations are not performed under t • Auto-up operation	C he non-initialized condition.
<ul><li>Anti-pinch function</li><li>Retained power operation</li></ul>	D
ADDITIONAL SERVICE WHEN REMOVING BATTE	ERY NEGATIVE TERMINAL : Spe-
cial Repair Requirement	INFOID:000000010481321
INITIALIZATION PROCEDURE	
1. Disconnect battery minus terminal or main power window and nect it after a minute or more.	d door lock/unlock switch connector. Recon-
<ol> <li>Turn ignition switch ON.</li> <li>Operate power window switch to fully open the window. (This already fully open)</li> </ol>	s operation is unnecessary if the window is $\ _{ m G}$
<ol> <li>Continue pulling the power window switch UP (AUTO-UP ope position, keep pulling the switch for 4 seconds or more.</li> </ol>	ration). Even after glass stops at fully closed
<ol> <li>Inspect anti-pinch function.</li> </ol>	Н
CHECK ANTI-PINCH FUNCTION	
<ol> <li>Fully open the door window.</li> <li>Place a piece of wood near fully closed position.</li> <li>Close door glass completely with AUTO-UP.</li> </ol>	I
<ul> <li>Check that glass lowers for approximately 150 mm or 2 seconds</li> <li>Check that glass does not rise when operating the main power lowering.</li> </ul>	
CAUTION:	
<ul> <li>Do not check with hands and other part of body because th</li> <li>Check that AUTO-UP operates before inspection when syste</li> <li>It may switch to fail-safe mode if open/close operation is per</li> </ul>	em initialization is performed.
<ul> <li>ting in that situation. Refer to <u>PWC-11, "Fail-safe"</u>.</li> <li>Perform initial setting when auto-up operation or anti-pinch</li> <li>Finish initial setting. Otherwise, next operation cannot be d</li> </ul>	
1. Auto-up operation 2. Anti-pinch function	
3. Retained power operation when ignition switch is OFF.	
ADDITIONAL SERVICE WHEN REPLACING CO	
ADDITIONAL SERVICE WHEN REPLACING CON	TROL UNIT : Description
Initial setting is necessary when replacing main power window and <b>CAUTION:</b>	d door lock/unlock switch.
The following specified operations are not performed under t	he non-initialized condition.
<ul> <li>Auto-up operation</li> <li>Anti-pinch function</li> <li>Retained power operation</li> </ul>	P
ADDITIONAL SERVICE WHEN REPLACING CON	TROL UNIT : Special Repair Re-
quirement	• INFOID:000000010481323

**INSPECTION AND ADJUSTMENT** 

INITIALIZATION PROCEDURE

#### **INSPECTION AND ADJUSTMENT**

#### < BASIC INSPECTION >

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

#### CHECK ANTI-PINCH FUNCTION

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

#### CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to <u>PWC-11, "Fail-safe"</u>.
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

	FRONT ONLY ANTI-PINCH]
DTC/CIRCUIT DIAGNOSIS	
POWER SUPPLY AND GROUND CIRCUIT	
BCM	
BCM : Diagnosis Procedure	INFOID:000000011009037
Regarding Wiring Diagram information, refer to <u>BCS-56, "Wiring Diagram"</u> .	
1. CHECK FUSE AND FUSIBLE LINK	
Check that the following fuse and fusible link are not blown.	
	The second for the Park Nu
Terminal No.     Signal name       139     Fusible link battery power	Fuse and fusible link No.
131 BCM battery fuse	1 (10A)
s the fuse or fusible link blown?	. (
YES >> Replace the blown fuse or fusible link after repairing the affected ci	rcuit.
NO >> GO TO 2.	
2. CHECK POWER SUPPLY CIRCUIT	
1. Disconnect BCM connector M21. Check veltage between BCM connector M21 terminals 121, 120 and group	а.
2. Check voltage between BCM connector M21 terminals 131, 139 and grour	IU.
BCM Ground	Voltage
Connector Terminal Ground	(Approx.)
M21 131 —	Battery voltage
139	
s the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace harness or connectors.	
3. CHECK GROUND CIRCUIT	
Check continuity between BCM connector M21 terminals 134, 143 and ground.	
·	
BCM Ground	Continuity
Connector Terminal	
M21	Yes
143	
<u>s the inspection result normal?</u> YES >> Inspection End.	
NO >> Repair or replace harness or connectors.	
POWER WINDOW MAIN SWITCH	
POWER WINDOW MAIN SWITCH : Description	INFOID:000000010481325
<ul> <li>BCM supplies power.</li> <li>It operates each power window motor via corresponding power window switch</li> </ul>	h and makes window move up/
down when main power window and door lock/unlock switch is operated.	

< DTC/CIRCUIT DIAGNOSIS >

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

Main Power Window And Door Lock/unlock Switch

**1.** CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Check power window motor operation with main power window and door lock/unlock switch. <u>Is the inspection result normal?</u>

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK. NO >> Refer to <u>PWC-30</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000010481327

INFOID:0000000010481326

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring Diagram - With Left Front Only Power Window Anti- Pinch".

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/unlock switch connectors D8, D12 and ground.

Termi				
(+)		( )	Voltage (Approx.)	
Main power window and door lock/unlock switch	Terminal	(-)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
D12	10	Ground	Pattonyvoltago	
D8	18	Giouna	Battery voltage	

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, main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- 3. Check continuity between BCM connector and main power window and door lock/unlock switch connectors.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M21	M21 140	D12	10	Yes
1012 1	141	D8	18	165

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal		Continuity
M21	140	Ground	No
	141		NO

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

**3.** CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch.

3. Check continuity between main power window and door lock/unlock switch connector D8 and ground.

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

	power window and door lock/unlock switch conn	ector Ter	minal	Ground	Continuity	
	D8		1	Ground	Yes	
<u>s the ir</u>	spection result normal?					
YES	>> Check main power window and do LH) GO TO 5.	or lock/unlock	switch out	out signal (rear po	ower window swi	
YES	>> Check main power window and do RH) GO TO 6.	or lock/unlock	switch out	out signal (rear po	ower window swi	
YES	>> Check main power window and do LH) GO TO 7.	or lock/unlock	switch outp	out signal (front po	ower window swi	
YES	>> Check main power window and do RH) GO TO 8.		switch outp	out signal (front po	ower window swi	
NO	>> Repair or replace the harness or co	onnectors.				
I. CHE	ECK BCM OUTPUT SIGNAL					
2. Tur	nnect BCM. n ignition switch ON. eck voltage between BCM connector M:	21 and ground.				
	Terminals					
	(+)			( )	Voltage (Approx.)	
	BCM connector	Terminal		()		
					Battery voltage	
	M21	140	Gr	ound	Battery voltage	
	M21	141			Battery voltage	
YES NO 5. CHE ER WIN 1. Col 2. Tur		141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL s/unlock switch	nittent Incie stallation". OCK SWIT	dent". TCH OUTPUT SIC	GNAL (REAR PC	
YES NO 5. CHE ER WIN 1. Col 2. Tur	nspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to <u>BCS-81, "F</u> ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock in ignition switch ON.	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL s/unlock switch	nittent Incie stallation". OCK SWIT	dent". TCH OUTPUT SIC	GNAL (REAR PO	
YES NO 5. CHE ER WIN 1. Col 2. Tur	nspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to <u>BCS-81, "F</u> ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock in ignition switch ON. eck voltage between main power windo	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL s/unlock switch	nittent Incid stallation" OCK SWIT	dent". TCH OUTPUT SIC vitch D12 and gro Window switch	GNAL (REAR PO	
YES NO <b>5.</b> CHE ER WIN 1. Con 2. Tur 3. Cho	nspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to <u>BCS-81, "F</u> ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock in ignition switch ON. eck voltage between main power windo Terminal	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL (/unlock switch w and door lock	nittent Incie stallation". OCK SWIT	dent". TCH OUTPUT SIC	GNAL (REAR PO	
YES NO CHE R WIN COL COL COL	nspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to <u>BCS-81</u> , "F ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock rn ignition switch ON. eck voltage between main power windo Terminal (+)	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL a/unlock switch w and door lock	nittent Incid stallation" OCK SWIT	dent". TCH OUTPUT SIC vitch D12 and gro Window switch	GNAL (REAR PC	
YES NO D. CHE R WIN COL 2. Tur 3. Che	Aspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to BCS-81. "F ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock in ignition switch ON. eck voltage between main power windo Terminal (+) sower window and door lock/unlock switch connect	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL (/unlock switch w and door lock	nittent Inciestallation". OCK SWIT <td>dent". FCH OUTPUT SIC vitch D12 and gro Window switch position (rear LH)</td> <td>GNAL (REAR PO und. Voltage (Approx.)</td>	dent". FCH OUTPUT SIC vitch D12 and gro Window switch position (rear LH)	GNAL (REAR PO und. Voltage (Approx.)	
YES NO <b>5.</b> CHE ER WIN 1. Con 2. Tur 3. Cho	nspection result normal? >> Check intermittent incident. Refer to >> Replace BCM. Refer to <u>BCS-81</u> , "F ECK MAIN POWER WINDOW AND DO IDOW SWITCH LH) nnect main power window and door lock rn ignition switch ON. eck voltage between main power windo Terminal (+)	141 o <u>GI-44, "Interr</u> Removal and In OR LOCK/UNL a/unlock switch w and door lock	nittent Incid stallation" OCK SWIT	dent". TCH OUTPUT SIC vitch D12 and gro Window switch position (rear LH) UP	GNAL (REAR PC und. Voltage (Approx.) Battery voltage	

**6.** CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-  $_{\rm P}$  ER WINDOW SWITCH RH)

1. Connect main power window and door lock/unlock switch.

2. Turn ignition switch ON.

3. Check voltage between main power window and door lock/unlock switch D12 and ground.

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

Terminal					
(+)			Window switch position (rear RH)	Voltage (Approx.)	
Main power window and door lock/unlock switch connector Terminal		(-)			
D12	6		UP	Battery voltage	
	0	Ground	DOWN	0	
	7	Giouna	UP	0	
	1		DOWN	Battery voltage	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Instal-</u> <u>lation</u>". After that, refer to <u>PWC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> <u>UNIT</u> : <u>Special Repair Requirement</u>".

7. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH LH)

- 1. Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.

3. Check voltage between main power window and door lock/unlock switch D8 and ground.

Terminal		N7 11		
(+)	(-)	Window switch position (front LH)	Voltage (Approx.)	
Main power window and door lock/unlock switch connector	Terminal	(-)	, , , , , , , , , , , , , , , , ,	V FF - 7
D8	17		UP	Battery voltage
	17	Ground	DOWN	0
	19	Ground	UP	0
	19		DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Instal-</u> <u>lation</u>". After that, refer to <u>PWC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> <u>UNIT</u> : <u>Special Repair Requirement</u>".

**8.** CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH RH)

1. Connect main power window and door lock/unlock switch.

2. Turn ignition switch ON.

3. Check voltage between main power window and door lock/unlock switch D12 and ground.

Terminal		N / 11			
(+)			Window switch position (front RH)	Voltage (Approx.)	
Main power window and door lock/unlock switch connector Ter		(—)		( [[]]	
	2		UP	Battery voltage	
D12	2	Ground	DOWN	0	
DIZ	16	Ground	UP	0	
	10		DOWN	Battery voltage	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Instal-</u> <u>lation</u>". After that, refer to <u>PWC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> <u>UNIT</u> : <u>Special Repair Requirement</u>".

#### POWER SUPPLY AND GROUND CIRCUIT < DTC/CIRCUIT DIAGNOSIS > [LH FRONT ONLY ANTI-PINCH]

#### POWER WINDOW MAIN SWITCH : Component Inspection

#### INFOID:000000010481328

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#### 1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### 1. Check main power window and door lock/unlock switch D12.

Tern	ninal	Main power window and doo	or lock/unlock switch condition	Continuity
10	8	Rear LH		
10	6	Rear RH	UP	
10	2	Front RH		
8	9	Rear LH		
6	7	Rear RH	NEUTRAL	Yes
2	16	Front RH		Tes
10	9	Rear LH		
10	7	Rear RH	DOWN	
10	16	Front RH		
1	12	L	-	

 Check continuity between main power window and door lock/unlock switch D12 (power window lock switch) (Lock operation).

Ter	minal	Main power window and door lock/unlock switch condition		Continuity	
9		Rear LH			Н
7	-	Rear RH	UP		
16	-	Front RH			
8	-	Deer			I
9		Rear LH			
7		Deer DU		NI-	J
6	- 1	Rear RH	NEUTRAL	No	
2		Encent DU			
16		Front RH			PW
8		Rear LH			
6		Rear RH	DOWN		L
2	1	Front RH			

 Check continuity between main power window and door lock/unlock switch D12 (power window lock switch) (Unlock operation).

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#### POWER SUPPLY AND GROUND CIRCUIT < DTC/CIRCUIT DIAGNOSIS > [LH FRONT ONLY ANTI-PINCH]

DOWN

#### Terminal Main power window and door lock/unlock switch condition Continuity 9 Rear LH 7 UP Rear RH Front RH 16 8 Rear LH 9 7 1 Rear RH **NEUTRAL** Yes 6 2 Front RH 16 8 Rear LH

Is the inspection result normal?

6

2

- YES >> Main power window and door lock/unlock switch is OK.
- NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-27</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> <u>UNIT</u>: <u>Special Repair Requirement</u>".

#### POWER WINDOW MAIN SWITCH : Special Repair Requirement

Rear RH

Front RH

INFOID:000000010481329

#### **1.** PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-27</u>. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to <u>PWC-30, "POWER WINDOW MAIN SWITCH : Component Function Check"</u>. FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

BCM supplies power.

• Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:0000000010481331

INFOID:000000010481330

Power Window And Door Lock/unlock Switch RH

**1.** CHECK POWER WINDOW MOTOR FUNCTION

Check front power window motor operation with power window and door lock/unlock switch RH. <u>Is the inspection result normal?</u>

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK. NO >> Refer to <u>PWC-35</u>, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

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

Check continuity between main power window and door lock/unlock switch connector D12 and power win-Ν dow and door lock/unlock switch RH connector D110.

Main power window and door lock/unlock switch connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity	
D12	2	D110	11	Vaa	
D12	16	D110	12	Yes	I

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#### 2015 Altima Sedan

M

PWC

INFOID:000000010481332

Voltage

(Approx.)

Battery voltage

(-)

Ground

А

В

D

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FRONT POWER WINDOW SWITCH : Diagnosis Procedure

# Terminal

Power window and door lock/unlock switch RH connector

D110

dow Anti- Pinch".

Regarding Wiring Diagram information, refer to PWC-18, "Wiring Diagram - With Left Front Only Power Win-

Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT (POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH)

1. Turn ignition switch ON.

Is the inspection result normal?

>> GO TO 3.

>> GO TO 2.

2. CHECK HARNESS CONTINUITY

YES

NO

< DTC/CIRCUIT DIAGNOSIS >

#### 2. Check voltage between power window and door lock/unlock switch RH connector D110 and ground.

Turn ignition switch OFF. 1. 2. Disconnect BCM, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH. 3. Check continuity between BCM connector M21 and power window and door lock/unlock switch RH connector D110. BCM connector Terminal Power window and door lock/unlock switch RH connector Continuity Terminal M21 140 D110 8 Yes Check continuity between BCM connector M21 and ground. BCM connector Terminal Continuity Ground M21 140 No Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the harness or connectors.  ${f 3.}$  CHECK HARNESS CONTINUITY (POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH) 1. Turn ignition switch OFF. 2. 3. Check continuity between main power window and door lock/unlock switch connector D12 and ground. 4. Main power window and door lock/unlock switch connector Terminal Continuity 2 Ground D12 No 16 Is the inspection result normal?

Terminal

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#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

#### **4.** CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- 2. Turn ignition switch ON.

3. Check voltage between BCM connector M21 and ground.

Ten				
(+)		(_)	Voltage (Approx.)	
BCM connector	Terminal	- (-)		
M21	140	Ground	Battery voltage	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

#### **5.** CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to PWC-36, "FRONT POWER WINDOW SWITCH : Component Inspection".

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace power window and door lock/unlock switch RH. Refer to <u>PWC-69</u>, "<u>Removal and Installa-</u> tion".

#### FRONT POWER WINDOW SWITCH : Component Inspection

INFOID:000000010481333

#### COMPONENT INSPECTION

#### 1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH D110.

Ter	minal	Power window switch condition	Continuity	
8	7	UP		
12	6	Ŭr.		
12	6	NEUTRAL	Yes	
7	11	NEUTRAL	165	
8	6	DOWN		
7	11	DOWN		

#### Is the inspection result normal?

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

NO >> Replace power window and door lock/unlock switch RH. Refer to <u>PWC-70, "Removal and Installa-</u> tion".

#### REAR POWER WINDOW SWITCH

#### REAR POWER WINDOW SWITCH : Description

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

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

INFOID:000000010481335

INFOID:000000010481334

#### Rear Power Window Switch

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

Check rear power window motor operation with rear power window switch.

# POWER SUPPLY AND GROUND CIRCUIT

# < DTC/CIRCUIT DIAGNOSIS >

# [LH FRONT ONLY ANTI-PINCH]

Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK. NO >> Refer to PWC-37, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

# REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000010481336

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Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring Diagram - With Left Front Only Power Window Anti- Pinch".

Rear Power Window Switch Power Supply Circuit Check

# 1. CHECK POWER SUPPLY CIRCUIT

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

	Condition	Voltage (Approx.)	F			
Rear power win	Rear power window switch connector					
LH	D203	4	Ground	Ignition switch ON	Battery voltage	G
RH	D303	4	Ground	Ignition switch ON	Ballery vollage	G

Is the inspection result normal?

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 main power window and door lock/unlock switch and rear power window switch LH.

 Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity	PWC
D12	8	D203	7	Yes	
012	9		8	163	L

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

Main power window and door lock/unlock switch connector	Terminal		Continuity	M
	8 Ground		No	
D12	9		No	
Is the inspection result normal?				N
YES >> GO TO 5.				

NO >> Repair or replace the harness or connectors.

# $\mathbf{3.}$ CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.

3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity	
D12	6	D303	7	Yes	
012	7	503	8	165	

# POWER SUPPLY AND GROUND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

# [LH FRONT ONLY ANTI-PINCH]

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

Main power window and door lock/unlock switch connector	Terminal		Continuity	
	6	Ground	No	
012	7		NO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

**4.** CHECK HARNESS CONTINUITY

- 1. Disconnect BCM, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- 2. Check continuity between BCM connector and rear power window switch connector.

BCM connector	Terminal	Rear power window switch connector		Rear power window switch connector		Terminal	Continuity
M21	140	LH	D203	1	Yes		
1012 1	140	RH	D303	4	165		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity	
M21	140	Orbana	No	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

NO >> Repair or replace harness or connectors.

**5.** CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-38, "REAR POWER WINDOW SWITCH : Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to <u>PWC-71, "Removal and Installation"</u>.

# REAR POWER WINDOW SWITCH : Component Inspection

INFOID:000000010481337

# COMPONENT INSPECTION

# 1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Terminal		Power window switch condition	Continuity		
4	5	UP			
8	6	UF			
8	6	NEUTRAL Yes			
5	7	NEUTRAL	165		
4	6	DOWN			
5	7	DOWN			

# Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to <u>PWC-71, "Removal and Installation"</u>.

# 

	_		NDOW MOTOR		V ANTI DIVO
			[L]	I FRONT ON	
POWER WINDOW N DRIVER SIDE	OTOR				
_	tion				
ORIVER SIDE : Descrip					INFOID:00000000104813
Door glass moves UP/DOWN	-	-	·	w and door loc	k/unlock switch.
ORIVER SIDE : Compo					INFOID:00000000104813
1. CHECK FRONT POWER					
Check front power window mo s the inspection result normal	•	ation with	the main power window a	ind door lock/u	nlock switch.
YES >> Front power windo	_ w motor L⊢				
NO >> Refer to <u>PWC-39.</u>			<u>gnosis Procedure"</u> .		
DRIVER SIDE : Diagno	SIS PIUCE	uure			INFOID:00000001048134
Regarding Wiring Diagram info <u>Iow Anti- Pinch"</u> .	ormation, re	er to <u>Pvv</u>	C-18, Winng Diagram -	WITH LETT FROM	Only Power win
Front Power Window Motor		Chook			
CHECK MAIN POWER WI					ΝΑΙ
I. Turn ignition switch OFF.		boom			
<ol> <li>Disconnect front power wi</li> <li>Turn ignition switch ON.</li> </ol>	ndow motor	LH.			
. Check voltage between from the second seco	ont power w	indow mo	tor LH connector D9 and	ground.	
Termina	1				
(+)			Main power window and d		Voltage
Front power window motor LH connector	Terminal	(-)	switch conditi	ION	(Approx.)
	1		UP		Battery voltage
D9	•	Ground	DOWN		0
	3		UP		0 Battery voltage
s the inspection result normal	?				, , , , , , , , , , , , , , , , , , , ,
YES >> GO TO 3. NO >> GO TO 2.					
<b>2.</b> CHECK HARNESS CONT					
. Turn ignition switch OFF.					
. Disconnect main power w				ab connector D	0 and front now
<ol> <li>Check continuity between window motor LH connect</li> </ol>			and door lock/uniock SWIG		o and none powe
Main power window and door lock/	un-	inel F	Front power window motor LH	Torreinal	Continuity
lock switch connector	leim	ina	connector	Terminal	Continuity
D8	17		D9	1	Yes
	1.	-		5	1

4. Check continuity between main power window and door lock/unlock switch connector D8 and ground.

# < DTC/CIRCUIT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal		Continuity
D8	17	Ground	No
20	19		140

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Instal-</u> <u>lation</u>". After that, refer to <u>PWC-40</u>, "<u>DRIVER SIDE</u> : <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

 $\mathbf{3}$ . Check front power window motor LH

Check front power window motor LH. Refer to PWC-40, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Replace front power window motor LH. Refer to <u>GW-16</u>, "<u>Removal and Installation - Front Regula-</u> tor". After that, refer to <u>PWC-40</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Reguirement</u>".

**DRIVER SIDE : Component Inspection** 

INFOID:000000010481341

# COMPONENT INSPECTION

# **1.**CHECK FRONT POWER WINDOW MOTOR LH

Check motor operation by connecting the battery voltage directly to power window motor D9.

Terr	ninal	- Motor condition		
(+)	(-)			
3	1	DOWN		
1	3	UP		

Is the inspection result normal?

NO

YES >> Front power window motor LH is OK.

>> Replace front power window motor LH. Refer to <u>GW-16, "Removal and Installation - Front Regula-</u> tor". After that, refer to <u>PWC-40, "DRIVER SIDE : Special Repair Requirement"</u>.

# DRIVER SIDE : Special Repair Requirement

INFOID:000000010481342

**1.** PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special <u>Repair Requirement"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to <u>PWC-39</u>, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

# PASSENGER SIDE : Description

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

Revision: May 2014

# **PWC-40**

INFOID:000000010481343

< DTC/CIRCUIT DIAGNOSI	S >				[LH FRON	T ONLY A	NTI-PINCH]
PASSENGER SIDE : C	omponent F	unc	tion Chec	k		II	NFOID:0000000010481344
1. CHECK FRONT POWER	WINDOW MO	FOR F		Г			
Check front power window mo window and door lock/unlock <u>Is the inspection result norma</u> YES >> Front power wind	switch. <u>I?</u> ow motor RH is	s OK.				k/unlock sw	itch or power
NO >> Refer to <u>PWC-41</u>				<u>is Procec</u>	<u>lure"</u> .		
PASSENGER SIDE : D	iagnosis Pro	oced	lure			II	NFOID:0000000010481345
Regarding Wiring Diagram inf <u>dow Anti- Pinch"</u> . Front Power Window Motor			<u>WC-18, "Wir</u>	ing Diag	<u>ram - With Lef</u>	<u>'t Front Only</u>	<u> Power Win-</u>
1. CHECK POWER WINDOW	W AND DOOR	LOCK	K/UNLOCK	SWITCH	RH OUTPUT	SIGNAL	
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect front power w</li> <li>Turn ignition switch ON.</li> <li>Check voltage between fr</li> </ol>	indow motor R	H.					
Te	erminal						
(+)				Front power window moto	ver window motor I condition	Voltage ( (Approx	
Front power window motor RH connector	Terminal		(-)			(79)	50.
	1				UP	Battery	voltage
D111	I	_	Ground		DOWN		0
	3			UP DOWN		0 Battery voltage	
Is the inspection result norma         YES       >> GO TO 3.         NO       >> GO TO 2.         2. CHECK HARNESS CONT         1. Turn ignition switch OFF.         2. Disconnect power window         3. Check continuity between window motor RH connect	INUITY v and door lock power window				ch RH connec	tor D110 an	d front power
Power window and door lock/unloc RH connector	k switch Termin	al I	Front power wi	indow moto	or RH connector	Terminal	Continuity
D110	7		D111			1	Yes
<ol> <li>Check continuity between</li> </ol>	power window	and	door lock/ur	nlock swi	tch connector l	D110 and gi	ound.
Power window and door lock/unlo	ock switch RH con	nector	Termina	ıl		Contin	uity
D110			7 6		Ground		
Is the inspection result norma YES >> Replace power w		· lock/	unlock swite	h RH. R	efer to PWC-69	9, " <u>R</u> emoval	and Installa-

NO >> Repair or replace the harness or connectors.

С

< DTC/CIRCUIT DIAGNOSIS >

 $\overline{\mathbf{3.}}$  check front power window motor RH

Check front power window motor RH. Refer to PWC-42, "PASSENGER SIDE : Component Inspection".

# Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Replace front power window motor RH. Refer to <u>GW-16</u>, "<u>Removal and Installation - Front Regulator</u>".

# PASSENGER SIDE : Component Inspection

# COMPONENT INSPECTION

# COMPONENT INSPECTION

# 1. CHECK FRONT POWER WINDOW MOTOR RH

Check motor operation by connecting the battery voltage directly to front power window motor RH D111.

Ter	minal	Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor RH. Refer to <u>GW-16, "Removal and Installation - Front Regulator"</u>.

# REAR LH

# REAR LH : Description

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

# **REAR LH : Component Function Check**

# **1.** CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Check rear power window motor LH operation with main power window and door lock/unlock switch or rear power window switch LH.

# Is the inspection result normal?

- YES >> Rear power window motor LH is OK.
- NO >> Refer to <u>PWC-42</u>, "REAR LH : Diagnosis Procedure"

# REAR LH : Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring Diagram - With Left Front Only Power Window Anti- Pinch".

Rear Power Window Motor LH Circuit Check

# 1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

# 1. Turn ignition switch OFF.

- 2. Disconnect rear power window motor LH.
- 3. Turn ignition switch ON.
- 4. Check voltage between rear power window motor LH connector D204 and ground.

# **PWC-42**

INFOID:000000010481346

INFOID:000000010481347

INFOID:000000010481348

INFOID:000000010481349

# < DTC/CIRCUIT DIAGNOSIS >

Termina	ai			Window		/oltage
(+) Rear power window motor LH connector	Term	inal	(-)	condition		Approx.)
· · · · · · · · · · · · · · · · · · ·				UP	Batte	ery voltage
	1			DOWN		0
D204			Ground	UP		0
	3			DOWN	Batte	ery voltage
s the inspection result normal?	I	I				
YES >> GO TO 3. NO >> GO TO 2.						
2. CHECK HARNESS CONTINUITY						
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect rear power window sw</li> <li>Check continuity between rear po LH connector D204.</li> </ol>	ower windo				•	
Rear power window switch LH connector	Terminal	Rear power	r window moto	or LH connector	Terminal	Continuity
D203	5	D204		1	Yes	
	6				3	
<ol> <li>Check continuity between rear pov</li> </ol>	wer window	w switch LF	- connector	r D203 and gro	ound.	
Rear power window switch LH connector	Terminal		Cont	inuity		
			-	-		antarty
D203	5	5	G	round		lo
	6	-	G	round		
s the inspection result normal? YES >> Check rear power window NO >> Repair or replace the harn 3. CHECK REAR POWER WINDOW Check rear power window motor LH.	switch LH less or con MOTOR L	. Refer to <u>F</u> inectors. .H	-		٢	10
Is the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43. "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent inciden         NO       >> Replace rear power window	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L	Refer to <u>F</u> inectors. _H <u>ection"</u> . <u>GI-44, "Inte</u>	PWC-43, "F	REAR LH : Con	mponent Ins	lo pection".
Is the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43, "REAR LH : Compoon         Is the inspection result normal?         YES       >> Check intermittent incidem	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L	Refer to <u>F</u> inectors. _H <u>ection"</u> . <u>GI-44, "Inte</u>	PWC-43, "F	REAR LH : Con	mponent Ins	lo pection".
Is the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43, "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent inciden         NO       >> Replace rear power window         REAR LH : Component Inspection	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L	Refer to <u>F</u> inectors. _H <u>ection"</u> . <u>GI-44, "Inte</u>	PWC-43, "F	REAR LH : Con	mponent Ins	lo pection".
Is the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43. "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent inciden         NO       >> Replace rear power windo         REAR LH : Component Inspector         COMPONENT INSPECTION	switch LH less or con MOTOR L nent Inspe t. Refer to w motor L ction	. Refer to <u>F</u> inectors. .H <u>ection"</u> . <u>GI-44, "Intr</u> H. Refer to	PWC-43, "F	REAR LH : Con	mponent Ins	10
s the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43. "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent inciden         NO       >> Replace rear power windo         REAR LH : Component Inspect         COMPONENT INSPECTION         1. CHECK REAR POWER WINDOW	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L ction	. Refer to <u>F</u> inectors. .H <u>ection"</u> . <u>GI-44, "Inte</u> H. Refer to	<u>PWC-43, "F</u> ermittent In <u>GW-25, "F</u>	REAR LH : Con	nponent Ins	NFOID:0000000104813
s the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43. "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent inciden         NO       >> Replace rear power windo         REAR LH : Component Inspect         COMPONENT INSPECTION         1. CHECK REAR POWER WINDOW	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L ction	. Refer to <u>F</u> inectors. .H <u>ection"</u> . <u>GI-44, "Inte</u> H. Refer to	<u>PWC-43, "F</u> ermittent In <u>GW-25, "F</u>	REAR LH : Con cident". Removal and In ar power windo	mponent Ins	NF OID:000000010481
s the inspection result normal?         YES       >> Check rear power window         NO       >> Repair or replace the harn         3. CHECK REAR POWER WINDOW         Check rear power window motor LH.         Refer to PWC-43. "REAR LH : Compo         Is the inspection result normal?         YES       >> Check intermittent incident         NO       >> Replace rear power window         REAR LH : Component Inspect         COMPONENT INSPECTION         1. CHECK REAR POWER WINDOW         Check motor operation by connecting to the section of t	switch LH less or con MOTOR L <u>nent Inspe</u> t. Refer to bw motor L ction	. Refer to <u>F</u> inectors. .H <u>ection"</u> . <u>GI-44, "Inte</u> H. Refer to	<u>PWC-43, "F</u> ermittent In <u>GW-25, "F</u>	REAR LH : Con cident". Removal and In ar power windo	nponent Ins	NF OID:000000010481
Is the inspection result normal? YES >> Check rear power window NO >> Repair or replace the harn 3. CHECK REAR POWER WINDOW Check rear power window motor LH. Refer to <u>PWC-43</u> . "REAR LH : Compo Is the inspection result normal? YES >> Check intermittent inciden NO >> Replace rear power windo REAR LH : Component Inspect COMPONENT INSPECTION 1. CHECK REAR POWER WINDOW Check motor operation by connecting to Terminal	switch LH less or con MOTOR L nent Inspe t. Refer to w motor L ction MOTOR L the battery	. Refer to <u>F</u> inectors. .H <u>ection"</u> . <u>GI-44, "Inte</u> H. Refer to	<u>PWC-43, "F</u> ermittent In <u>GW-25, "F</u>	REAR LH : Con cident". Removal and In ar power windo	mponent Ins	NFOID:000000010481

NO >> Replace rear power window motor LH. Refer to <u>GW-25. "Removal and Installation"</u>. REAR RH

# < DTC/CIRCUIT DIAGNOSIS >

# REAR RH : Description

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

# **REAR RH** : Component Function Check

INFOID:000000010481352

INFOID:000000010481351

# 1. CHECK POWER WINDOW MOTOR CIRCUIT

Check rear power window motor RH operation with operating main power window and door lock/unlock switch or rear power window switch RH.

## Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to <u>PWC-44</u>, "REAR RH : Diagnosis Procedure".

# **REAR RH** : Diagnosis Procedure

INFOID:000000010481353

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring Diagram - With Left Front Only Power Window Anti- Pinch".

# Rear Power Window Motor RH Circuit Check

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

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor RH.
- 3. Turn ignition switch ON.

4. Check voltage between rear power window motor RH connector D304 and ground.

Terminal	Terminal				
(+)	(-)	Rear power window switch RH condition	Voltage (Approx.)		
Rear power window motor RH connector	Terminal				
	1		UP	Battery voltage	
D304	I	Ground	DOWN	0	
0304	3	Ground	UP	0	
	5		DOWN	Battery voltage	

## 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.

 Check continuity between rear power window switch RH connector D303 and rear power window motor RH connector D304.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
 D303	5	D304	1	Yes
	6	504	3	165

4. Check continuity between rear power window switch RH connector D303 and ground.

Rear power window switch RH connector	Terminal		Continuity
D303	5	Ground	No
	6		INO

Is the inspection result normal?

# 

	POWER WINDOW	MOTOR
< DTC/CIRCUIT DIAGNOSIS	\$>	[LH FRONT ONLY ANTI-PINCH]
		VC-45, "REAR RH : Component Inspection"
	harness or connectors.	
3. CHECK REAR POWER W		
Check rear power window mot Refer to <u>PWC-45</u> , "REAR RH		
Is the inspection result normal		
YES >> Check intermittent	t incident. Refer to <u>GI-44, "Interr</u>	
NO >> Replace rear pow	er window motor RH. Refer to G	W-25, "Removal and Installation".
REAR RH : Component	Inspection	INFOID:000000010481354
	NI	
COMPONENT INSPECTIO		
1. CHECK REAR POWER W		
Check motor operation by con	necting the battery voltage direc	tly to rear power window motor RH D304.
Те	rminal	
(+)	(-)	Motor condition
3	1	DOWN
1	3	UP
Is the inspection result normal		
YES >> Power window mo NO >> Replace rear pow		W-25, "Removal and Installation".
		W 20, Removal and installation.
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# < DTC/CIRCUIT DIAGNOSIS > ENCODER

# DRIVER SIDE

DRIVER SIDE : Description

Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE : Component Function Check

1. CHECK ENCODER OPERATION

Check front door glass LH perform AUTO open/close operation normally with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to <u>PWC-46, "DRIVER SIDE : Diagnosis Procedure"</u>.

DRIVER SIDE : Diagnosis Procedure

INFOID:000000010481357

INFOID-000000010481355

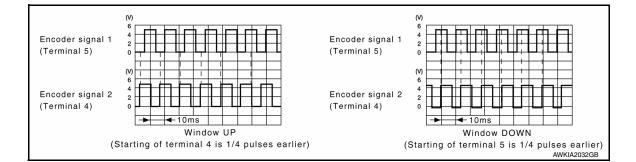
INFOID:000000010481356

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring Diagram - With Left Front Only Power Window Anti- Pinch".

Encoder Circuit Check

- 1. CHECK ENCODER OPERATION
- 1. Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check signal between main power window and door lock/unlock switch connector D12 and ground with oscilloscope.

Terminals			
(+)		()	Signal (Reference value)
Main power window and door lock/unlock switch connector	Terminal	()	(**************************************
D12	4	Ground	Refer to following signal
DIZ	5	Ground	Relet to following signal



# Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

```
NO >> GO TO 2.
```

# 2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Check voltage between front power window motor LH connector D9 and ground.

# ENCODER

# < DTC/CIRCUIT DIAGNOSIS >

Т	erminal				tage
(+)			()		tage prox.)
Front power window motor LH connector		Terminal			
D9		2	Ground		10
Is the inspection result normal? YES >> GO TO 4. NO >> GO TO 3. <b>3.</b> CHECK HARNESS CONTINUITY 1					
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect main power window and</li> <li>Check continuity between main po power window motor connector D9.</li> </ol>					
Main power window and door lock/unlock switch connector	Terminal	Front power win	dow motor LH conne	ector Terminal	Continuity
D12	14		D9	2	Yes
4. Check continuity between main pow	er window	and door lock/	unlock switch co	nnector D12 a	nd ground.
Main power window and door lock/unlock switc	h connector	Terminal		0	ontinuity
D12		14	Grour	id	No
Is the inspection result normal?					
<ol> <li>Turn ignition switch OFF.</li> <li>Disconnect front power window motors.</li> <li>Check continuity between front power.</li> </ol>		motor LH conr	ector D9 and gro	ound.	
Front power window motor LH connector	Termina 4		Ground	Continu Yes	lity
Is the inspection result normal? YES >> GO TO 6. NO >> GO TO 5. 5. CHECK HARNESS CONTINUITY 2					
<ol> <li>Disconnect main power window and</li> <li>Check continuity between main po power window motor LH connector I</li> </ol>	wer windo		ock/unlock switc	h connector [	012 and from
Main power window and door lock/unlock switch connector	Terminal	Front power wind	low motor LH connec	ctor Terminal	Continuity
D12	12		D9	4	Yes
Is the inspection result normal?					
YES >> Check main power window <u>MAIN SWITCH : Componen</u> NO >> Repair or replace the harnes 6. CHECK HARNESS CONTINUITY 3	it Inspectio	<u>n"</u> .	itch. Refer to <u>P\</u>	<u>VC-33, "POW</u>	<u>ER WINDO\</u>
<ol> <li>Disconnect main power window and</li> <li>Check continuity between main po</li> </ol>			oor lock/unlock	switch conned	ctor and fro

power window motor LH connector D9.

# ENCODER

# < DTC/CIRCUIT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
 D12	4	D9	6	Yes
012	5	53	5	163

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

Main power window and door lock/unlock switch connector	Terminal		Continuity
 D12	4	Ground	No
D12	5		INO

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-16, "Removal and Installation - Front Regula-</u> tor". After that, refer to <u>PWC-48, "DRIVER SIDE : Special Repair Requirement"</u>.

NO >> Repair or replace harness or connectors.

# DRIVER SIDE : Special Repair Requirement

INFOID:000000010481358

**1.** PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

# **DOOR SWITCH**

DOOR SWITCH         Description         Detects door open/close condition.         Component Function Check         .CHECK FUNCTION         Image: Condition Check         Image: Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor         Image: Condition Check         Image: Condition Check         Image: Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor         Image: Condition Check         Image: Condition Check Check Build and Check Check Build and Check Bu		[LH FRONT ONLY ANTI-PINCH
Description       mean consent of the co	< DTC/CIRCUIT DIAGNOSIS >	
Detects door open/close condition.         Component Function Check         .CHECK FUNCTION         With CONSULT         Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor         Monitor item       Condition         DOOR SW-DR       DOOR SW-RL         DOOR SW-RR       CLOSE → OPEN: OFF → ON         DOOR SW-RR       DOOR SW-RR         a the inspection result normal?       YES         YES       > Door switch is OK.         NO       >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure       wear.commonton         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.	DOOR SWITCH	
Component Function Check       Decomponent Function Check         .CHECK FUNCTION         With CONSULT         Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor	Description	INFOID:000000011009
Component Function Check       Decomponent Function Check         .CHECK FUNCTION         With CONSULT         Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor	Detects door open/close condition.	
.CHECK FUNCTION         With CONSULT         Theck door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor		
With CONSULT         Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor		
Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor         Monitor item       Condition         DOOR SW-DR       DOOR SW-AS         DOOR SW-AS       CLOSE → OPEN: OFF → ON         DOOR SW-RR       DOOR SW-RR         sthe inspection result normal?       YES         YES       >> Door switch is OK.         NO       >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure       Meroit-concentration         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.		
DOOR SW-DR         DOOR SW-AS         DOOR SW-RL         DOOR SW-RR         Sthe inspection result normal?         YES         YES         >> Door switch is OK.         NO         >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure         NFOID:000000110         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.		AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor
DOOR SW-AS       CLOSE → OPEN: OFF → ON         DOOR SW-RL       DOOR SW-RR         sthe inspection result normal?         YES       >> Door switch is OK.         NO       >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure       Information, refer to DLK-51, "Wiring Diagram".         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.	Monitor item	Condition
DOOR SW-RL       DOOR SW-RR         DOOR SW-RR       CLOSE → OPEN: OFF → ON         s the inspection result normal?       YES >> Door switch is OK.         YES >> Door switch is OK.       NO >> Refer to PWC-49. "Diagnosis Procedure".         Diagnosis Procedure       INFOID:000000110         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".       INFOID:000000110         .CHECK DOOR SWITCH INPUT SIGNAL       .         . Turn ignition switch OFF.       .	DOOR SW-DR	
DOOR SW-RL         DOOR SW-RR         a the inspection result normal?         YES       >> Door switch is OK.         NO       >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure       INFOID:000000110         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.	DOOR SW-AS	
s the inspection result normal?         YES       >> Door switch is OK.         NO       >> Refer to PWC-49. "Diagnosis Procedure".         Diagnosis Procedure       Diagnosis Procedure         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         .CHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.	DOOR SW-RL	$CLOSE \to OPEN: OFF \to ON$
YES >> Door switch is OK. NO >> Refer to <u>PWC-49</u> , "Diagnosis Procedure". Diagnosis Procedure Regarding Wiring Diagram information, refer to <u>DLK-51</u> , "Wiring Diagram". .CHECK DOOR SWITCH INPUT SIGNAL . Turn ignition switch OFF.	DOOR SW-RR	
NO       >> Refer to PWC-49, "Diagnosis Procedure".         Diagnosis Procedure       INFOLDATION         Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".         ICHECK DOOR SWITCH INPUT SIGNAL         . Turn ignition switch OFF.	s the inspection result normal?	
Diagnosis Procedure		
Regarding Wiring Diagram information, refer to <u>DLK-51, "Wiring Diagram"</u> . CHECK DOOR SWITCH INPUT SIGNAL . Turn ignition switch OFF.	NO >> Refer to <u>PWC-49</u> , "Diagnosis Procedure	<u> </u>
CHECK DOOR SWITCH INPUT SIGNAL	Diagnosis Procedure	INFOID:00000001100
		nd with oscilloscope.

# **DOOR SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

	Terminals				
(+ BCM connector	) Terminal	(-)	Door cor	ndition	Voltage (V) (Approx.)
				OPEN	0
	96		Front door switch LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
-				OPEN	0
M19	94	Ground	Front door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
10119		Ground		OPEN	0
	93		Rear door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
F				OPEN	0
	82		Rear door switch LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2. CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM connector and door switch connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
	96	Front door switch LH		Yee
M19	94	Front door switch RH	Ground part of door switch	
MT9	93	Rear door switch RH		Yes
	82	Rear door switch LH		



# **DOOR SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

3. Check continuity between BCM connector and ground.

	Те	rminal	Continuity
		96	
		94 Ground	
M19		93	No
		82	
the inspection result nor YES >> GO TO 3. NO >> Repair or repla CHECK DOOR SWITC efer to <u>PWC-51, "Compo</u>	ace harness between B( :H	CM and door switch.	
the inspection result nor YES >> GO TO 4. NO >> Replace malfu	r <u>mal?</u> unctioning door switch. F NT INCIDENT	Refer to <u>DLK-219, "Removal and</u>	d Installation".
Refer to <u>GI-44, "Intermitter</u>	<u>nt Incident"</u> .		
>> Inspection En Component Inspectio . CHECK DOOR SWITC . Turn ignition switch OI 2. Disconnect door switc	on :H FF.		INFCID:000000011009031
3. Check door switch. Termin			
		Loor switch condition	Continuity
Door sw		Door switch condition	Continuity
3 (	itch Ground part of door switch —	Pressed Released	No Yes
3 ( Is the inspection result nor YES >> Inspection End	itch Ground part of door switch rmal? d.	Pressed	No Yes

# < DTC/CIRCUIT DIAGNOSIS >

# **KEY CYLINDER SWITCH**

# Description

INFOID:0000000011009032

[LH FRONT ONLY ANTI-PINCH]

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

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

# Component Function Check

INFOID:000000011009033

# 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check "KEY CYL UN-SW", "KEY CYL UN-SW" in "Data Monitor" for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>DLK-81, "Work Flow"</u>.

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

# Is the inspection result normal?

- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>PWC-52</u>, "<u>Diagnosis Procedure (With LH and RH Anti-Pinch)</u>".
- NO >> With LH anti-pinch only, refer to <u>PWC-53, "Diagnosis Procedure (With LH Anti-Pinch Only)"</u>.

# Diagnosis Procedure (With LH and RH Anti-Pinch)

INFOID:000000011009034

Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".

# 1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Ter	minals			
(+)			Key position	Voltage (V)
Main power window and door lock/ unlock switch connector	(–)			(Approx.)
	3	3 Ground	Lock	0
			Neutral / Unlock	5
D7	45	Ground	Unlock	0
	15		Neutral / Lock	5

# Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>".

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

# **KEY CYLINDER SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

# [LH FRONT ONLY ANTI-PINCH]

unlock switch connector	Terminal	Front door lock	assembly LH connector	Terminal	Continuity
D7 -	3		D14	6	Yes
	15			5	
Check continuity between	main power			connector ar	la grouna.
Main power window and door lock/u lock switch connector	IN- T	erminal			Continuity
D7		3	Ground		No
s the inspection result normal		15			
NO >> Repair or replace CHECK DOOR KEY CYLIN Check continuity between from	NDER SWITC				
Front door lock assembly LH	connector	nector Terminal			Continuity
D14	4		Grou	Ground	
YES >> GO TO 4. NO >> Repair or replace <b>1</b> .CHECK DOOR KEY CYLIN Check door key cylinder switc Refer to <u>PWC-54</u> , "Componer s the inspection result normal YES >> Check intermitten	NDER SWITC h. <u>it Inspection"</u> ? t incident. Re	fer to <u>GI-44, "I</u>			
NO >> Replace front doc Installation".	or lock assem	bly LH. Refer	to <u>DLK-203, "FRONT</u>	DOOR LOC	K : Removal a
Diagnosis Procedure (V	Vith LH An	iti-Pinch On	ly)		INFOID:00000001100
Regarding Wiring Diagram inf	ormation, refe	er to <u>DLK-51, "</u>	Wiring Diagram".		
1. CHECK DOOR KEY CYLIN	NDER SWITC	CH INPUT SIG	NAL		

# **KEY CYLINDER SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

Terminals (+)				
		(_)	Key position	Voltage (V) (Approx.)
BCM connector	Terminal	()		
M18	74	Ground	Lock	0
MIO	74		Neutral / Unlock	5
N417	24		Unlock	0
M17	24		Neutral / Lock	5

Is the inspection result normal?

YES >> Replace front door lock assembly LH. Refer to PWC-69, "Removal and Installation". NO >> GO TO 2.

**2.**CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

- Turn ignition switch OFF. 1.
- 2. Disconnect front door lock assembly LH connector.

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

Front door lock assembly LH connector	Terminal	Ground	Continuity
D14	4	- Ground	Yes

## Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

Disconnect BCM connector M18 and M17. 1.

Check continuity between front door lock assembly LH connector and BCM connector M18 or M17. 2.

Front door lock assembly LH connector	Terminal	BCM connector	Terminal	Continuity
D14	5	M17	24	Yes
	6	M18	74	163

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

Front door lock assembly LH connector	Terminal		Continuity
D14	5	Ground	No
	6		NO

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-54, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
- >> Replace front door lock assembly LH. Refer to DLK-203, "FRONT DOOR LOCK : Removal and NO Installation".

**Component Inspection** 

# COMPONENT INSPECTION

CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH.

INFOID:0000000011009036

# **KEY CYLINDER SWITCH**

# < DTC/CIRCUIT DIAGNOSIS >

Terminal				/
Front door lock assembly LF		Key position	Continuity	
E		Unlock	Yes	E
5	4	Neutral / Lock	No	
C	4	Lock	Yes	(
6		Neutral / Unlock	No	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH. Refer to <u>DLK-203</u>, "FRONT DOOR LOCK : Removal and <u>Installation"</u>.

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# < DTC/CIRCUIT DIAGNOSIS >

# POWER WINDOW LOCK SWITCH

# Description

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

# Component Function Check

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. <u>Is the inspection result normal?</u>

- YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-69</u>, "<u>Removal and Instal-</u> lation". After that, refer to <u>PWC-56</u>, "<u>Special Repair Requirement</u>".
- NO >> Check condition of harness and connector.

# Special Repair Requirement

INFOID:000000010481365

# 1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

INFOID:000000010481364

INFOID:000000010481363

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH- ES	
< SYMPTOM DIAGNOSIS > [LH FRONT ONLY ANTI-PINCH]	
SYMPTOM DIAGNOSIS	^
POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES	A
Diagnosis Procedure	D
1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT	С
Check BCM power supply and ground circuit. Refer to <u>BCS-75, "Diagnosis Procedure"</u> .	
<u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	D
2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH	Ε
Check main power window and door lock/unlock switch. Refer to <u>PWC-33. "POWER WINDOW MAIN SWITCH : Component Inspection"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	F
<b>3</b> . CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND GROUND CIRCUIT	G
Check main power window and door lock/unlock switch power supply and ground circuit. Refer to <u>PWC-30, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u> .	Н
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> . NO >> Repair or replace the malfunctioning parts.	I
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# DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE < SYMPTOM DIAGNOSIS > [LH FRONT ONLY ANTI-PINCH]

# DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

**Diagnosis** Procedure

INFOID:000000010481367

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH. Refer to <u>PWC-39</u>, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

# FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH FRONT ONLY ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

# FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-ATE

Diagnosis Procedure	INFOID:000000010481368	В
1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH		D
Check power window and door lock/unlock switch RH. Refer to <u>PWC-34, "FRONT POWER WINDOW SWITCH : Component Function Check"</u> .		С
Is the inspection result normal?		
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.		D
2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT		
Check front power window motor RH circuit. Refer to <u>PWC-41, "PASSENGER SIDE : Component Function Check"</u> .		E
Is the inspection result normal?		
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> . NO >> Repair or replace the malfunctioning parts.		F
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# **REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE** [LH FRONT ONLY ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

# REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

**Diagnosis** Procedure

INFOID:000000010481369

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH. Refer to PWC-36, "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-42, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

>> Repair or replace the malfunctioning parts. NO

# REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >	[LH FRONT ONLY ANTI-PINCH]
REAR RH SIDE POWER WINDOW ALONE DOES	
Diagnosis Procedure	INFOID:000000010481370
1. CHECK REAR POWER WINDOW SWITCH RH	I
Check rear power window switch RH. Refer to <u>PWC-36, "REAR POWER WINDOW SWITCH : Component Fun</u>	ction Check".
Is the inspection result normal?	(
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. <b>2.</b> CHECK REAR POWER WINDOW MOTOR RH	[
Check rear power window motor RH. Refer to <u>PWC-41</u> , "PASSENGER SIDE : Component Function Check". Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-44. "Intermittent Incident.</u> NO >> Repair or replace the malfunctioning parts.	lent".
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# AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (DRIVER SIDE)

< SYMPTOM I	DIAGNOSIS >
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[LH FRONT ONLY ANTI-PINCH]

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

# **Diagnosis** Procedure

INFOID:000000010481371

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-46, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

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

<pre>ANTI-PINCH STSTEW DUES NOT OPERATE NORWALLT (DRIVER SIDE) &lt; SYMPTOM DIAGNOSIS &gt; [LH FRONT ONLY ANTI-PINCH]</pre>	
ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)	
Diagnosis Procedure	А
1. PERFORM INITIALIZATION PROCEDURE	В
Perform initialization procedure. Refer to <u>PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Require-</u> ment".	С
Is the inspection result normal?         YES       >> GO TO 2.         NO       >> Repair or replace the malfunctioning parts.	D
2. CHECK DOOR WINDOW SLIDING PART	
<ul> <li>A foreign material adheres to window glass or glass run rubber.</li> <li>Glass run rubber wear or deformation.</li> <li>Sash is tilted too much or not enough.</li> <li>Is the inspection result normal?</li> </ul>	E
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	F
3. CHECK ENCODER CIRCUIT	G
Check encoder circuit. Refer to <u>PWC-46. "DRIVER SIDE : Component Function Check"</u> . <u>Is the inspection result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-44. "Intermittent Incident"</u> .	Н
NO >> Repair or replace the malfunctioning parts.	

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# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

**Diagnosis** Procedure

INFOID:000000010481373

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to <u>DLK-100, "Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

# POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

[LH FRONT ONLY ANTI-PINCH]

# < SYMPTOM DIAGNOSIS >

# POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

# Diagnosis Procedure 1.REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Replace main power window and door lock/unlock switch. Refer to PWC-69, "Removal and Installation". After that, PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement". >> Inspection End.

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# DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

# DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-DOWS

Diagnosis Procedure

INFOID:000000010481375

[LH FRONT ONLY ANTI-PINCH]

**1.**PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed. Refer to <u>PWC-27. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Require-</u><u>ment"</u>.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

2. CHECK FRONT DOOR LOCK ASSEMBLY LH (DOOR KEY CYLINDER SWITCH)

Check front door lock assembly LH (door key cylinder switch). Refer to <u>PWC-56, "Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${\it 3.}$  CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> GO TO 1.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE< SYMPTOM DIAGNOSIS >[LH FRONT ONLY ANTI-PILKEYLESS POWER WINDOW DOWN DOES NOT OPERATE	NCH]
KETLESS POWER WINDOW DOWN DOES NOT OPERATE	A
Diagnosis Procedure	0010481376
1. CHECK REMOTE KEYLESS ENTRY FUNCTION	В
Check remote keyless entry function.	
Is the inspection result normal?	0
YES >> GO TO 2.	С
NO >> Refer to <u>DLK-144, "Component Function Check"</u> . 2.CHECK POWER WINDOW OPERATION	D
Check power window operation.	
In the inspection result normal?	
YES >> GO TO 3.	E
NO >> Refer to <u>PWC-39, "DRIVER SIDE : Diagnosis Procedure"</u> . <b>3.</b> CONFIRM THE OPERATION	F
Confirm the operation again.	
Is the inspection result normal?	
<ul> <li>YES &gt;&gt; Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.</li> <li>NO &gt;&gt; GO TO 1.</li> </ul>	G

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INFOID:000000010481377

# PERIODIC MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC

**Basic Inspection** 

**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.

INSTALLATION

Installation is in the reverse order of removal.

# NOTE:

When the main power window and door lock/unlock switch is disconnected from the harness connector it is necessary to perform the initialization procedure. Refer to <u>PWC-27</u>, "<u>ADDITIONAL SERVICE WHEN</u> <u>REPLACING CONTROL UNIT : Description</u>".

Revision: May 2014

# MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH < REMOVAL AND INSTALLATION > [LH FRONT ONLY ANTI-PINCH]

REMOVAL AND INSTALLATION MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

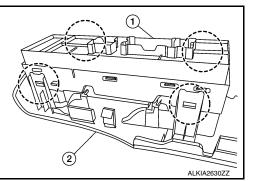
# Removal and Installation

REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the main power window and door lock/unlock switch and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the main power window and door lock/unlock switch.
- Release the four pawls (two on each side) using a suitable tool, then separate the main power window and door lock/unlock switch (1) from the main power window and door lock switch finisher (2).
  - (͡): Pawl

**CAUTION:** 

Do not bend back the pawls on the switch finisher too far or breakage may occur.



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INFOID:000000010481378

# POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH < REMOVAL AND INSTALLATION > [LH FRONT ONLY ANTI-PINCH]

# POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

# Removal and Installation

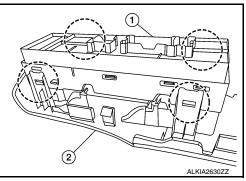
INFOID:000000010481379

# REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the power window switch and door lock/unlock switch RH finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the power window and door lock/unlock switch RH.
- Release the four pawls (two on each side) using a suitable tool, then separate the power window and door lock/unlock switch RH (1) from the power window and door lock/unlock switch RH finisher (2).

(): Pawl CAUTION:

Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION Installation is in the reverse order of removal.

# < REMOVAL AND INSTALLATION >

# REAR POWER WINDOW SWITCH

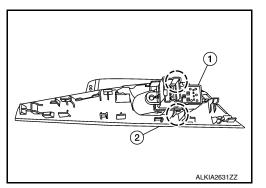
# Removal and Installation

# REMOVAL

- Release the pawls using a suitable tool and lift the rear power window switch and finisher as an assembly 1. by starting at the rear, then pull upward and remove
- 2. Disconnect the harness connector from the rear power window switch.
- Release the pawl (one on each side) using a suitable tool, then 3. separate the rear power window switch (1) from the rear power switch finisher (2).

# (): Pawl CAUTION:

Do not bend back the pawls on the switch finisher too far or breakage may occur.



# INSTALLATION

Installation is in the reverse order of removal.

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# < PRECAUTION >

# PRECAUTION PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

## WARNING:

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

# PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

## WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

# Precaution for Work

INFOID:000000010481382

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

# PREPARATION

# PREPARATION

# Special Service Tool

INFOID:000000010481383

The actual shapes of the tools may differ from those illustrated here.	
--	--

Tool number (TechMate No.) Tool name		Description	C
 (J-46534) Trim Tool Set	AWJA0483ZZ	Removing trim components	E
			—— F

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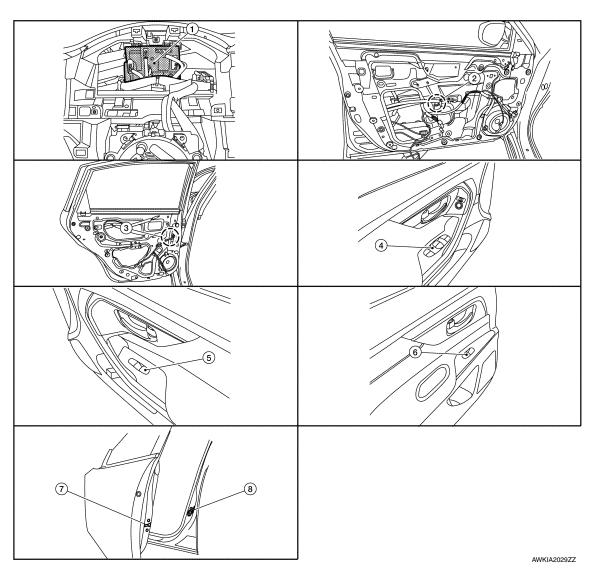
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# < SYSTEM DESCRIPTION > SYSTEM DESCRIPTION COMPONENT PARTS

Component Parts Location

INFOID:000000010481384



- 1. BCM (view with combination meter removed)
- 4. Main power window and door lock/ 5. unlock switch
- 7. Front door lock assembly LH (key cylinder switch)
- **Component Description**

## FRONT WINDOW ANTI-PINCH SYSTEM

Front power window motor LH (RH similar)

2.

- Power window and door lock/unlock 6. switch RH
- 8. Front door switch LH (RH similar)
- Rear power window motor LH (RH similar)

3.

Rear power window switch LH (RH similar)

INFOID:000000010481385

## **COMPONENT PARTS**

#### < SYSTEM DESCRIPTION >

#### [LH & RH FRONT ANTI-PINCH]

Component	Function
BCM	<ul><li>Supplies power to power window switches.</li><li>Controls retained power.</li></ul>
Front power window motor LH	<ul> <li>Integrates the ENCODER POWER and WINDOW MOTOR.</li> <li>Starts operating with signals from main power window and door lock/unlock switch.</li> <li>Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.</li> </ul>
Front power window motor RH	<ul> <li>Integrates the ENCODER POWER and WINDOW MOTOR.</li> <li>Starts operating with signals from main power window and door lock/unlock switch &amp; power window and door lock/unlock switch RH.</li> <li>Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.</li> </ul>
Main power window and door lock/unlock switch	<ul><li>Directly controls all power window motor of all doors.</li><li>Controls anti-pinch operation of front power window LH.</li></ul>
Power window and door lock/unlock switch RH	<ul><li>Controls front power window motor RH.</li><li>Controls anti-pinch operation of front power window RH.</li></ul>
Rear power window switch	Controls rear power window motors LH and RH.
Rear power window motor	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door lock assembly LH (key cylinder switch)	Transmits operation condition of key cylinder switch to main power window and door lock/unlock switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

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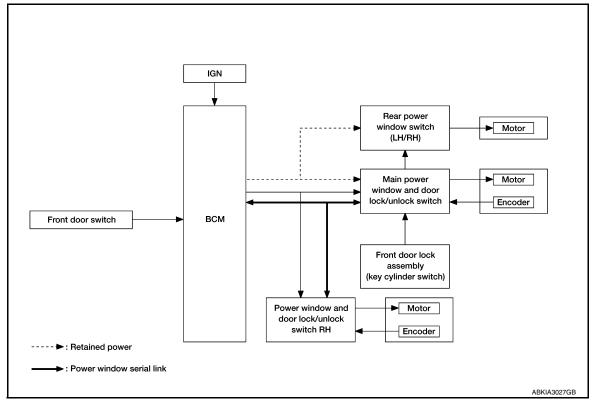
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# SYSTEM

System Diagram

FRONT WINDOW ANTI-PINCH SYSTEM



## System Description

INFOID:000000010481387

# MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator
Key cylinder switch	LOCK/UNLOCK signal (more than 1 seconds over)		
Encoder	Encoder pulse signal		
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal	Power window control	Front power window motor
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal		
BCM	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH INPUT/OUTPUT SIGNAL CHART INFOID:000000010481386

## SYSTEM

#### < SYSTEM DESCRIPTION >

#### [LH & RH FRONT ANTI-PINCH]

Item	Input signal to front power window switch	Front power window switch RH function	Actuator
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control	Front power window motor RH
Encoder	Encoder pulse signal		
BCM	RAP signal		
or during the retain Main power windo Front & rear powe If door glass receiv	/ OPERATION stem activated by the power wind ned power operation after ignition w and door lock/unlock switch ca r window switch can open/close t ves resistance that is more than t nt LH & RH), power window will r	n switch turns OFF. an open/close all windows. the corresponding windows. he specified value and the p	ower window is in the AUTO-
AUTO UP/DOWN	AUTO-OPERATION (FRON operation can be performed wi door lock/unlock switch RH turn	nen main power window ar	nd door lock/unlock switch &
as the encoder pu Power window swi fully opened/close	s detecting the movement of pow lse signal while power window m itch reads the changes of encode d position. tor is operable in case encoder is	otor is operating. er signal and stops AUTO op	
AUTO function do	es not operate if encoder is malfu		
	R OPERATION peration is an additional power su seconds even when ignition switc		ower window system to oper-
When ignition swit	E (door switch OFF) $\rightarrow$ OPEN (doo	or switch ON).	
	/ LOCK FUNCTION		
Ground circuit insid	e main power window and doo hibits power window switch oper		
Pinch foreign mate	RATION (FRONT LH & RH) erial in the door glass during AUT		e anti-pinch function that low-
<ul> <li>Encoder continues as the encoder pu</li> </ul>	150 mm (5.9 in.) or 2 seconds w s detecting the movement of pow lse signal while power window m	ver window motor and trans otor is operating.	
nal if foreign mater	lied to the power window motor r rial is trapped in the door glass.	-	
encoder pulse sigr OPERATION COND			
	ss AUTO-UP operation is perforr and is fully closed)	ned (anti-pinch function doe	es not operate just before the
	onment and driving conditions, i	f a similar impact or load is	applied to the door glass, it
Hold the door key cy	WITCH OPERATION Inder to the LOCK or UNLOCK or en ignition switch is OFF. In add		

**OPERATION CONDITION** 

• Ignition switch OFF

## SYSTEM

#### < SYSTEM DESCRIPTION >

- Hold door key cylinder to LOCK position for more than 1 second to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for more than 1 second to perform OPEN operation of the door glass.

#### KEYLESS POWER WINDOW DOWN OPERATION (FRONT LH & RH)

Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3<sup>(NOTE)</sup> seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.

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

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

While retained power operation activate, keyless power window down function cannot be operated.

#### Fail-safe

INFOID:000000010481388

[LH & RH FRONT ANTI-PINCH]

#### 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 an error beyond the regulation value is detected between the fully closed position and the actual position of the glass.

Malfunction	Malfunction condition		
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.		
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/close operation.		
Pulse direction malfunc- tion	When the pulse signal that is detected during glass open/close operation detects the opposite con- dition 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 that the value of glass full stroke during glass open/close opera- tion.		
Malfunction of not yet up- dated closed position of glass When glass open/close operation is continuously performed without fully closing more ified value (approximately 10 strokes).			

It changes to condition before initialization and the following functions do not operate when switched to failsafe control:

- Auto-up operation
- Anti-pinch function
- Retained power 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 switch or in motor.

	[]
DIAGNOSIS SYSTEM (BCM)	
COMMON ITEM	
COMMON ITEM : CONSULT Function (BCM - COMMO	DN ITEM)
<b>CAUTION:</b> After disconnecting the CONSULT vehicle interface (VI) from the d be cycled OFF $\rightarrow$ ON (for at least 5 seconds) $\rightarrow$ OFF. If this step is to "sleep mode", potentially causing a discharged battery and a n	not performed, the BCM may not go

#### **APPLICATION ITEM**

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description	E
Ecu Identification	The BCM part number is displayed.	
Self Diagnostic Result	The BCM self diagnostic results are displayed.	
Data Monitor	The BCM input/output data is displayed in real time.	F
Active Test	The BCM activates outputs to test components.	
Work support	The settings for BCM functions can be changed.	0
Configuration	<ul><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing BCM.</li></ul>	
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.	ŀ

## SYSTEM APPLICATION

BCM can perform the following functions.

				Direct [	Diagnosti	c Mode			-
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr	J
Door lock	DOOR LOCK		×	×	×	×			
Rear window defogger	REAR DEFOGGER			×	×	×			-
Warning chime	BUZZER			×	×				M
Interior room lamp timer	INT LAMP			×	×	×			-
Remote keyless entry system	MULTI REMOTE ENT			×	×	×			
Exterior lamp	HEADLAMP			×	×	×			N
Wiper and washer	WIPER			×	×	×			-
Turn signal and hazard warning lamps	FLASHER			×	×				0
Air conditioner	AIR CONDITIONER			×					
Intelligent Key system	INTELLIGENT KEY		×	×	×	×			_
Combination switch	COMB SW			×					Р
BCM	BCM	×	×			×	×	×	_
Immobilizer	IMMU		×	×	×				_
Interior room lamp battery saver	BATTERY SAVER			×	×				-
Trunk open	TRUNK			×					_
Vehicle security system	THEFT ALM			×	×	×			_

## **DIAGNOSIS SYSTEM (BCM)** < SYSTEM DESCRIPTION >

Revision: May 2014

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## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

				Direct [	Diagnosti	c Mode		
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			х				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

## RETAINED PWR

## RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:000000011009039

#### CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF  $\rightarrow$  ON (for at least 5 seconds)  $\rightarrow$  OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

#### DATA MONITOR

Monitor Item [Unit]	Description
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

CU DIAGNOSIS INFORMATION M (BODY CONTROL MODULE)					
t of ECU Reference	, INFOID:00000001048				
ECU	Reference				
	BCS-32, "Reference Value"				
ВСМ	BCS-51, "Fail Safe" BCS-52, "DTC Inspection Priority Chart"				
	BCS-53, "DTC Index"				

#### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH [LH & RH FRONT ANTI-PINCH]

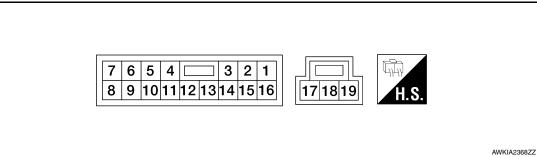
#### < ECU DIAGNOSIS INFORMATION >

## MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### **Reference Value**

INFOID:000000010481392

#### **TERMINAL LAYOUT**



## PHYSICAL VALUES

Termin	al No.	Description			Vallana		
+	-	Signal name	Input/ Output	Condition	Voltage (Approx.)		
1 (B)	Ground	Ground		_	0		
3 (P)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral/Unlocked $\rightarrow$ Locked)	$5 \rightarrow 0$		
4 (BG)	12 (P)	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 2 0 10 ms JMKIA0070GB		
5 (R)	12 (P)	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB		
6 (SB)	Ground	Rear power window motor RH DOWN signal	Output	When the rear RH switch on the main power window and door lock/unlock switch is operated in the DOWN position.	Battery voltage		
7 (V)	Ground	Rear power window motor RH UP signal	Output	When the rear RH switch on the main power window and door lock/unlock switch is operated in the UP position.	Battery voltage		
8 (L)	Ground	Rear power window motor LH DOWN signal	Output	When the rear LH switch on the main power window and door lock/unlock switch is operated in the DOWN position.	Battery voltage		
9 (Y)	Ground	Rear power window motor LH UP signal	Output	When the rear LH switch on the main power window and door lock/unlock switch is operated in the UP position.	Battery voltage		

## MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### < ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT ANTI-PINCH]

Termin	al No.	Description			
+	-	Signal name	Input/ Output	Condition	Voltage (Approx.)
				IGN SW ON	Battery voltage
10	Ground	RAP signal	Within 45 second after ignition switch is turned to OFF.		Battery voltage
(BR)			p at	When front LH or RH door is opened during retained power operation.	0
11 (P)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 10 10 10 10 10 10 10 10 10
12 (P)	Ground	Encoder ground	_	_	0
14 (LG)	Ground	Encoder power supply	Output	When ignition switch ON or pow- er window timer operates.	10
15 (G)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral/Locked $\rightarrow$ Unlocked)	$5 \rightarrow 0$
17 (W)	19 (R)	Front door power window mo- tor LH UP signal	Output	When the front LH switch on the main power window and door lock/unlock switch is operated in the UP position.	Battery voltage
18 (LG)	Ground	Battery power supply	Input	_	Battery voltage
19 (R)	17 (W)	Front door power window mo- tor LH DOWN signal	Output	When the front LH switch on the main power window and door lock/unlock switch is operated in the DOWN position.	Battery voltage

## Fail Safe

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#### 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.

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 mal- function	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 up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).	

## MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

#### < ECU DIAGNOSIS INFORMATION >

## [LH & RH FRONT ANTI-PINCH]

It changes to condition before initialization and the following functions do not operate when switched to failsafe control:

- Auto-up operation
- Anti-pinch function
- Retained power 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 switch or in motor.

## POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

#### < ECU DIAGNOSIS INFORMATION >

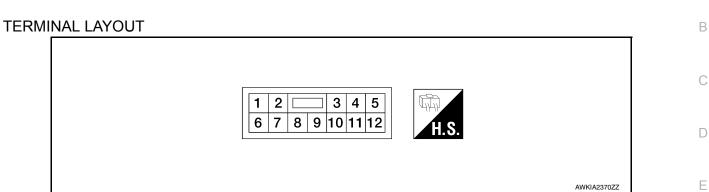
# POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

#### **Reference Value**

INFOID:000000010481394

А

[LH & RH FRONT ANTI-PINCH]



### PHYSICAL VALUES

Term	inal No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
3 (P)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
4 (BG)	Ground	Encoder ground	_	_	0
5 (W)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
7 (B)	Ground	Ground	_	_	0
8 (LG)	Ground	Battery power supply	Input	_	Battery voltage
9 (LG)	4 (BG)	Encoder pulse signal 1	Input	When power window motor op- erates.	(V) 6 4 2 0 10 ms JMKIA0070GB
10 (G)	4 (BG)	Encoder pulse signal 2	Input	When power window motor op- erates.	(V) 6 4 2 0 10 ms JMKIA0070GB
11 (R)	12 (P)	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
12 (P)	11 (R)	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage

### POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH < ECU DIAGNOSIS INFORMATION > [LH & RH FRONT ANTI-PINCH]

## Fail Safe

INFOID:000000010481395

#### 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.

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 mal- function	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 up- dated 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 failsafe control:

- Auto-up operation
- Anti-pinch function
- Retained power 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 switch or in motor.

< WIRING DIAGRAM >

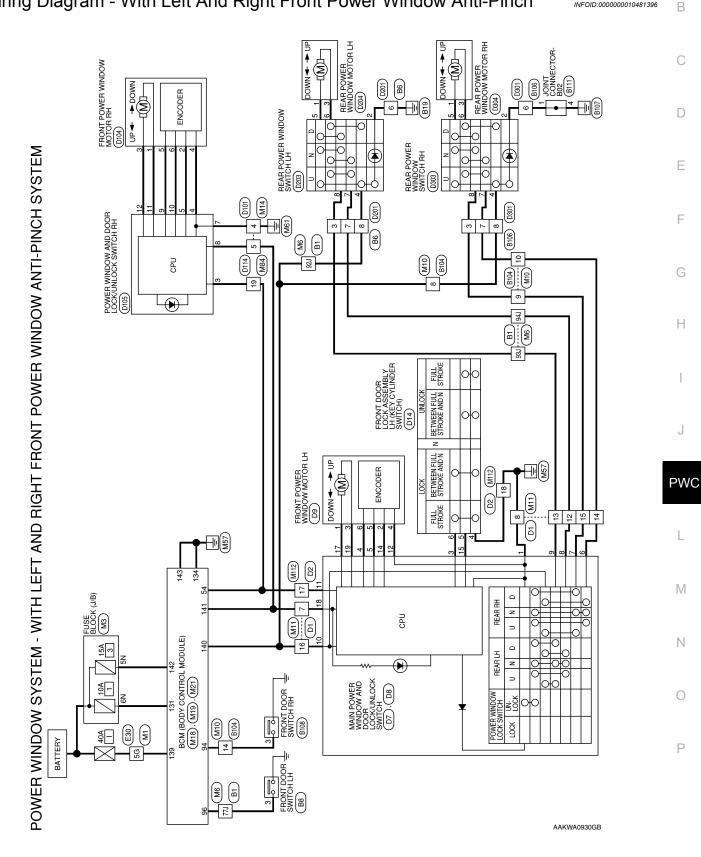
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INFOID:000000010481396

# WIRING DIAGRAM

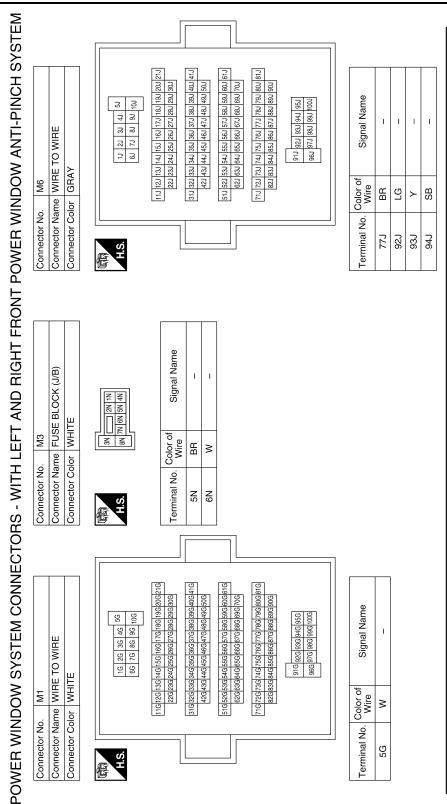
POWER WINDOW SYSTEM

Wiring Diagram - With Left And Right Front Power Window Anti-Pinch



Revision: May 2014

#### < WIRING DIAGRAM >



Signal Name	I	I	I	I	
Color of Wire	ГG	٨	BR	SB	
Terminal No. Color of Wire	8	6	10	14	





ABKIA3682GB

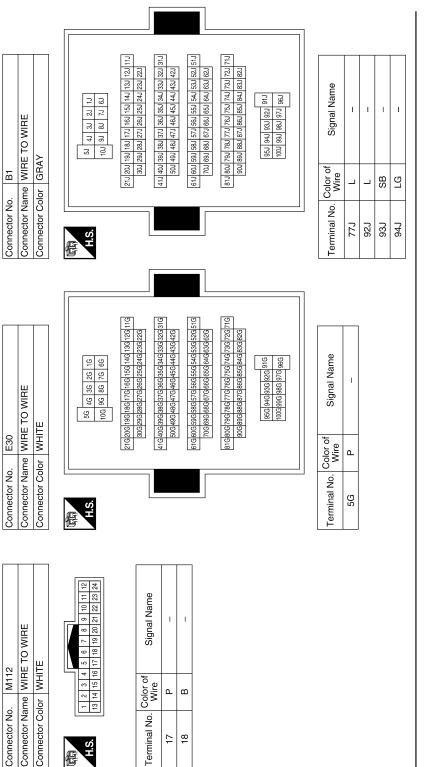
# [LH & RH FRONT ANTI-PINCH]

DIAGRA	M >								) I E IVI [L	_H &	RH	FR	10	NT.	AN	ITI-PINC
Connector No. M18 Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK	HIS.	60         59         57         56         55         54         53         52         51         50         48         47         46         45         44         43         42         44         43         42         44         43         42         44         43         42         44         43         43         41         43         44         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         43         44         44         43         44         44         43<		Terminal No. Color of Signal Name	54 P PW LIN		Connector No. M84 Connector Name WIRE TO WIRE	Connector Color WHITE	HLS. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	Terminal No. Color of Signal Name	- L L L L L L L L L L L L L L L L L L L					
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE	HS. HS.	Terminal No. Color of Signal Name 4 GR –	Б –	-			Connector No. M21 Connector Name BCM (BODY CONTROL MODULE)	Connector Color WHITE	(所) H.S.	of e	131 W BAT BCM FUSE	5 ≥	140 LG P/W POWER SUPPLY IGN	V P/W	BR BALF	143 B GNUI
Connector No. M11 Connector Name WIRE TO WIRE Connector Color WHITE	1         2         3         4         5         6         7           8         9         10         11         12         13         14         15         16	Terminal No. Color of Signal Name 7 V –		SB			Connector No. M19 Connector Name BCM (BODY CONTROL MODULE)	Connector Color GRAY	92         94         90         88         87         86         84         82         81           104         102         101         100         98         97         96         94         83	r of	BD DD DOR SW					

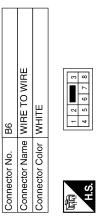
ABKIA4846GB

Р

#### < WIRING DIAGRAM >



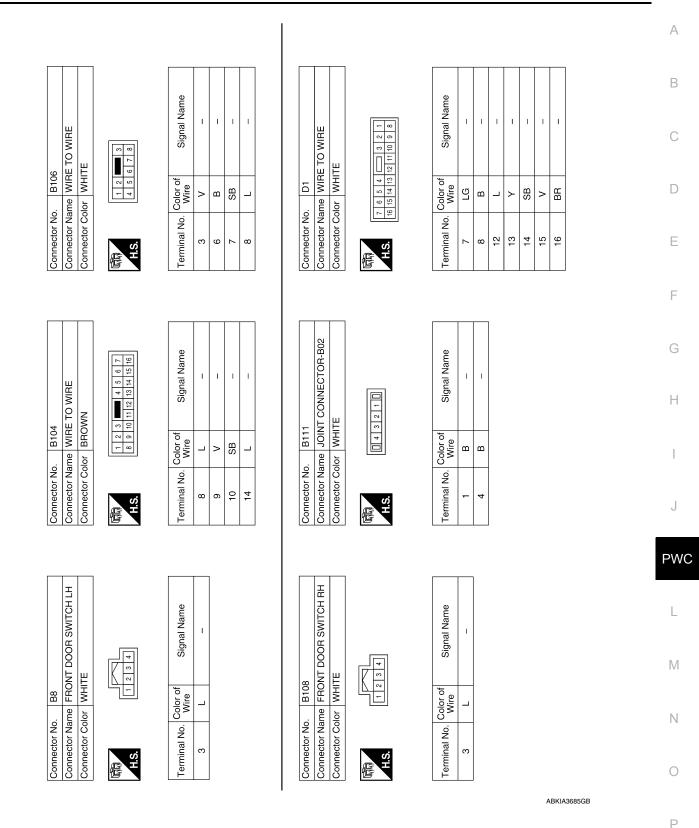
Terminal No.Color of<br/>WireSignal Name3SB-6B-7LG-8L-



ABKIA3684GB

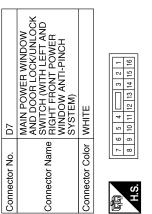
#### < WIRING DIAGRAM >

#### [LH & RH FRONT ANTI-PINCH]



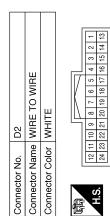
Revision: May 2014

Signal Name	RR DN	RR UP	RL DN	RL UP	IGN	COM	ENCODER GND	I	ENCODER +	KEYCYLINDER UNLOCK	I
Color of Wire	SB	>	_	≻	ВВ	٩	٩	T	ГG	g	I
Terminal No.	9	2	8	6	10	÷	12	13	14	15	16



f Signal Name	GND	Ι	KEYCYLINDER LOC	ENCODER SIG2	ENCODER SIG1
Color of Wire	ш	T	Ч	BG	н
Terminal No. Color of Wire	÷	2	3	4	5

K



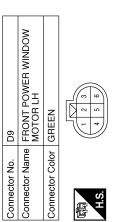
Signal Name	1
Color of Wire	Р
Terminal No.	17

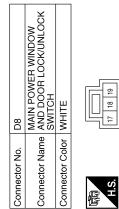
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18

Signal Name	M2	VCC (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)	M1	GND (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)	PLS A	PLS B
Color of Wire	Μ	ГG	æ	٩	н	BG
Terminal No. Color of Wire	۲	N	e	4	5	9





Signal Name	DR UP	BAT	DR DN
Color of Wire	8	ГG	В
Terminal No.	17	18	19

AAKIA2233GB

#### < WIRING DIAGRAM >

D104 FRONT POWER WINDOW MOTOR RH (WITH LEFT AND RIGHT POWER SYSTEM) GREEN	Signal Name M2 VCC M1 GND PLS A PLS B	D114 WIRE TO WIRE WHITE WHITE Or of Signal Name	
	Color of Wire R R R Vire LG Color of Color of Wire R R R Color of Color of Color of Color of Color of Color of Color of Color of Color of Color of		
Connector No. Connector Name Connector Color	Terminal No. 1 1 5 5 6 6	Connector No. Connector Name Connector Color 19 19	
D101 WIRE TO WIRE 8 7 6 5 4	Signal Name	Signal Name - - COM ENCODER GND ENCODER A BAT BAT ENCODER SGN1 ENCODER SGN1 AS UP AS DN	
D101 WIRE T WHITE 8 7 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire B LG		
Connector No. Connector Name Connector Color H.S.	Terminal No.	Terminal No. ( 1 5 8 8 8 9 9 11 11 12	
Connector No. D14 Connector Name FRONT DOOR LOCK Connector Color GRAY LH 1 2 3 4 5 6	Signal Name	D105 POWER WINDOW AND BOWRCH RH (WITH LEFT SWITCH RH (WITH LEFT WINDOW ANTI-PINCH SYSTEM) WHITE	
D14 FRONT D ASSEMBI GRAY	Color of Wire G G G	D105 POWER WINDOW BUCKUNN WINDOW ANTI-PI WINDOW ANTI-PI WINDOW ANTI-PI 0 11 12 0 11 12	
Connector Name F Connector Name F Connector Color	l Si≓ m Ω r	Connector No.	

#### < WIRING DIAGRAM >

[LH & RH FRONT ANTI-PINCH]

Ρ

Revision: May 2014

AAKIA2234GB

Connector No	1201	Connector No	D203		Connector No D204	04
e r	WIRE TO WIRE WHITE	Connector Name		REAR POWER WINDOW SWITCH LH		REAR POWER WINDOW MOTOR LH
		Connector Color	lor WHITE	щ	Connector Color GF	GREEN
日 H.S.	3         2         1           8         7         6         4	国 H.S.	8 7 8	<b>6</b> 5 4	国 H.S.	
Terminal No. Colo	Color of Signal Name Wire	Terminal No.	Color of Wire	Signal Name	Terminal No. Color of Wire	f Signal Name
3		N	m	1	-	1
9	в	4	~	1	3 LG	I
7 B	BR -	5	_	1		
80	- -	9	Ъ	1		
		7	BR	1		
		8	>	I		
Connector No.	D301	Connector No.	. D303		Connector No. D304	04
Connector Name WIRE TO WIRE	WIRE TO WIRE	Connector Name		REAR POWER WINDOW SWITCH RH	Connector Name RE MC	REAR POWER WINDOW MOTOR RH
		Connector Color	lor WHITE	Щ	Connector Color GF	GREEN
E	3 2 1	ą			Ą	
ню	7 6	的 S.H	3 7 6	5 4	S.H.S.	2 3
Terminal No. Colo	Color of Signal Name Wire	Terminal No.	Color of Wire	Signal Name	Terminal No. Color of Wire	f Signal Name
e	-	2	в	1	-	1
9	ч	4	7	1	3 LG	I
7 B	BR -	5	_	I		
8	-	9	പ	I		
		7	BR	I		
		8	>	1		

ABKIA4828GB

< WIRING DIAGRAM >

# BASIC INSPECTION DIAGNOSIS AND REPAIR WORKFLOW

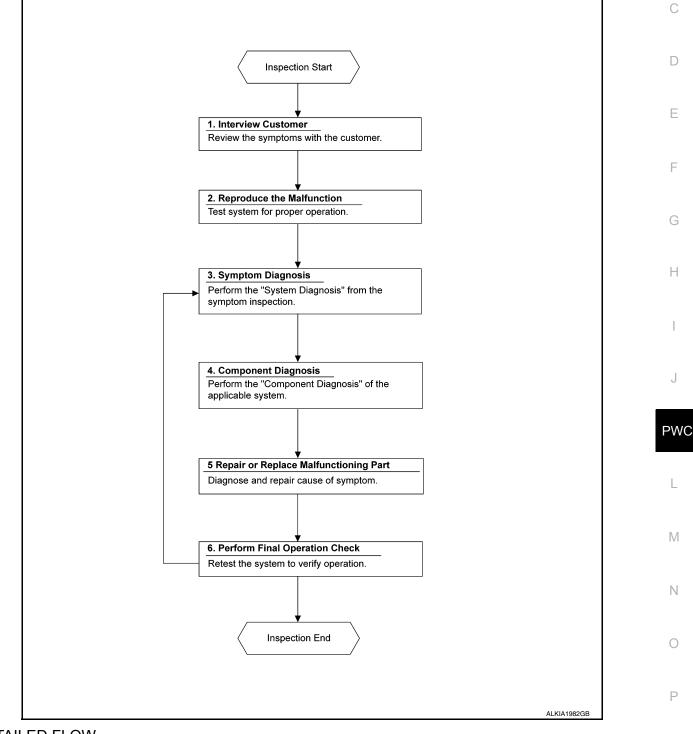
## Work Flow

INFOID:000000010481397 B

А

[LH & RH FRONT ANTI-PINCH]

OVERALL SEQUENCE



### DETAILED FLOW

## 1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

#### DIAGNOSIS AND REPAIR WORKFLOW

#### < BASIC INSPECTION >

>> GO TO 2.

# 2. CONFIRM THE SYMPTOM

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.

 $\mathbf{3}$ . IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS

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

>> GO TO 4.

**4.** PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

**5.** REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

**6.** 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.

Are the malfunctions corrected?

YES >> Inspection End. NO >> GO TO 3.

< BASIC INSPECTION > [LH & RH FRONT ANTI-PINCH]	
INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL	А
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : De- scription	В
Initial setting is necessary when battery terminal is disconnected.	0
CAUTION: The following specified operations are not performed under the non-initialized condition. • Auto-up operation • Anti-pinch function	C
ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Spe- cial Repair Requirement	Е
INITIALIZATION PROCEDURE	
<ol> <li>Disconnect battery minus terminal or main power window and door lock/unlock switch connector. Reconnect it after a minute or more.</li> <li>Turn ignition switch ON.</li> </ol>	F
3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is	G
<ul> <li>already fully open)</li> <li>4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed</li> </ul>	
<ul><li>position, keep pulling the switch for 4 seconds or more.</li><li>5. Inspect anti-pinch function.</li></ul>	Н
CHECK ANTI-PINCH FUNCTION	
<ol> <li>Fully open the door window.</li> <li>Place a piece of wood near fully closed position.</li> <li>Close door glass completely with AUTO-UP.</li> </ol>	Ι
<ul> <li>Check that glass lowers for approximately 150 mm (5.91 in.)or 2 seconds without pinching piece of wood and stops.</li> </ul>	J
<ul> <li>Check that glass does not rise when operating the main power window and door lock/unlock switch while lowering.</li> </ul>	
CAUTION:	PWC
<ul> <li>Do not check with hands and other part of body because they may be pinched. Do not get pinched.</li> <li>Check that AUTO-UP operates before inspection when system initialization is performed.</li> </ul>	
<ul> <li>It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial set- ting in that situation. Refer to <u>PWC-83, "Fail Safe"</u>.</li> </ul>	L
<ul> <li>Perform initial setting when auto-up operation or anti-pinch function does not operate normally.</li> <li>Finish initial setting. Otherwise, next operation cannot be done.</li> </ul>	
1. Auto-up operation 2. Anti-pinch function	$\mathbb{M}$
3. Retained power operation when ignition switch is OFF.	
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT	Ν
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description	
Initial setting is necessary when replacing main power window and door lock/unlock switch.	0
<ul> <li>The following specified operations are not performed under the non-initialized condition.</li> <li>Auto-up operation</li> <li>Anti-pinch function</li> <li>Retained power operation</li> </ul>	Ρ
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-	
quirement INFOLD:000000010481401	

INSPECTION AND ADJUSTMENT

#### INITIALIZATION PROCEDURE

## **INSPECTION AND ADJUSTMENT**

#### < BASIC INSPECTION >

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

#### CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm (5.91 in.) or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the main power window and door lock/unlock switch while lowering.

#### CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to <u>PWC-83</u>, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

P	OWER SUPPLY AN	D GROUND	CIRCUIT	
< DTC/CIRCUIT DIAGNOS	SIS >		[LH & RH FRONT ANTI-PIN	CH]
DTC/CIRCUIT	DIAGNOSIS			^
POWER SUPPLY A	AND GROUND CIR	CUIT		A
BCM				_
BCM : Diagnosis Proc	cedure		INFOID:0000000	B 11009040
				С
Regarding Wiring Diagram i	information, refer to BCS-5	6, "Wiring Diagrai	<u>m"</u> .	0
				D
1. CHECK FUSE AND FUS	SIBLE LINK			D
Check that the following fus	e and fusible link are not bl	own.		
Terminal No.	Signal nan	20	Fuse and fusible link No.	E
139	Fusible link batte		I (40A)	
131	BCM battery		1 (10A)	— F
Is the fuse or fusible link blo	<u>wn?</u>			
YES >> Replace the blo NO >> GO TO 2.	own fuse or fusible link after	repairing the affe	ected circuit.	G
2. CHECK POWER SUPP	LY CIRCUIT			
<ol> <li>Disconnect BCM conne</li> <li>Check voltage between</li> </ol>	ector M21. BCM connector M21 termi	nals 131. 139 an	id around.	H
		,	5	
BC		Ground	d Voltage	I
Connector	Terminal 131		(Approx.)	
M21	131		Battery voltage	J
Is the inspection result norm	nal?			
YES >> GO TO 3. NO >> Repair or replace	a harnaaa ar aannaatara			PV
3. CHECK GROUND CIRC	ce harness or connectors.			
Check continuity between B		als 134 143 and	around	L
			ground	
BC	CM	Ground	d Continuity	M
Connector	Terminal			
M21	134	_	Yes	Ν
Is the inspection result norm	-			
YES >> Inspection End.	ce harness or connectors.			C
POWER WINDOW M	AIN SWITCH : Descr	iption	INFOID:0000000	10481403
	ndow motor via correspond indow and door lock/unlocl		w switch and makes window move ted.	e up/

< DTC/CIRCUIT DIAGNOSIS >

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

Main Power Window And Door Lock/unlock Switch

**1.** CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Check power window motor operation with main power window and door lock/unlock switch. <u>Is the inspection result normal?</u>

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK. >> Refer to <u>PWC-100, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u>.

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000010481405

INFOID:000000010481404

Regarding Wiring Diagram information, refer to <u>PWC-87, "Wiring Diagram - With Left And Right Front Power</u> <u>Window Anti-Pinch"</u>.

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

Terminal			
(+)			Voltage (Approx.)
Main power window and door lock/unlock switch connector	Terminal	- (-)	()
D7	10	Ground	Potton voltago
D8	18	Giound	Battery voltage

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, main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- 3. Check continuity between BCM connector and main power window and door lock/unlock switch connectors.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M21	140	D7	10	Yes
	141	D8	18	165

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal		Continuity
M21	140	Ground	No
WIZ I	141		NO

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

**3.** CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch.

3. Check continuity between main power window and door lock/unlock switch connector D7 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Ter	minal		Continuity	
D7		1	Ground	Yes	
the inspection result normal?					
<ul> <li>YES &gt;&gt; Check main power window and door lo LH) GO TO 5.</li> <li>YES &gt;&gt; Check main power window and door lo RH) GO TO 6.</li> <li>YES &gt;&gt; Check main power window and door lo RH) GO TO 6.</li> </ul>	ock/unlock	switch out	put signal (rear po	wer window swit	
LH) GO TO 7. IO >> Repair or replace the harness and con	noctors				
. CHECK BCM OUTPUT SIGNAL					
Connect BCM. Turn ignition switch ON. Check voltage between BCM connector M21 a	nd ground				
Terminals					
(+)		(-)		Voltage (Approx.)	
BCM connector Terminal		( )			
M21 140		Ground	Ba	ttery voltage	
141		Cround	Bu		
CHECK MAIN POWER WINDOW AND DOOR WINDOW SWITCH LH) Connect main power window and door lock/unl Turn ignition switch ON. Check voltage between main power window ar	lock switch				
Terminal					
Terrinitar			Window switch	Voltage	
(+)		()	position (rear LH)	(Approx.)	
(+) Main power window and door lock/unlock switch connector	Terminal	(-)	· · · · · · · · · · · · · · · · · · ·		
		- (-)	UP	Battery voltage	
Main power window and door lock/unlock switch connector	Terminal 8			Battery voltage	
	8	Ground	UP	, ,	
Main power window and door lock/unlock switch connector			UP DOWN	0	
Main power window and door lock/unlock switch connector	8		UP DOWN UP	0	
Main power window and door lock/unlock switch connector	8 9 I-44, "Interi or lock/unl -97, "ADDI	Ground mittent Incio	UP DOWN UP DOWN dent". . Refer to <u>PWC-1</u>	0 0 Battery voltage 45, "Removal a	

2. Turn ignition switch ON.

3. Check voltage between main power window and door lock/unlock switch connector D7 and ground.

#### < DTC/CIRCUIT DIAGNOSIS >

Terminal				Voltage (Approx.)	
(+)		(-)	Window switch position (rear RH)		
Main power window and door lock/unlock switch connector	r Terminal		· 、 ,		
	7		UP	Battery voltage	
D7	1	Ground	DOWN	0	
וט	6	Ground	UP	0	
	0		DOWN	Battery voltage	

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "Removal and <u>Installation"</u>.

7. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH LH)

1. Connect main power window and door lock/unlock switch.

2. Turn ignition switch ON.

3. Check voltage between main power window and door lock/unlock switch connector D7 and ground.

Terminal				
(+)		(-)	Window switch position (front LH)	Voltage (Approx.)
Main power window and door lock/unlock switch connector	Terminal	(-)	, , , , , , , , , , , , , , , , , , ,	
	17		UP	Battery voltage
D7	17	Ground	DOWN	0
	19	Ground	UP	0
	19		DOWN	Battery voltage

#### Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>".

### POWER WINDOW MAIN SWITCH : Component Inspection

INFOID:000000010481406

#### 1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Check main power window and door lock/unlock switch D7.

Terr	ninal	Main power window and do	Continuity	
10	8	Rear LH	UP	
10	7	Rear RH		
8	9	Rear LH	NEUTRAL	
6	7	Rear RH	NEUTRAL	Yes
10	9	Rear LH	DOWN	
10	6	Rear RH		
1	12		-	

 Check continuity between main power window and door lock/unlock switch D7 (power window lock switch). (Lock operation).

#### < DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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Tern	ninal	Main power window and do	oor lock/unlock switch condition	Continuity	A
9		Rear LH	UP		
6		Rear RH	UF UF		
8		Rear LH		*	В
9	1	NEUTRAL		No	
7		Rear RH	DOWN	NO	С
6		i teai i ti i			
8		Rear LH		<b>*</b>	
7	]	Rear RH	DOWN		D

3. Check continuity between main power window and door lock/unlock switch D7 (power window lock switch). (Unlock operation).

Term	ninal	Main power window and door lock/unlock switch condition		Continuity	
9		Rear LH			_
6		Rear RH	UP		F
8		Decelu			
9	4	Rear LH	NEUTRAL	Yes	C
6	1	Deer DU			
7		Rear RH			
8	-	Rear LH	DOWN		-
7		Rear RH	DOWN		

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>". After that, refer to <u>PWC-97</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>".

### POWER WINDOW MAIN SWITCH : Special Repair Requirement

### **1.** PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-97</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

## Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

## 2. CHECK ANTI-PINCH OPERATION

 N
 N

 Refer to PWC-97, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

 No.

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to <u>PWC-108</u>, "DRIVER SIDE : Component Function Check".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWIT	CH : Description
-------------------------	------------------

INFOID:000000010481408

INFOID:000000010481407

• BCM supplies power.

• Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

< DTC/CIRCUIT DIAGNOSIS >

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

Power Window And Door Lock/unlock Switch RH

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Check front power window motor RH operation with power window and door lock/unlock switch RH. Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK. NO >> Refer to <u>PWC-104</u>, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000010481410

INFOID:000000010481409

Regarding Wiring Diagram information, refer to <u>PWC-87, "Wiring Diagram - With Left And Right Front Power</u> <u>Window Anti-Pinch"</u>.

Power Window And Door Lock/unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D105 and ground.

Terminal	N/ 14		
(+)			Voltage (Approx.)
Power window and door lock/unlock switch RH connector	Terminal	()	( FF - 7
D105	8	Ground	Battery voltage

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 and power window and door lock/unlock switch RH.
- Check continuity between BCM connector M21 and power window and door lock/unlock switch RH connector D105.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M21	141	D105	8	Yes

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal	Ground	Continuity
M21	141	Clound	No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

**3.** CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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

3. Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH	Terminal	Ground	Continuity
D105	7	Oldana	Yes

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

< DTC/CIRCUIT DIAGNOSIS >		[LH 8	RH FRONT ANTI-PINCH
NO >> Repair or replace the	e harness or connectors.		
4. CHECK BCM OUTPUT SIGN			
<ol> <li>Connect BCM.</li> <li>Turn ignition switch ON.</li> <li>Check voltage between BCN</li> </ol>	I connector M21 and gro	und.	
	Terminals		
(+)		(-)	Voltage (Approx.)
BCM connector	Terminal	(-)	
M21	141	Ground	Battery voltage
	cident. Refer to <u>GI-44, "I</u> to <u>BCS-81, "Removal ar</u> W SWITCH : Speci	nd Installation".	ment INFOID:000000010481411
<b>1.</b> PERFORM INITIALIZATION	PROCEDURE		
Perform initialization procedure. Refer to <u>PWC-97, "ADDITIONAL ment"</u> .	SERVICE WHEN REP	LACING CONTROL UI	NIT : Special Repair Require-
<u>s the inspection result normal?</u> YES >> GO TO 2. NO >> Check intermittent in <b>2.</b> CHECK ANTI-PINCH OPER/	icident. Refer to <u>GI-44, "I</u> ATION	ntermittent Incident".	
Check anti-pinch operation. Refer to <u>PWC-97, "ADDITIONAI ment"</u> .		LACING CONTROL UI	NIT : Special Repair Require-
Is the inspection result normal? YES >> Inspection end. NO >> Refer to <u>PWC-104, "</u> REAR POWER WINDO\	FRONT POWER WINDO	<u> DW SWITCH : Compon</u>	ent Function Check".
REAR POWER WINDOW	SWITCH : Descrip	otion	INFOID:000000010481412
<ul> <li>BCM supplies power.</li> <li>Rear power window motor will switch.</li> </ul>			
		ver window switch is o	perated. Rear power window
REAR POWER WINDOW			
REAR POWER WINDOW	/ SWITCH : Compo	nent Function Che	
REAR POWER WINDOW Rear Power Window Switch 1. CHECK REAR POWER WIN	SWITCH : Compo	onent Function Che	
REAR POWER WINDOW Rear Power Window Switch 1. CHECK REAR POWER WIN Check rear power window motor	SWITCH : Compo	onent Function Che	
REAR POWER WINDOW Rear Power Window Switch 1. CHECK REAR POWER WIN Check rear power window motor Is the inspection result normal? YES >> Rear power window	SWITCH : Compo DOW MOTOR FUNCTIC operation with rear powe switch power supply and	ON PN er window switch. I ground circuit are OK.	eck INFOID:000000010481413
REAR POWER WINDOW Rear Power Window Switch 1. CHECK REAR POWER WIN Check rear power window motor Is the inspection result normal? YES >> Rear power window	SWITCH : Compo DOW MOTOR FUNCTIO operation with rear powe switch power supply and REAR POWER WINDOM	ON ON er window switch. I ground circuit are OK. W SWITCH : Diagnosis	eck INFOID:000000010481413

Regarding Wiring Diagram information, refer to <u>PWC-87</u>, "Wiring Diagram - With Left And Right Front Power <u>Window Anti-Pinch"</u>.

Rear Power Window Switch Power Supply Circuit Check

С

< DTC/CIRCUIT DIAGNOSIS >

## 1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

Terminal						
	(+)			Condition	Voltage (Approx.)	
Rear power wind	ow switch connector	Terminal	(-)		V FF - 7	
LH	D203	4	Ground	Ignition switch ON	Battery voltage	
RH	D303	<b>4</b>	Giouna		Dattery Voltage	

Is the inspection result normal?

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 main power window and door lock/unlock switch and rear power window switch LH.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 and rear power window switch LH connector D203.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
DZ	8	D203	7	Yes
Di	9	6203	8	165

#### 4. Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
 D7	8	Ground	No
וט	9		INO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 and rear power window switch RH connector D303.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	6	D303	7	Yes
57	7	2303	8	165

4. Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
DZ	6	Ground	No
Di	7		NO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

**4.** CHECK HARNESS CONTINUITY

1. Disconnect BCM and rear power window switch.

#### < DTC/CIRCUIT DIAGNOSIS >

BCM connector	Terminal	ninal Rear power window switch connector		Terminal	Continuity	
M21	140	LH	D203	4	Yes	
		RH	D303		163	
Check continuity	between BCM cc	nnector M21 and	ground.			
BCM conne	ector	Terminal		round	Continuity	
M21		140	140 Grou		No	
<ul> <li>&gt;&gt; Repair or</li> <li>CHECK REAR PC</li> <li>ck rear power win</li> <li>er to <u>PWC-107</u>, "F</li> <li>inspection result</li> <li>S &gt;&gt; Check int</li> <li>&gt;&gt; Replace r</li> </ul>	BCM. Refer to BC replace the harn OWER WINDOW dow switch. REAR POWER W It normal? remittent incident rear power windo WINDOW SW	CS-81, "Removal a ess or connectors SWITCH (INDOW SWITCH t. Refer to <u>GI-44, "</u> w switch. Refer to (ITCH : Compo	: Component Ins Intermittent Incid	<u>ent"</u> . loval and Instal	<u>lation"</u> . ™Fold:000000	
CHECK REAR PO		SWITCH LH				
	idow switch LH D					
Terminal		203. Power window s	witch condition		Continuity	
Terminal	5				Continuity	
Terminal 4 8	5 6	Power window s			Continuity	
Terminal 4 8 8 8	5 6 6	Power window s	2		Continuity Yes	
Terminal 4 8 8 5	5 6 6 7	Power window s	2		-	
Terminal           4           8           8           5           6           5	5 6 6 7 4 7	Power window s	RAL		-	
4 8 8 5 6 5 the inspection resul 'ES >> Rear pow	5 6 7 4 7 1t normal? ver window switch rear power windo WER WINDOW	Power window s UF NEUT DOV D LH is OK. w switch. Refer to SWITCH RH	RAL VN	noval and Instal	Yes	
Terminal 4 8 8 5 6 5 6 5 he inspection resul ES >> Rear pow O >> Replace r CHECK REAR PO	5 6 7 4 7 1t normal? ver window switch rear power windo WER WINDOW	Power window s UF NEUT DOV D LH is OK. w switch. Refer to SWITCH RH	P RAL VN 9 <u>PWC-147, "Rem</u>	noval and Instal	Yes	
Terminal 4 8 8 5 6 5 6 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 6 7 4 7 1t normal? ver window switch rear power windo WER WINDOW	Power window s UF NEUT DOV NLH is OK. w switch. Refer to SWITCH RH D303. Power window s	P RAL VN P PWC-147, "Rem witch condition	noval and Instal	Yes	
Terminal 4 8 8 5 6 5 6 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5 6 7 4 7 1t normal? ver window switch rear power windo WER WINDOW 3 idow switch RH E	Power window s UF NEUT DOV N LH is OK. w switch. Refer to SWITCH RH D303.	P RAL VN P PWC-147, "Rem witch condition	noval and Instal	Yes	
Terminal 4 8 8 5 6 5 6 5 6 5 8 8 5 8 8 5 6 5 8 8 8 8	5       6       6       7       4       7       1t normal?       ver window switch       rear power windo       WER WINDOW       work witch RH E       5	Power window s UF NEUT DOV NLH is OK. w switch. Refer to SWITCH RH D303. Power window s UF	P RAL VN P PWC-147, "Rem witch condition	noval and Instal	Yes lation".	
Terminal       4       8       5       6       5       6       5       e inspection result       S       >> Rear power       CHECK REAR PO       eck rear power wind       Terminal       4       7	5       6       6       7       4       7       4       7       It normal?       ver window switch       rear power windo       WER WINDOW       work witch RH E       5       6	Power window s UF NEUT DOV NLH is OK. w switch. Refer to SWITCH RH D303. Power window s	P RAL VN P PWC-147, "Rem witch condition	noval and Instal	Yes	
Terminal       4       8       5       6       5       6       5       he inspection result       ES     >> Rear power       O     >> Replace r       CHECK REAR PO       eck rear power wind       Terminal       4       7       7	5       6       6       7       4       7 <t< td=""><td>Power window s UF NEUT DOV NLH is OK. w switch. Refer to SWITCH RH D303. Power window s UF</td><td>PWC-147, "Rem</td><td>noval and Instal</td><td>Yes lation".</td></t<>	Power window s UF NEUT DOV NLH is OK. w switch. Refer to SWITCH RH D303. Power window s UF	PWC-147, "Rem	noval and Instal	Yes lation".	

NO >> Replace rear power window switch. Refer to PWC-147, "Removal and Installation".

### POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

## POWER WINDOW MOTOR DRIVER SIDE

**DRIVER SIDE : Description** 

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

DRIVER SIDE : Component Function Check

**1.** CHECK POWER WINDOW MOTOR CIRCUIT

Check front power window motor LH operation with operating main power window and door lock/unlock switch.

Is the inspection result normal?

- YES >> Front power window motor LH is OK.
- NO >> Refer to <u>PWC-108</u>, "DRIVER SIDE : Diagnosis Procedure".
- **DRIVER SIDE : Diagnosis Procedure**

INFOID:000000010481418

INFOID:0000000010481416

INFOID:000000010481417

Regarding Wiring Diagram information, refer to <u>PWC-87, "Wiring Diagram - With Left And Right Front Power</u> <u>Window Anti-Pinch"</u>.

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- 1. Disconnect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor LH connector D9 and ground.

Termina				
(+)		- (-)	Main power window and door lock/unlock switch condition	Voltage (Approx.)
Power window motor LH connector	Terminal			
	1	- Ground	UP	Battery voltage
D9			DOWN	0
69	3		UP	0
			DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch and front power window motor LH.

3. Check continuity between main power window and door lock/unlock switch connector D8 and front power window motor connector LH D9.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D8	17	D9	1	Yes
	19		3	

4. Check continuity between main power window and door lock/unlock switch connector D8 and ground.

### < DTC/CIRCUIT DIAGNOSIS >

### [LH & RH FRONT ANTI-PINCH]

Main power window and door lock/unlock switch connector	Terminal		Continuity
	17	Ground	<b>N</b> 1 -
D8	19	_	No
s the inspection result normal?         YES       >> Replace main power window Installation". After that, refer to NO         NO       >> Repair or replace the harness         B. CHECK POWER WINDOW MOTOR         Check front power window motor LH.         Refer to PWC-109, "DRIVER SIDE : Component Incident. Refer to power window motor LH.         YES       >> Check intermittent incident. Refer to a component incident. Refer that, refer to pwc-109, "DRIVER SIDE : Component Inspection PWC-109, "DRIVER SIDE : Component PWC-	o <u>PWC-109, "DRIVER</u> or connectors. <u>conent Inspection"</u> . efer to <u>GI-44, "Interm</u> LH. Refer to <u>GW-16</u> <u>DRIVER SIDE : Spe</u>	R SIDE : Special Repair	Requirement".
COMPONENT INSPECTION  CHECK FRONT POWER WINDOW M Check motor operation by connecting the I		ly to power window mot	or D9.
Terminal		RA_1	andition
(+)	(–)	Motor co	Dhailion
3	1	DO	WN
1	1 3		P
YES >> Front power window motor LH NO >> Replace front power window m tor". After that, refer to <u>PWC-1</u> DRIVER SIDE : Special Repair R <b>1.</b> PERFORM INITIALIZATION PROCED Perform initialization procedure. Refer to <u>PWC-97. "ADDITIONAL SERVIC</u> ment".	notor LH. Refer to <u>GV</u> 09. "DRIVER SIDE : equirement URE	Special Repair Require	INFOID:00000001048142
Is the inspection result normal? YES >> GO TO 2. NO >> Check intermittent incident. Re	efer to <u>GI-44, "Interm</u>	ittent Incident".	

< DTC/CIRCUIT DIAGNOSIS >

### PASSENGER SIDE : Description

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

### PASSENGER SIDE : Component Function Check

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check power window motor operation with operating main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to <u>PWC-110, "PASSENGER SIDE : Diagnosis Procedure"</u>.

### PASSENGER SIDE : Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>PWC-87</u>, "Wiring Diagram - With Left And Right Front Power <u>Window Anti-Pinch"</u>.

Front Power Window Motor RH Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Turn ignition switch ON.

4. Check voltage between front power window motor RH connector D104 and ground.

Terminal									
(+)	(+)		Front power window motor RH condition	Voltage					
Front power window motor RH connector	Terminal	()		(Approx.)					
	1		UP	Battery voltage					
D104		1	I	· ·	I	•	Cround	DOWN	0
D104		Ground	UP	0					
	3		DOWN	Battery voltage					

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 and door lock/unlock switch RH.

3. Check continuity between power window and door lock/unlock switch RH connector D105 and front power window motor RH connector D104.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	11	D104	1	Yes
	12	D 104	3	165

4. Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH connector	Terminal		Continuity
D105	11	Ground	No
	12	N	NO

INFOID:000000010481422

INFOID-000000010481423

< DTC/CIRCUIT DIAGNOSIS >	[LH & RH FRONT ANTI-PINCH]
Is the inspection result normal?	
lation". After that, refer to PWC-111, "PA	nlock switch RH. Refer to <u>PWC-146, "Removal and Instal-</u> ASSENGER SIDE : Special Repair Requirement".
NO >> Repair or replace harness or connectors	
3. CHECK FRONT POWER WINDOW MOTOR RH	1
Check front power window motor RH. Refer to <u>PWC-111, "PASSENGER SIDE : Componen</u>	nt Inspection".
Is the inspection result normal?	
	<u>44, "Intermittent Incident"</u> . Refer to <u>GW-16, "Removal and Installation - Front Regu-</u> SSENGER SIDE : Special Repair Requirement".
PASSENGER SIDE : Component Inspec	
FASSENGER SIDE : Component inspec	INFOID:000000010481424
COMPONENT INSPECTION	
1. CHECK FRONT POWER WINDOW MOTOR RH	4
Check motor operation by connecting the battery vol	Itage directly to front power window motor RH D104.
Terminal	
(+) (–)	Motor condition
3 1	DOWN
1 3	UP
PASSENGER SIDE : Special Repair Rec <b>1.</b> PERFORM INITIALIZATION PROCEDURE	
Perform initialization procedure. Refer to <u>PWC-97, "ADDITIONAL SERVICE WHEN</u> ment".	REPLACING CONTROL UNIT : Special Repair Require-
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Check intermittent incident. Refer to <u>GI-</u>	<u>44, "Intermittent Incident"</u> .
2. CHECK ANTI-PINCH OPERATION	
Check anti-pinch operation. Refer to PWC-97. "ADDITIONAL SERVICE WHEN	REMOVING BATTERY NEGATIVE TERMINAL : Special
Repair Requirement".	
Is the inspection result normal?	
YES >> Inspection End. NO >> Refer to <u>PWC-117, "PASSENGER SIDE</u>	- Component Function Check"
REAR LH	<u></u>
REAR LH : Description	INFOID:000000010481426
	al from main power window and door lock/unlock switch or
REAR LH : Component Function Check	INFOID:000000010481427
1. CHECK REAR POWER WINDOW MOTOR LH (	

### < DTC/CIRCUIT DIAGNOSIS >

Check rear power window motor LH operation with main power window and door lock/unlock switch or rear power window switch LH.

### Is the inspection result normal?

- YES >> Rear power window motor LH is OK.
- NO >> Refer to <u>PWC-112</u>, "REAR LH : Diagnosis Procedure"

### REAR LH : Diagnosis Procedure

INFOID:000000010481428

Regarding Wiring Diagram information, refer to <u>PWC-87</u>, "Wiring Diagram - With Left And Right Front Power <u>Window Anti-Pinch"</u>.

### Power Window Motor Circuit Check

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

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between rear power window motor LH connector D204 and ground.

Terminal		N /  //			
(+)		( )	Window condition	Voltage (Approx.)	
Rear power window motor LH connector	Terminal	()			
	1		UP	Battery voltage	
D204		•	Ground	DOWN	0
D204		Giouna	UP	0	
	5		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

- 2. CHECK HARNESS CONTINUITY
- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH connector D203 and rear power window motor LH connector D204.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203	5	D204	1	Yes
5203	6	0204	3	163

4. Check continuity between rear power window switch LH connector D203 and ground.

Rear power window switch LH connector	Terminal		Continuity
D203	5	Ground	No
5203	6		INO

### Is the inspection result normal?

- YES >> Check rear power window switch LH. Refer to <u>PWC-107, "REAR POWER WINDOW SWITCH :</u> <u>Component Inspection"</u>.
- NO >> Repair or replace the harness or connectors.
- **3.** CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to <u>PWC-113, "REAR LH : Component Inspection"</u>. Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >			[LH & RH F	RONT ANTI-PINCH]	
YES >> Check intermittent incide NO >> Replace rear power wind				allation".	A
REAR LH : Component Inspe				INFOID:000000010481429	
COMPONENT INSPECTION					В
1. CHECK REAR POWER WINDOW	V MOTOR LH	1			
Check motor operation by connecting			v to rear power window	motor I H D204	С
Terminal			Motor co	ndition	_
(+)	(-)				D
3	1		DOW		
1	3		UP		E
Is the inspection result normal?					
YES >> Rear power window moto NO >> Replace rear power wind		. Refer to GW	-25, "Removal and Inst	allation".	_
REAR RH					F
REAR RH : Description					
				INFOID:000000010481430	G
Door glass moves UP/DOWN by received rear power window switch RH.	eiving the sigr	nal from main	power window and doc	r lock/unlock switch or	
REAR RH : Component Fund	ction Chec	k		INFOID:000000010481431	Η
1. CHECK REAR POWER WINDOW	V MOTOR RH	I CIRCUIT			
Check rear power window motor RH	operation with	n operating m	ain power window and o	loor lock/unlock switch	
or rear power window switch RH.	•		•		
Is the inspection result normal?					J
YES >> Rear power window moto NO >> Refer to <u>PWC-113</u> , "REA		nosis Procedu	re"		
			<u>.</u> .		DV
REAR RH : Diagnosis Procee	Jule			INFOID:000000010481432	P۷
Regarding Wiring Diagram informatic Window Anti-Pinch".	on, refer to <u>PN</u>	<u>/VC-87, "Wirir</u>	ig Diagram - With Left A	And Right Front Power	L
	_				
Rear Power Window Motor RH Ci					N
<b>1.</b> CHECK REAR POWER WINDOW	V SWITCH R	H OUTPUT S	IGNAL		
1. Turn ignition switch OFF.					Ν
<ol> <li>Disconnect rear power window m</li> <li>Turn ignition switch ON.</li> </ol>	notor RH.				
4. Check voltage between rear pow	er window me	otor RH conne	ector D304 and ground.		
					С
Terminal			Rear power window	Voltage	
(+)	Torminal	- (-)	switch RH condition	(Approx.)	F
Rear power window motor RH connector	Terminal		UP	Batteny voltage	
	1		DOWN	Battery voltage	
D304		Ground	UP	0	
	3		DOWN	Battery voltage	
	1	1	DOMIN	Duttory voltage	

Is the measurement value within the specification?

< DTC/CIRCUIT DIAGNOSIS >

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

2. Disconnect rear power window switch RH.

 Check continuity between rear power window switch RH connector D303 and rear power window motor RH connector D304.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303	5	D304	1	Yes
2000	6	2004	3	163

4. Check continuity between rear power window switch RH connector D303 and ground.

Rear power window switch RH connector	Terminal		Continuity
D303 -	5	Ground	No
	6		110

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to <u>PWC-107</u>, "REAR POWER WINDOW SWITCH : <u>Component Inspection</u>".

NO >> Repair or replace the harness or connectors.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to <u>PWC-114</u>, "REAR RH : Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Replace rear power window motor RH. Refer to <u>GW-25, "Removal and Installation"</u>.

**REAR RH : Component Inspection** 

INFOID:000000010481433

### COMPONENT INSPECTION

1.CHECK REAR POWER WINDOW MOTOR RH

Check motor operation by connecting the battery voltage directly to rear power window motor RH D304.

Terminal		Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-25, "Removal and Installation"</u>.

< DTC/CI	RCUIT DIAGNOSIS >		[LH & R	H FRONT ANTI-PINCH]
ENCO	DER			
DRIVE	R SIDE			
DRIVEF	R SIDE : Description			INFOID:000000010481434
	ondition of the front power window motor LH k switch as pulse signal.	I operation and	transmits to ma	in power window and door
DRIVEF	R SIDE : Component Function Ch	eck		INFOID:000000010481435
1. снес	K ENCODER OPERATION			
	nt door glass LH perform AUTO open/clos lock/unlock switch.	e operation norr	mally when oper	rating main power window
	pection result normal?			
YES > NO >	> Encoder operation is OK. > Refer to <u>PWC-115, "DRIVER SIDE : Dia</u>	ignosis Procedu	re".	
	R SIDE : Diagnosis Procedure		_	INFOID:000000010481436
	-			
Encoder	<u>Inti-Pinch"</u> . Circuit Check K ENCODER OPERATION			
2. Checl	gnition switch ON. k signal between main power window and oscope.	door lock/unlo	ck switch conn	ector D7 and ground with
	Terminals			
	(+)		( )	Signal (Reference value)
Main po	wer window and door lock/unlock switch connector	Terminal	()	(
	D7	4 5	Ground	Refer to following signal
	(M)		(V)	
( E	Encoder signal 1 Terminal 5) Encoder signal 2 Terminal 4)	Encoder signal 1 (Terminal 5) Encoder signal 2 (Terminal 4)	2 0 0 6 4 2 0 • • • • • • • • • • • • • • • • • • •	
	(Starting of terminal 4 is 1/4 pulses earlie	r)		DOWN 5 is 1/4 pulses earlier) AWKIA2032GB
s the insp	pection result normal?			
	> Check intermittent incident. Refer to <u>GI-</u>	44. "Intermittent	Incident".	
-	K FRONT POWER WINDOW MOTOR LH	POWER SUPP	LY	

1. Turn ignition switch ON.

2. Check voltage between front power window motor LH connector D9 and ground.

### < DTC/CIRCUIT DIAGNOSIS >

(+)			Voltage (Approx.)
Front power window motor LH connector Terminal		()	(Approx.)
D9	2	Ground	10

Is the measurement value within the specification?

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

NO >> GO TO 3.

**3.** CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 and front power window motor LH connector D9.

Main power window and door lock/ unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	14	D9	2	Yes

4. Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity	
D7	14	Crodina	No	

### Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>". After that, refer to <u>PWC-97</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>".

- NO >> Repair or replace the harness or connectors.
- **4.** CHECK GROUND CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector D9 and ground.

Front power window motor LH connector	Terminal	Ground	Continuity
D9	4	Ground	Yes

Is the inspection result normal?

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

**5.** CHECK HARNESS CONTINUITY 2

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

2. Check continuity between main power window and door lock/unlock switch connector D7 and front power window motor LH connector D9.

Main power window and door lock/un- lock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	12	D9	4	Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>". After that, refer to <u>PWC-97</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CON-</u> <u>TROL UNIT</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace the harness or connectors.

**O.** CHECK HARNESS CONTINUITY 3

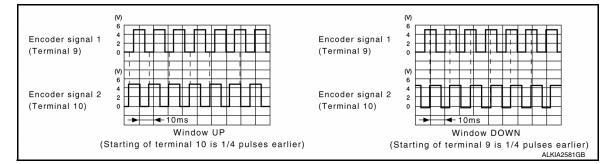
### < DTC/CIRCUIT DIAGNOSIS >

### [LH & RH FRONT ANTI-PINCH]

Disconnect main power window and door lock/unlock switch. 1. 2. Check continuity between main power window and door lock/unlock switch connector D7 and front power А window motor LH connector D9. Main power window and door lock/unlock switch В Terminal Front power window motor LH connector Terminal Continuity connector 5 5 D7 na Yes 6 4 Check continuity between main power window and door lock/unlock switch connector D7 and ground. 3. Main power window and door lock/unlock switch connector Terminal Continuity D 5 Ground D7 No 4 Ε Is the inspection result normal? YES >> Replace front power window motor LH. Refer to <u>GW-16, "Removal and Installation - Front Regula-</u> tor". After that, refer to PWC-97, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT F Special Repair Requirement". NO >> Repair or replace the harness or connectors. PASSENGER SIDE **PASSENGER SIDE : Description** INFOID:000000010481437 Detects condition of the front power window motor RH operation and transmits to power window and door Н lock/unlock switch RH as pulse signal. PASSENGER SIDE : Component Function Check INFOID:000000010481438 1. CHECK ENCODER OPERATION Check front door glass RH perform AUTO open/close operation normally when operating power window and door lock/unlock switch RH. Is the inspection result normal? YFS >> Encoder operation is OK. PWC >> Refer to PWC-117, "PASSENGER SIDE : Diagnosis Procedure". NO PASSENGER SIDE : Diagnosis Procedure INFOID:000000010481439 Regarding Wiring Diagram information, refer to PWC-87, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch". Μ 1. CHECK ENCODER SIGNAL Ν 1. Connect front power window motor RH. 2. Turn ignition switch ON. 3. Check signal between power window and door lock/unlock switch RH connector D105 and ground with oscilloscope. Ο Terminals Signal (+) Ρ (Reference value) (-) Power window and door lock/unlock switch RH connector Terminal 9 D105 Ground Refer to following signal 10

### < DTC/CIRCUIT DIAGNOSIS >





### Is the inspection result normal?

### YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 2.

### 2. CHECK FRONT POWER WINDOW MOTOR RH POWER SUPPLY

- 1. Turn ignition switch ON.
- 2. Check voltage between front power window motor RH connector D105 and ground.

Terr	minal					
(+)			( )	Voltage (Approx.)		
Front power window motor RH connector	Termin	al	()			
D105	5		Ground	10		
s the inspection result normal?						
YES >> GO TO 4. NO >> GO TO 3.						
<b>3.</b> CHECK HARNESS CONTINUITY 1						
<ul> <li>Turn ignition switch OFF.</li> <li>Disconnect power window and door log.</li> <li>Check continuity between power wind window motor RH connector D104.</li> </ul>						
Power window and door lock/unlock switch RH connector	Terminal	Front power w	indow motor RH conne	ctor Terminal	Continuity	
D105	5		D104	2	Yes	
. Check continuity between power wind	low and do	or lock/unlock	switch RH connec	tor D105 and	ground.	
Power window and door lock/unlock switch RH c	onnector	Terminal		Continuity		
D105		5	Ground	No	No	
<u>s the inspection result normal?</u> YES >> Replace power window and d <u>lation"</u> . After that, refer to <u>P</u> UNIT : Special Repair Require	<u>WC-97, "Al</u>	lock switch R	H. Refer to <u>PWC-1</u> SERVICE WHEN I	46, "Remova REPLACING	l and Insta CONTRC	
NO >> Repair or replace the harness CHECK GROUND CIRCUIT . Turn ignition switch OFF. . Disconnect front power window motor . Check continuity between front power	s or connec		ector D104 and gro	ound.		
<ul> <li>NO &gt;&gt; Repair or replace the harness</li> <li>CHECK GROUND CIRCUIT</li> <li>Turn ignition switch OFF.</li> <li>Disconnect front power window motor</li> </ul>	s or connec r RH. r window m		ector D104 and gro	ound.	inuity	

### Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

### [LH & RH FRONT ANTI-PINCH]

### < DTC/CIRCUIT DIAGNOSIS > 5. CHECK HARNESS CONTINUITY 2

- 1. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D105 and front power window motor RH connector D104.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	4	D104	4	Yes

### Is the inspection result normal?

- YES >> Replace power window and door lock/unlock switch RH. Refer to <u>PWC-146, "Removal and Instal-</u> <u>lation"</u>. After that, refer to <u>PWC-97, "ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> <u>UNIT : Special Repair Requirement"</u>.
- NO >> Repair or replace the harness or connectors.

### 6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D105 and front power window motor RH connector D104.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity	G
 D105	9	D104	5	Yes	
	10		6	105	Н

### 3. Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH connector	Terminal		Continuity	
D405	9 Ground		No	
D105	10		No	

### Is the inspection result normal?

- YES >> Replace front power window motor RH. Refer to <u>GW-16</u>, "Removal and Installation Front Regulator". After that, refer to <u>PWC-97</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL <u>UNIT</u>: Special Repair Requirement".
- NO >> Repair or replace the harness or connectors.

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### < DTC/CIRCUIT DIAGNOSIS >

### **DOOR SWITCH**

### Description

Detects door open/close condition.

**Component Function Check** 

### 1. CHECK FUNCTION

### (I) With CONSULT

Check door switches "DOOR SW-DR", "DOOR SW-AS", "DOOR SW-RL", "DOOR SW-RR" in "Data Monitor".

Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	
DOOR SW-RL	$CLOSE \to OPEN: OFF \to ON$
DOOR SW-RR	
Is the inspection result normal?	

YES >> Door switch is OK.

NO >> Refer to PWC-120, "Diagnosis Procedure".

**Diagnosis** Procedure

INFOID:000000011009043

Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".

1. CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.

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

[LH & RH FRONT ANTI-PINCH]

INFOID:000000011009041

INFOID:000000011009042

### **DOOR SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

### [LH & RH FRONT ANTI-PINCH]

	Terminals								
(+ BCM nnector	+) Terminal	()	Door cor	ndition	Voltage (V) (Approx.)				
				OPEN	0				
	96		Front door switch LH	CLOSE	(V) 15 0 5 0 10 ms JPMIA0011GB				
-				OPEN	0				
	94		Front door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB				
M19		Ground		OPEN	0				
	93						Rear door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
				OPEN	0				
	82		Rear door switch LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB				
s >> (	<u>ion result no</u> GO TO 4. GO TO 2.	rmal?	<u> </u>		1				
	OOR SWITC	H CIRCUIT							
Disconne	ect BCM coni	nector.							
			onnector and doc	or switch conn	ector.				

					D
BCM connector	Terminal	Door switch connector	Terminal	Continuity	Г
	96	Front door switch LH			-
M19	94	Front door switch RH	Ground part of	Yes	
W19	93	Rear door switch RH	door switch	Tes	
	82	Rear door switch LH			_

### **DOOR SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
	96		
M19	94	Ground	No
IN 19	93		No
	82		

YES >> GO TO 3.

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

**3.**CHECK DOOR SWITCH

Refer to PWC-122, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-219</u>, "Removal and Installation".

**4.**CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> Inspection End.

### **Component Inspection**

INFOID:000000011009044

### 1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.

3. Check door switch.

Τε	rminal	Door switch condition	Continuity
Doc	or switch	Door switch condition	Continuity
2	Ground part of door switch	Pressed	No
3	Ground part of door Switch	Released	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-219, "Removal and Installation"</u>.

### **KEY CYLINDER SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

### **KEY CYLINDER SWITCH**

### Description

For vehicles equipped with LH and RH anti-pinch system, the main power window and door lock/unlock switch detects condition of the door key cylinder switch and transmits to BCM as the LOCK or UNLOCK signal.

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

### **Component Function Check**

### INFOID:0000000011009046

INFOID:000000011009045

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

Check "KEY CYL UN-SW", "KEY CYL UN-SW" in "Data Monitor" for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>DLK-81, "Work Flow"</u>.

Monitor item	Co	ndition	F
KEY CYL LK-SW	Lock	: ON	
REFUTER-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	G
KET CTL UN-SW	Neutral / Lock	: OFF	

### Is the inspection result normal?

- YES >> Key cylinder switch is OK.
- NO >> With LH and RH anti-pinch, refer to <u>PWC-123</u>, "<u>Diagnosis Procedure (With LH and RH Anti-Pinch)</u>".
- NO >> With LH anti-pinch only, refer to <u>PWC-53</u>, "Diagnosis Procedure (With LH Anti-Pinch Only)".

### Diagnosis Procedure (With LH and RH Anti-Pinch)

Regarding Wiring Diagram information, refer to DLK-51, "Wiring Diagram".

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

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

Term	ninals				
(+)			Key position	Voltage (V)	
Main power window and door lock/ unlock switch connector	Terminal	()		(Approx.)	
	2		Lock	0	-
D7	3	Ground	Neutral / Unlock	5	-
D7	45	Ground	Unlock	0	
	15		Neutral / Lock	5	-

### Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>".

**2.**CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

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### **KEY CYLINDER SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

- 2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH connector.
- Check continuity between main power window and door lock/unlock switch connector and front door lock assembly LH connector.

Main power window and door lock/ unlock switch connector	Terminal	Front door lock assembly LH connector	Terminal	Continuity
D7	3	D14	6	Yes
	15	014	5	163

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

Main power window and door lock/un- lock switch connector	Terminal		Continuity
D7	3	Ground	No
10	15	*	NO

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.check door key cylinder switch ground circuit

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

Front door lock assembly LH connector	Terminal	Ground	Continuity
D14	4	Ciouna	Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

**4**.CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch. Refer to <u>PWC-124</u>, "Component Inspection".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to <u>GI-44</u>, "Intermittent Incident".
- NO >> Replace front door lock assembly LH. Refer to <u>DLK-203, "FRONT DOOR LOCK : Removal and</u> <u>Installation"</u>.

### **Component Inspection**

### COMPONENT INSPECTION

### 1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH.

Term	inal		
Front door lock assembly LF nec		Key position	Continuity
E		Unlock	Yes
5	4	Neutral / Lock	No
C	4	Lock	Yes
6		Neutral / Unlock	No

Is the inspection result normal?

YES >> Key cylinder switch is OK.

INFOID:0000000011009049

### **KEY CYLINDER SWITCH**

### [LH & RH FRONT ANTI-PINCH]

< DTC/	/CIRCUIT DIAGNOSIS >		[LH & RH	FRONT ANTI-PINCH]
NO	>> Replace front door lock assembly LH. Installation".	Refer to DLK-203,	<u>FRONT DOOF</u>	R LOCK : Removal and

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< DTC/CIRCUIT DIAGNOSIS >

### POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal
- Power window control by key cylinder switch signal
- · Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000010481450

INFOID-000000010481449

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "Data Monitor" for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>BCS-16, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)"</u>.

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-126, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u>.

### POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000010481451

Regarding Wiring Diagram information, refer to <u>PWC-87</u>, "Wiring Diagram - With Left And Right Front Power <u>Window Anti-Pinch</u>".

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- 2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

### POWER WINDOW SERIAL LINK

### < DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

	Termin	nal			0	
( BCM connector	(+) Tor	rminal	()		Signal ence value)	
M18		54	Ground	(V) 15 10 5 0 10 10 10 10 m		
the inspection resu	ult normal?					
ES >> Power w IO >> GO TO 2 CHECK POWER Turn ignition swit	2. WINDOW tch OFF.	SERIAL	LINK CIRCUIT	ock/unlock switch.		
Check continuity nector D7.	v between E	SCM conn	ector M18 and r	nain power window and		
BCM connector M18	Terminal 54	Main powe	er window and door	lock/unlock switch connector	Terminal 11	Continuity Yes
BCM connec M18			Terminal 54	Ground	C	ontinuity No
M18 the inspection resu 'ES >> Replace Installatio TROL U	ult normal? main pow <u>on"</u> . After t <u>NIT : Speci</u> r replace ha	that, refei <u>al Repair</u> arness or	54 w and door locl r to <u>PWC-97, "/</u> <u>Requirement"</u> . connectors.	Ground k/unlock switch. Refer t	o <u>PWC-145</u>	No
M18 the inspection resu ES >> Replace Installatio TROL U IO >> Repair o	ult normal? main pow <u>on"</u> . After t <u>NIT : Speci</u> or replace ha R WIND	that, refer <u>al Repair</u> arness or OW SV	54 w and door locl r to <u>PWC-97, "A</u> <u>Requirement"</u> . connectors. VITCH	k/unlock switch. Refer t	o <u>PWC-145</u>	No
M18 the inspection result (ES >> Replace Installation TROL UI IO >> Repair o RONT POWEI RONT POWEF ain power window insmit and receive le signal mentioned wer window and do	ult normal? main pow on". After t <u>NIT : Speci</u> or replace ha R WINDO R WINDO and door I the signal I d below is t oor lock/un	that, refer arness or OW SV OW SW OW SW lock/unloc by power transmitte lock switt	54 w and door locl r to <u>PWC-97, "/</u> <u>Requirement"</u> . connectors. VITCH ITCH : Desci k switch, power window serial lir of from BCM to r	k/unlock switch. Refer to ADDITIONAL SERVICE ription	o <u>PWC-145</u> <u>WHEN RE</u> unlock swite	No . "Removal and PLACING CON- INFOID:000000010481452 ch RH and BCM
M18 the inspection result (ES >> Replace Installating TROL UI IO >> Repair o RONT POWEI RONT POWEI RONT POWEF ain power window insmit and receive we signal mentioned wer window and do Keyless power window is signal mentioned we and door lock/ur Front door window Power window con Retained power op	ult normal? main pow on". After t <u>NIT : Speci</u> or replace ha <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> and door I the signal I d below is t oor lock/un dow down s d below is t nlock switch RH operati trol by key peration sign	that, refer arness or OW SV OW SW OW SW lock/unloc by power transmitter lock switc signal ransmitter n RH ion signal cylinder s nal	54 w and door lock r to <u>PWC-97, "A</u> <u>Requirement"</u> . connectors. VITCH ITCH : Desci XITCH : Desci ITCH : Desci k switch, power window serial lir cd from BCM to r ch RH d from main pow	k/unlock switch. Refer to ADDITIONAL SERVICE ription window and door lock/	o <u>PWC-145</u> WHEN RE unlock swite door lock/u	No 
M18 the inspection result TES >> Replace Installating TROL UI IO >> Repair of RONT POWER A CONT POWER A CONT A	ult normal? main pow on". After t NIT : Speci r replace ha R WINDO R WINDO and door I the signal I d below is t d below is t d below is t nlock switch RH operati trol by key beration sign s switch sign	that, refer arness or OW SV OW SW OW SW OW SW lock/unloc by power transmitte lock switc signal ransmitte n RH ion signal cylinder s nal nal	54 w and door lock r to <u>PWC-97, "A</u> <u>Requirement"</u> . connectors. VITCH ITCH : Descu k switch, power window serial lir d from BCM to r ch RH d from main pow	k/unlock switch. Refer to ADDITIONAL SERVICE ription window and door lock/ nk. main power window and ver window and door lock	o <u>PWC-145</u> <u>WHEN RE</u> unlock swite door lock/u	No 
M18 the inspection result TES >> Replace Installating TROL UI NO >> Repair of RONT POWER AND POWER	ult normal? main pow on". After t <u>NIT : Speci</u> or replace ha <b>R WIND</b> <b>R WIND</b> <b>R WIND</b> and door I the signal I d below is t oor lock/un dow down s d below is t nlock switch RH operati trol by key peration sign <b>R WIND</b> <b>R WIND</b>	that, refer arness or OW SV OW SW OW SW lock/unloc by power transmitter lock switc signal ransmitter n RH ion signal cylinder s nal nal	54 w and door locl r to <u>PWC-97, "/</u> <u>Requirement"</u> . connectors. VITCH ITCH : Desci k switch, power window serial lir d from BCM to r ch RH d from main pow switch signal	k/unlock switch. Refer to ADDITIONAL SERVICE ription window and door lock/ nk. main power window and	o <u>PWC-145</u> <u>WHEN RE</u> unlock swite door lock/u t/unlock swite	No 

### **POWER WINDOW SERIAL LINK**

### < DTC/CIRCUIT DIAGNOSIS >

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-128</u>, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

### FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000010481454

Regarding Wiring Diagram information, refer to <u>PWC-87, "Wiring Diagram - With Left And Right Front Power</u> <u>Window Anti-Pinch"</u>.

Power Window Serial Link Check

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

- 1. Remove Intelligent Key, and close the front door LH and RH.
- 2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

Terminal				
(+)		( )	Signal (Reference value)	
BCM connector	Terminal	()		
M18	54	Ground	(V) 15 10 0 10 10 10 10 10 10 10 10	

### Is the inspection result normal?

YES >> Power window serial link is OK.

### 2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- Check continuity between BCM connector M18 and power window and door lock/unlock switch RH connector D105.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M18	54	D105	3	Yes

### 4. Check continuity between BCM connector M18 and ground.

BCM connector	Terminal	Ground	Continuity
M18	54	Cround	No

Is the inspection result normal?

### **POWER WINDOW SERIAL LINK**

### < DTC/CIRCUIT DIAGNOSIS >

### [LH & RH FRONT ANTI-PINCH]

- YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>. "Removal and <u>Installation</u>". After that, refer to <u>PWC-97</u>, "ADDITIONAL SERVICE WHEN REPLACING CON-<u>TROL UNIT : Special Repair Requirement</u>".
- NO >> Repair or replace the harness or connectors.

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### < DTC/CIRCUIT DIAGNOSIS >

### POWER WINDOW LOCK SWITCH

### Description

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

### Component Function Check

1. CHECK POWER WINDOW LOCK SIGNAL

Main power window and door lock/unlock switch operation (window lock signal) is checked.

Does power window lock operate?

- YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-145</u>, "<u>Removal and</u> <u>Installation</u>". After that, refer to <u>PWC-130</u>, "<u>Special Repair Requirement</u>".
- NO >> Check condition of harness and connector.

### Special Repair Requirement

INFOID:000000010481457

### 1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-97</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

INFOID:000000010481456

INFOID:000000010481455

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH-
<pre> ES </pre> < SYMPTOM DIAGNOSIS >  [LH & RH FRONT ANTI-PINCH]
SYMPTOM DIAGNOSIS
POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES
Diagnosis Procedure
1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT
Check BCM power supply and ground circuit. Refer to <u>BCS-75, "Diagnosis Procedure"</u> . <u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. <b>2.</b> CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Check main power window and door lock/unlock switch.
Refer to <u>PWC-102</u> , "POWER WINDOW MAIN SWITCH : Component Inspection". Is the inspection result normal?
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. <b>3.</b> CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND
GROUND CIRCUIT
Check power window switch main power supply and ground circuit. Refer to <u>PWC-100, "POWER WINDOW MAIN SWITCH : Component Function Check"</u> .
<u>Is the inspection result normal?</u> YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts.
${f 4.}$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH SERIAL CIRCUIT
Check main power window and door lock/unlock switch serial circuit. Refer to <u>PWC-126, "POWER WINDOW MAIN SWITCH : Component Function Check"</u> .
Is the inspection result normal?
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> . NO >> Repair or replace the malfunctioning parts.

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### DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE < SYMPTOM DIAGNOSIS > [LH & RH FRONT ANTI-PINCH]

### DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

**Diagnosis** Procedure

INFOID:000000010481459

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH. Refer to <u>PWC-108</u>, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

### FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH & RH FRONT ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

### FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-ATE

Diagnosis Procedure	INFOID:000000010481460	B
1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH	in a start star	
Check power window and door lock/unlock switch RH. Refer to <u>PWC-104, "FRONT POWER WINDOW SWITCH : Component Function Check"</u> .	(	С
Is the inspection result normal?		
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	Γ	D
2. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH SERIAL LINK CIRC	UIT	
Check power window and door lock/unlock switch RH serial link circuit. Refer to <u>PWC-127</u> , "FRONT POWER WINDOW SWITCH : Component Function Check".	E	E
Is the inspection result normal?		
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT	F	F
	(	G
Check front power window motor RH circuit. Refer to <u>PWC-110, "PASSENGER SIDE : Component Function Check"</u> .		
Is the inspection result normal?YES>> Check intermittent incident. Refer to GI-44. "Intermittent Incident".NO>> Repair or replace the malfunctioning parts.	ŀ	Η

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

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:000000010481461

[LH & RH FRONT ANTI-PINCH]

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH. Refer to <u>PWC-105, "REAR POWER WINDOW SWITCH : Component Function Check"</u>.

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 <u>PWC-111, "REAR LH : Component Function Check"</u>.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >	[LH & RH FRONT ANTI-PINCH]
REAR RH SIDE POWER WINDOW ALONE DOES	S NOT OPERATE
Diagnosis Procedure	INFOID:000000010481462
1. CHECK REAR POWER WINDOW SWITCH RH	
Check rear power window switch RH. Refer to <u>PWC-105, "REAR POWER WINDOW SWITCH : Component File</u>	unction Check".
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
<b>2.</b> CHECK REAR POWER WINDOW MOTOR RH	
Check rear power window motor RH. Refer to <u>PWC-113</u> , "REAR RH : Component Function Check".	
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Inci</u> NO >> Repair or replace the malfunctioning parts.	<u>dent"</u> .

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### ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH & RH FRONT ANTI-PINCH]

### < SYMPTOM DIAGNOSIS >

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

**Diagnosis** Procedure

INFOID:000000010481463

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-97, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. 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.

 ${f 3.}$  CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-115, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
- NO >> Repair or replace the malfunctioning parts.

### ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) [LH & RH FRONT ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure	D
1. PERFORM INITIALIZATION PROCEDURE	В
Perform initialization procedure. Refer to <u>PWC-97, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Require-</u> <u>ment</u> ".	С
Is the inspection result normal?         YES       >> GO TO 2.         NO       >> Repair or replace the malfunctioning parts.	D
2. CHECK DOOR WINDOW SLIDING PART	E
<ul> <li>A foreign material adheres to window glass or glass run rubber.</li> <li>Glass run rubber wear or deformation.</li> <li>Sash is tilted too much or not enough.</li> <li>Is the inspection result normal?</li> <li>YES &gt;&gt; GO TO 3.</li> <li>NO &gt;&gt; Repair or replace the malfunctioning parts.</li> <li>CHECK ENCODER CIRCUIT</li> </ul>	F
Check encoder circuit. Refer to <u>PWC-117. "PASSENGER SIDE : Component Function Check"</u> . <u>Is the inspection result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> .	Н
NO >> Repair or replace the malfunctioning parts.	

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### AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (DRIVER SIDE)

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[LH & RH FRONT ANTI-PINCH]

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

### **Diagnosis** Procedure

INFOID:000000010481465

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-97</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-115, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

### AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >	[LH & RH FRONT ANTI-PINCH]
AUTO OPERATION DOES NOT OPERATE BU NORMALLY (PASSENGER SIDE)	IT MANUAL OPERATES
Diagnosis Procedure	INFOID:000000010481466
1. PERFORM INITIALIZATION PROCEDURE	D
Perform initialization procedure. Refer to <u>PWC-97</u> , "ADDITIONAL SERVICE WHEN REPLACING CONT ment".	ROL UNIT : Special Repair Require-
<u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	D
2. CHECK ENCODER	E
Check encoder. Refer to <u>PWC-117</u> , "PASSENGER SIDE : Component Function Check".	
<u>Is the inspection result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident</u> NO >> Repair or replace the malfunctioning parts.	<mark>dent"</mark> .

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# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

### POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

**Diagnosis** Procedure

INFOID:000000010481467

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to <u>DLK-100, "Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> Repair or replace the malfunctioning parts.

### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

[LH & RH FRONT ANTI-PINCH]

### < SYMPTOM DIAGNOSIS >

### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

# Diagnosis Procedure INFOLD-000000010481468 1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH B Replace main power window and door lock/unlock switch. B Refer to PWC-145, "Removal and Installation". After that, PWC-103, "POWER WINDOW MAIN SWITCH : Special Repair Requirement". C >> Inspection End. D

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### DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

### DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-DOWS

Diagnosis Procedure

INFOID:000000010481469

[LH & RH FRONT ANTI-PINCH]

**1.**PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed. Refer to <u>PWC-97. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Require-</u><u>ment"</u>.

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

 $2. {\sf CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)}$ 

Check front door lock assembly LH (key cylinder switch). Refer to <u>PWC-123</u>, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${\it 3.}$  CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.

NO >> GO TO 1.

### KEYLESS POWER WINDOW DOWN DOES NOT OPERATE DIAGNOSIS > [LH & RH FRONT ANTI-PINCH]

### < SYMPTOM DIAGNOSIS >

## KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

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Diagnosis Procedure	INFOID:000000010481470	
1. CHECK INTELLIGENT KEY FUNCTION		В
Check Intelligent Key function. Refer to <u>DLK-146, "Component Function Check"</u> .		
Is the inspection result normal?		С
<ul> <li>YES &gt;&gt; Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u>.</li> <li>NO &gt;&gt; Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.</li> </ul>		
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# PERIODIC MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC

**Basic Inspection** 

**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.

INFOID:000000010481471

### NOTE: When the main nower window and door li

Installation is in the reverse order of removal.

When the main power window and door lock/unlock switch is disconnected from the harness connector it is necessary to perform the initialization procedure. Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN <u>REPLACING CONTROL UNIT : Description"</u>.

### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH < REMOVAL AND INSTALLATION > [LH & RH FRONT ANTI-PINCH]

### REMOVAL AND INSTALLATION MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

### Removal and Installation

REMOVAL

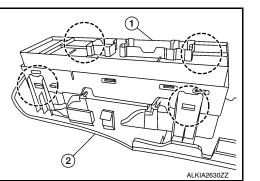
- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the main power window and door lock/unlock switch and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the main power window and door lock/unlock switch.
- Release the four pawls (two on each side) using a suitable tool, then separate the main power window and door lock/unlock switch (1) from the main power window and door lock switch finisher (2).

(\_): Pawl

INSTALLATION

**CAUTION:** 

Do not bend back the pawls on the switch finisher too far or breakage may occur.



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# POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH < REMOVAL AND INSTALLATION > [LH & RH FRONT ANTI-PINCH]

### POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

### Removal and Installation

INFOID:000000010481473

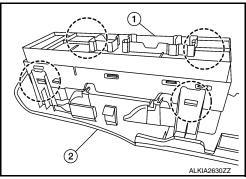
### REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the power window and door lock/unlock switch RH and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the power window and door lock/unlock switch RH.
- Release the four pawls (two on each side) using a suitable tool, then separate the power window and door lock/unlock switch RH (1) from the power window and door lock switch RH finisher (2).

(\_): Pawl

### **CAUTION:**

Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

### NOTE:

When the main power window and door lock/unlock switch is disconnected from the harness connector it is necessary to perform the initialization procedure. Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN <u>REPLACING CONTROL UNIT : Description</u>".

### < REMOVAL AND INSTALLATION >

### REAR POWER WINDOW SWITCH

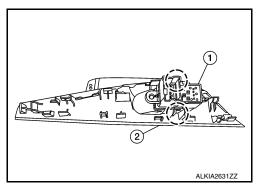
### Removal and Installation

### REMOVAL

- Release the pawls using a suitable tool and lift the rear power window switch and finisher as an assembly 1. by starting at the rear, then pull upward and remove
- 2. Disconnect the harness connector from the rear power window switch.
- 3. Release the pawl (one on each side) using a suitable tool, then separate the rear power window switch (1) from the rear power switch finisher (2).

# (): Pawl CAUTION:

Do not bend back the pawls on the switch finisher too far or breakage may occur.



### INSTALLATION

Installation is in the reverse order of removal.

[LH & RH FRONT ANTI-PINCH]

INFOID:000000010481474

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