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# **PRECAUTION**

## **PRECAUTIONS**

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
  ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
  a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
  serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

# < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION

# **COMPONENT PARTS**

Component Parts Location

INFOID:0000000007495573

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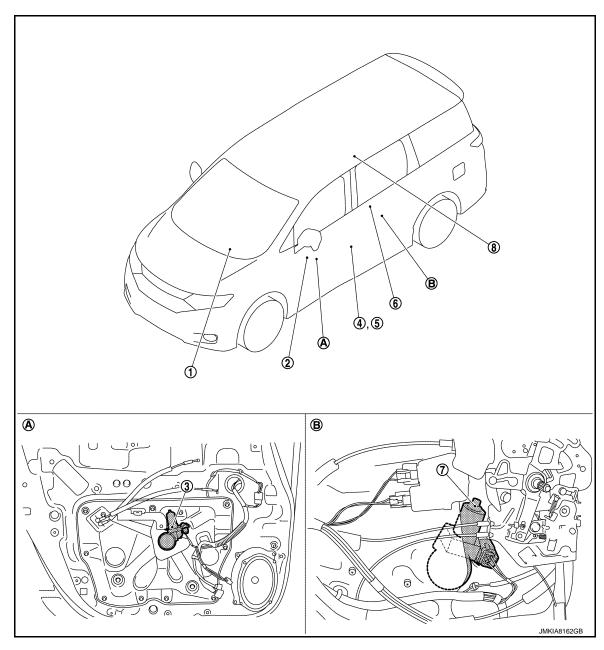
D

Е

F

G

Н



View with front door finisher removed B. View with sliding door finisher removed

No.	Component	Function
1.	ВСМ	Supplies power supply to power window switch.     Controls retained power.     Receives key ID signal from remote keyless entry receiver.     Refer to BCS-4. "BODY CONTROL SYSTEM: Component Parts Location" for detailed installation location.
2.	Power window main switch	Refer to PWC-8, "Power Window Main Switch".
3.	Front power window motor (driver side)	Refer to PWC-8, "Front Power Window Motor (Driver Side)".

**PWC** 

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Revision: 2011 September

## **COMPONENT PARTS**

#### < SYSTEM DESCRIPTION >

#### [FRONT WINDOW ANTI-PINCH]

No.	Component	Function
4.	Front door switch (driver side)	Detects door open/close condition and transmits to BCM. Refer to <u>DLK-28</u> , <u>"Front Door Switch"</u> .
5.	Front door lock assembly (driver side) (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch. Refer to <a href="DLK-28">DLK-28</a> , "Front Door Lock Assembly (Driver Side)".
6.	Sliding door power window switch LH	Refer to PWC-8, "Sliding Door Power Window Switch".
7.	Sliding door power window motor LH	Refer to PWC-8, "Sliding Door Power Window Motor".
8.	Remote keyless entry receiver	Receives key ID signal from the Intelligent Key, and then transmits to BCM. Refer to <u>DLK-18</u> , " <u>DOOR LOCK SYSTEM</u> : Component Parts Location" for detailed installation location.

## Power Window Main Switch

INFOID:0000000007836948

- Directly controls all power window motor of all doors.
- Controls anti-pinch operation of power window.

# Front Power Window Motor (Driver Side)

INFOID:0000000007836951

- Integrates the encoder and power window motor.
- Operates with signals from power window main switch.
- Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.

# Sliding Door Power Window Switch

INFOID:0000000007836950

Controls power window motor of sliding door.

# Sliding Door Power Window Motor

INFOID:0000000007836952

Operates with signals from power window main switch and sliding door power window switch.

#### SYSTEM

# System Description

#### INFOID:0000000007495574

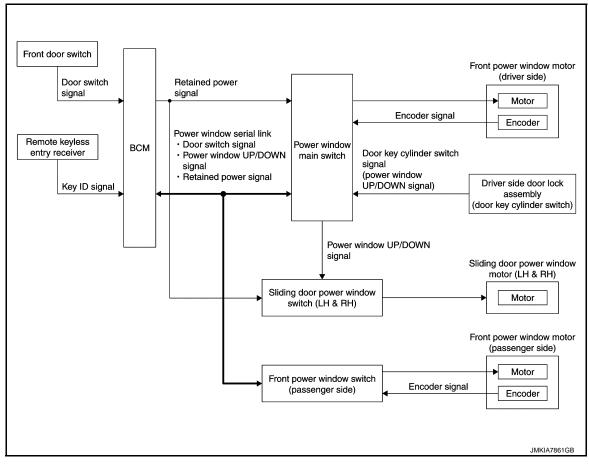
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#### SYSTEM DIAGRAM



#### DESCRIPTION

- Power window system is activated by power window switch when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.
- Power window main switch opens/closes all door glass.
- Front and sliding door power window switch opens/closes the corresponding door glass.
- AUTO UP/DOWN operation can be performed when power window main switch or front power window switch (passenger side) turns to AUTO.
- Power window serial link transmits the signals from power window main switch to front power window switch (passenger side).
- Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is the specified value or more while power window of front seat is in AUTO-UP operation, power window of front seat operates in the reverse direction.
- Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE front power windows when ignition switch OFF.
- Front power windows open when pressing Intelligent Key unlock button for 3 seconds.

#### Power Window AUTO-Operation

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

Retained Power Operation

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#### < SYSTEM DESCRIPTION >

Retained power operation is an additional power supply function that enables power window system to operate during the 45 seconds even when ignition switch is turned OFF.

#### **Retained Power Cancel Conditions**

- Front door CLOSE (door switch OFF)→OPEN (door switch ON).
- When ignition switch is ON.
- When timer time passes (45 seconds).

#### **Power Window Lock Function**

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

#### Power Window Serial Link

- Power window main switch, front power window switch (passenger side), and BCM transmit and receive the signal by power window serial link.
- Power window serial link transmits the power window main switch operation signals and retained power signal to power window main switch module and front power window switch (passenger side) module.

#### Anti-Pinch Operation

- Pinch foreign matter in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.9 in) or for 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the door glass for 150 mm (5.9 in) after it detects encoder pulse signal frequency change.

#### **Operation Condition**

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

#### NOTE:

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

#### Door Key Cylinder Switch Operation

Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

#### **Operation Conditions**

- Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1.5 seconds or more to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass.

#### Keyless Power Window Down Operation

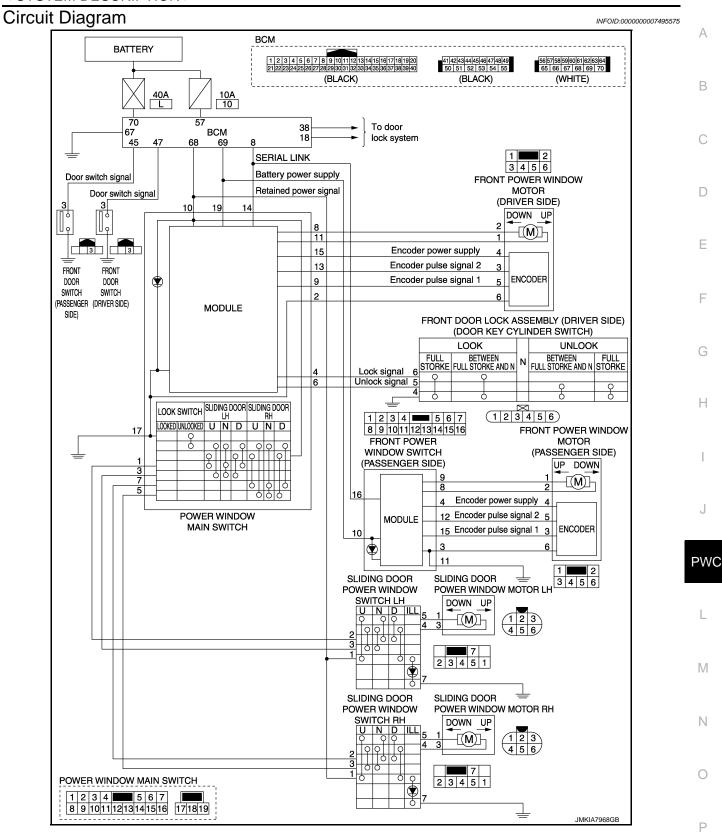
Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3 seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.

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

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

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

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to <u>DLK-95</u>, "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".



Fail-safe

#### FAIL-SAFE CONTROL

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

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.	

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

- Auto-up operation
- Anti-pinch function

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

# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[FRONT WINDOW ANTI-PINCH]

# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description	
Work Support	Changes the setting for each system function.	
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	<del></del>
CAN Diag Support Monitor Monitors the reception status of CAN communication viewed from BCM.		
Data Monitor	The BCM input/output signals are displayed.	·
Active Test	ctive Test The signals used to activate each device are forcibly supplied from BCM.	
Ecu Identification	The BCM part number is displayed.	·
Configuration	<ul> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>	

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

×: Applicable item

System	Sub system selection item	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	AIR CONDITONER		×	×*
<ul><li>Intelligent Key system</li><li>Engine start system</li></ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

#### NOTE:

## FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

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<sup>\*:</sup> For models with automatic air conditioning control system, this diagnosis mode is not used.

## [FRONT WINDOW ANTI-PINCH]

CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (LOCK)]	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (OFF)]	
	LOCK>ACC		While turning power supply position from OFF (LOCK) to ACC	
	ACC>ON		While turning power supply position from ACC to ON	
	RUN>ACC		While turning power supply position from RUN to ACC (Except emergency stop operation)	
	CRANK>RUN		While turning power supply position from CRANK to RUN	
	RUN>URGENT		While turning power supply position from RUN to ACC (Emergency stop operation)	
	ACC>OFF		While turning power supply position from ACC to OFF (OFF)	
Vehicle Condition	OFF>LOCK	Power position status of the moment a particular DTC is detected*	While turning power supply position from OFF (OFF) to OFF (LOCK)	
	OFF>ACC		While turning power supply position from OFF (OFF) to ACC	
	ON>CRANK		While turning power supply position from ON to CRANK	
	OFF>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (OFF)] to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (LOCK)] to low power consumption mode	
	LOCK		Power supply position is OFF (LOCK)	
	OFF		Power supply position is OFF (OFF)	
	ACC		Power supply position is ACC	
	ON		Power supply position is ON	
	ENGINE RUN		Power supply position is RUN	
	CRANKING		Power supply position is CRANK	
IGN Counter	0 - 39	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>		

#### NOTE:

- \*: Refer to the following for details of the power supply position.
- OFF (OFF, LOCK): Ignition switch OFF
- ACC: Ignition switch ACC
- IGN: Ignition switch ON with engine stopped
- RUN: Ignition switch ON with engine running
- CRANK: At engine cranking

Power supply position shifts to "OFF (LOCK)" from "OFF (OFF)", when ignition switch is in the OFF position, shift position is in the P position, and any of the following conditions are met.

- · Closing door
- · Opening door
- · Door is locked using door request switch
- · Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "OFF (LOCK)".

## **RETAIND PWR**

# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

# [FRONT WINDOW ANTI-PINCH]

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

INFOID:0000000007495578

#### **DATA MONITOR**

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

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# **BCM (BODY CONTROL MODULE)**

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

# **ECU DIAGNOSIS INFORMATION**

BCM (BODY CONTROL MODULE)

List of ECU Reference

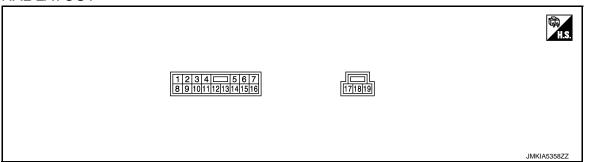
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ECU	Reference
	BCS-36, "Reference Value"
BCM	BCS-58, "Fail-safe"
BCIVI	BCS-58, "DTC Inspection Priority Chart"
	BCS-59, "DTC Index"

# POWER WINDOW MAIN SWITCH

Reference Value

## **TERMINAL LAYOUT**



## PHYSICAL VALUES

	inal No. e color)	Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output	Condition	voltage (v)
1 (O)	Ground	Sliding door power window motor LH UP signal	Output	When sliding door LH switch in power window main switch is in UP operation.	9 – 16
2 (W)	Ground	Encoder ground	_	_	0 - 1
3 (BR)	Ground	Sliding door power window motor LH DOWN signal	Output	When sliding door LH switch in power window main switch is in DOWN operation.	9 – 16
4 (P)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	4 - 6 -> 0 - 1.5
5 (SB)	Ground	Sliding door power window motor RH DOWN signal	Output	When sliding door RH switch in power window main switch is in DOWN operation.	9 – 16
6 (GR)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	4 - 6 -> 0 - 1.5
7 (P)	Ground	Sliding door power window motor RH UP signal	Output	When sliding door RH switch in power window main switch is in UP operation.	9 – 16
8 (L)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is in UP operation.	9 – 16
9 (SB)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

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	inal No. e color)	Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output	Condition	Voltage (V)
				Ignition switch ON	9 – 16
10		5		Within 45 seconds after ignition switch is turned to OFF.	9 – 16
(V)	Ground	Retained power signal	Input	When driver side or passenger side door is opened during retained power operation.	0 – 1
11 (LG)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is in DOWN operation.	9 – 16
13 (Y)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
14 (BR)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
15 (R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	9 – 16
17 (B)	Ground	Ground	_	_	0 - 1
19 (LG)	Ground	Battery power supply	Input	_	9 – 16

Fail-safe

#### **FAIL-SAFE CONTROL**

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

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.

## **POWER WINDOW MAIN SWITCH**

#### < ECU DIAGNOSIS INFORMATION >

## [FRONT WINDOW ANTI-PINCH]

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

- Auto-up operation
- Anti-pinch function

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

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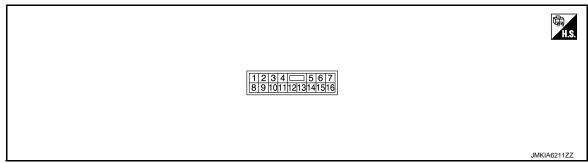
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# FRONT POWER WINDOW SWITCH

Reference Value

## **TERMINAL LAYOUT**



## PHYSICAL VALUES

	nal No. color)	Description		Condition	Voltage (V)	
+	_	Signal name	Input/ Output	Condition	voltage (v)	
3 (BR)	Ground	Encoder ground	_	_	0 – 1	
4 (SB)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	9 – 16	
8 (Y)	Ground	Front power window motor (passenger side) UP signal	Output	When front power window switch (passenger side) is in UP operation.	9 – 16	
9 (G)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front power window switch (passenger side) is in DOWN operation.	9 – 16	
10 (V)	Ground	Battery power supply	Input	_	9 – 16	
11 (W)	Ground	Ground	_	_	0 – 1	
12 (O)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	

## FRONT POWER WINDOW SWITCH

#### < ECU DIAGNOSIS INFORMATION >

#### [FRONT WINDOW ANTI-PINCH]

-		nal No. color) Description			Condition	Voltage (V)
	+	_	Signal name	Input/ Output	Condition	voltage (v)
	15 (R)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
	16 (L)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms  JPMIA0013GB

Fail-safe

#### **FAIL-SAFE CONTROL**

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

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.

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

- Auto-up operation
- Anti-pinch function

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

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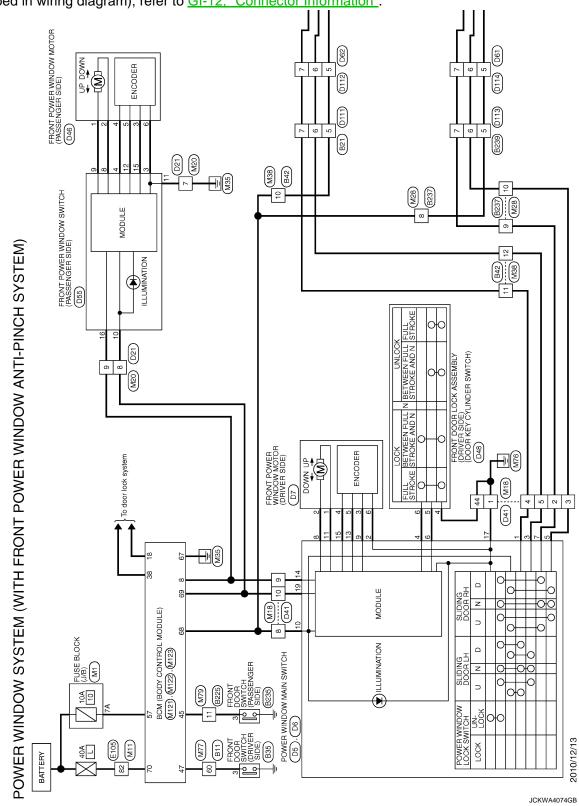
Revision: 2011 September PWC-21

# WIRING DIAGRAM

# POWER WINDOW SYSTEM

Wiring Diagram

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



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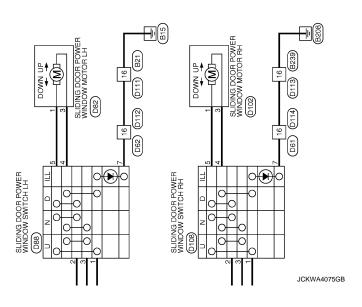
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# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORK FLOW

Work Flow (INFOID:000000007495588

# 1. OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

# 2. REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.

Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

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

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

>> GO TO 4.

# 4. IDENTIFY MALFUNCTIONING PARTS WITH "DTC/CIRCUIT DIAGNOSIS"

Perform the diagnosis with "DTC/CIRCUIT 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.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

## ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL [FRONT WINDOW ANTI-PINCH]

< BASIC INSPECTION >

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-NAL

Description INFOID:0000000007495586

When the battery negative terminal is disconnected, the initialization is necessary for normal operation of power window system.

**CAUTION:** 

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

- Auto-up operation
- Anti-pinch function

Work Procedure

1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-27, "Work Procedure".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-28, "Work Procedure".

>> END

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**PWC-25** Revision: 2011 September **2012 QUEST** 

## ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW SWITCH [FRONT WINDOW ANTI-PINCH]

< BASIC INSPECTION >

# ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW SWITCH

Description INFOID:0000000007495588

When the power window main switch or front power window switch (passenger side) replaced, the initialization in necessary for normal operation of power window system. **CAUTION:** 

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

- Auto-up operation
- Anti-pinch function

Work Procedure INFOID:0000000007495589

# 1.SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-27, "Work Procedure".

>> GO TO 2.

# 2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-28, "Work Procedure".

>> END

#### SYSTEM INITIALIZATION

< BASIC INSPECTION >

[FRONT WINDOW ANTI-PINCH]

## SYSTEM INITIALIZATION

Description INFOID:0000000007495590

If any of the following operations are performed, the initialization is necessary for normal operation of power window system.

- Disconnection and connection of battery cable from negative terminal.
- When power window main switch or front power window switch (passenger side) replaced.
- Electric power supply to power window main switch or front power window switch (passenger side) or power window motor (driver side/passenger side) is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Disconnection and connection of power window main switch or front power window switch (passenger side)
  harness connector.
- Removal of power window motor (driver side/passenger side) from regulator assembly.
- Operation of regulator assembly as an independent unit.
- · Removal and installation of glass.
- Removal and installation of door glass run.

#### **CAUTION:**

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

- Auto-up operation
- Anti-pinch function

Work Procedure

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## **1.**STEP 1

- Turn ignition switch ON.
- 2. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 3. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 2 seconds or more.
- Check that AUTO-UP function operates normally.

>> GO TO 2.

## 2.STEP 2

Check anti-pinch function. Refer to PWC-28, "Work Procedure".

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>> END

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[FRONT WINDOW ANTI-PINCH]

# **CHECK ANTI-PINCH FUNCTION**

Description INFOID:000000007495592

If any of the following operations are performed, the initialization is necessary for normal operation of antipinch function.

- Disconnection and connection of battery cable from negative terminal.
- When power window main switch or front power window switch (passenger side) replaced.
- Electric power supply to power window main switch or front power window switch (passenger side) or power window motor (driver side/passenger side) is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Disconnection and connection of power window main switch or front power window switch (passenger side) harness connector.
- Removal of power window motor (driver side/passenger side) from regulator assembly.
- Operation of regulator assembly as an independent unit.
- · Removal and installation of glass.
- · Removal and installation of door glass run.

Work Procedure

# 1. 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.
- 4. Check the following conditions.
- Check that glass lowers for approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that glass does not rise not when operating the power window main switch or front power window switch (passenger side) while lowering.

#### **CAUTION:**

- Perform initial setting when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Do not check with hands and other body parts because they may be pinched. Do not get pinched.

>> END

## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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# 1. CHECK POWER SUPPLY

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

(+)					Voltage (V)
Power window main switch		(–) Condition		ndition	
Connector	Terminal				
D5	10	Ground	Ignition switch	ON	9 – 16
D6	19	Giodila	Ignition switch	OFF	3 – 10

#### Is the inspection result normal?

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

>> GO 10 2.

2.CHECK POWER SUPPLY CIRCUIT

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

BCM		Power windo	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M123	68	D5	10	Existed
IVI 123	69	D6	19	LAISIEU

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	
M123	68	Ground	Not existed
IVI 123	69	-	inot existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

NO >> Repair or replace harness.

# 3.CHECK GROUND CIRCUIT

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

Power windo	w main switch		Continuity
Connector	Connector Terminal		Continuity
D6	17		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

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## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

IFOID:0000000007495595

# 1. CHECK POWER SUPPLY

1. Turn ignition switch OFF.

2. Disconnect front power window switch (passenger side) connector.

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

(	+)			
Front power window s	Front power window switch (passenger side)		Voltage (V)	
Connector	Terminal			
D55	10	Ground	9 – 16	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

- Disconnect BCM connector.
- Check continuity between BCM harness connector and front power window switch (passenger side) harness connector.

ВСМ		Front power (passen	Continuity	
Connector	Terminal	Connector	Terminal	
M123	69	D55	10	Existed

3. Check continuity between BCM harness connector and ground.

В	CM		
Connector	Terminal	Ground	Continuity
M123	69		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

NO >> Repair or replace harness.

# 3. CHECK GROUND CIRCUIT

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

Front power window s	witch (passenger side)		Continuity
Connector	Terminal	Ground	Continuity
D55	11		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

#### SLIDING DOOR POWER WINDOW SWITCH

# SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000007495596

# 1. CHECK POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connectors.
- Turn ignition switch ON.
- 4. Check voltage between sliding door power window switch harness connector and ground.

## **POWER SUPPLY AND GROUND CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

(+) Sliding door power window switch			(–)	Voltage (V)
Coni	Connector Terminal			
LH	D88	1	Ground	9 – 16
RH	D108	<b>'</b>	Ground	9 – 10

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

# 2.CHECK POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM harness connector and sliding door power window switch harness connector.

В	СМ	Sliding door power window switch					Continuity
Connector	Terminal	Connector		Terminal	Continuity		
M123	M123 68	LH	D88	1	Existed		
WIIZS		RH	D108	I	EXISTEC		

4. Check continuity between BCM harness connector and ground.

В	СМ		Continuity
Connector Terminal		Ground	Continuity
M123	68		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

NO >> Repair or replace harness.

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## **SLIDING DOOR POWER WINDOW SWITCH**

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

## SLIDING DOOR POWER WINDOW SWITCH

# Component Function Check

INFOID:0000000007495597

# 1. CHECK FUNCTION

Check sliding door power window motor operation with sliding door power window switch.

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-32, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000007495598

# 1. CHECK SLIDING DOOR POWER WINDOW SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between sliding door power window switch harness connector and ground.

(+) Sliding door power window switch		(-) Condit		ition	Voltage (V)	
Conr	nector	Terminal				
		2			NEUTRAL	0 – 1
	Doo	2	switch	Power window main	UP	9 – 16
LH	LH D88	3		(sliding door LH side)	NEUTRAL	0 - 1
				, , ,	DOWN	9 – 16
		0			NEUTRAL	0 - 1
	RH D108		Power window main	UP	9 – 16	
RH			switch (sliding door RH side)	NEUTRAL	0 - 1	
	3		,	DOWN	9 - 16	

#### Is the inspection result normal?

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

# 2.check sliding door power window switch circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect power window main switch connector.
- Check continuity between sliding door power window switch harness connector and power window main switch harness connector.

Slidin	Sliding door power window switch		Power window main switch		Continuity	
Coni	Connector		Connector	Terminal	Continuity	
LH	D88	2	Dr	1	Existed	
LN	D88	3		3		
DU	RH D108 2 3	D400	2	D5	7	Existed
КП		3		5		

4. Check continuity between sliding door power window switch harness connector and ground.

## **SLIDING DOOR POWER WINDOW SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

Slic	Sliding door power window switch			Continuity	
Connector		ector Terminal		Continuity	
LH	LH D88		Ground		
LΠ	D00	3	Giouria	Not existed	
DU	D100			Not existed	
RH	D108	3	1		

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> Repair or replace harness.

# 3.check sliding door power window switch

Check sliding door power window switch.

Refer to PWC-33, "Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace sliding door power window switch. Refer to <a href="PWC-62">PWC-62</a>, "Removal and Installation".

# Component Inspection

1. CHECK SLIDING DOOR POWER WINDOW SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connector.
- 3. Check sliding door power window switch terminals under the following conditions.

	Sliding door power window switch Terminal		Continuity
1	5	UP	
3	4	UP UP	
2	5	NEUTRAL	Existed
3	4	NEOTIVAL	LAISIGU
1	4	DOWN	
2	5	DOWN	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sliding door power window switch. Refer to PWC-62, "Removal and Installation".

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[FRONT WINDOW ANTI-PINCH]

# **POWER WINDOW MOTOR**

**DRIVER SIDE** 

**DRIVER SIDE: Component Function Check** 

INFOID:0000000007495600

# 1. CHECK FUNCTION

Check front power window motor (driver side) operation with power window main switch.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-34, "DRIVER SIDE : Diagnosis Procedure".

## DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007495601

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

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

(+) Front power window motor (driver side)		(-) Condit		ition	Voltage (V)
Connector Terminal		1			
	4	Ground	Power window main switch (driver side)	NEUTRAL	0 - 1
D7	1			DOWN	9 – 16
Ui	2			NEUTRAL	0 – 1
	2			UP	9 - 16

#### Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-28. "Removal and Installation"</u>.

NO >> GO TO 2.

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

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

Front power window	Front power window motor (driver side)		Power window main switch	
Connector	Terminal	Connector	Terminal	Continuity
	D7 1 D5		11	Existed
	2	D3	8	LAISIEU

4. Check continuity between front power window motor (driver side) harness connector and ground.

Front power window motor (driver side)			Continuity	
Connector	Terminal	Ground	Continuity	
	1	Ground	Not existed	
D1	2		ivoi existed	

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> Repair or replace harness.

#### PASSENGER SIDE

# PASSENGER SIDE: Component Function Check

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## 1. CHECK FUNCTION

Check front power window motor (passenger side) operation with power window main switch or front power window switch (passenger side).

## Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-35, "PASSENGER SIDE : Diagnosis Procedure".

# PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007495603

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

1. Turn ignition switch OFF.

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

(+)					
Front power window motor (passenger side)		(-)	Condit	tion	Voltage (V)
Connector	Terminal	1			
D46	1	- Ground	Front power window switch (passenger side)	NEUTRAL	0 - 1
				DOWN	9 – 16
	2			NEUTRAL	0 - 1
				UP	9 – 16

#### Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to <u>GW-28, "Removal and Installation"</u>. NO >> GO TO 2.

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

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

Front power window r	motor (passenger side)	Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D46	1	D55	9	Existed
D40	2	D33	8	LXISIGU

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

Front power window motor (passenger side)			Continuity	
Connector	Terminal	Ground	Continuity	
D46	1	Ground	Not existed	
	2	1	Not existed	

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <u>PWC-61, "Removal and Installation"</u>.

NO >> Repair or replace harness.

SLIDING DOOR LH

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#### **POWER WINDOW MOTOR**

< DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

# SLIDING DOOR LH: Component Function Check

INFOID:0000000007495604

## 1. CHECK FUNCTION

Check sliding door power window motor LH operation with power window main switch or sliding door power window switch LH.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-36, "SLIDING DOOR LH: Diagnosis Procedure".

## SLIDING DOOR LH: Diagnosis Procedure

INFOID:0000000007495605

# 1. CHECK SLIDING DOOR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+)			Condition		
Sliding door power window motor LH		(-)			Voltage (V)
Connector	Terminal				
	3	- Ground	Sliding door power window switch LH	NEUTRAL	0 – 1
D82				UP	9 – 16
D62				NEUTRAL	0 – 1
				DOWN	9 – 16

#### Is the inspection result normal?

YES >> Replace sliding door power window motor LH.

NO >> GO TO 2.

# $2.\mathsf{CHECK}$ SLIDING DOOR POWER WINDOW MOTOR LH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch LH connector.
- Check continuity between sliding door power window motor LH harness connector and sliding door power window switch LH harness connector.

Sliding door powe	r window motor LH	Sliding door power window switch LH		Continuity
Connector	Terminal	Connector Terminal		Continuity
D82	1	D88	5	Existed
D02	3		4	LAISIEU

4. Check continuity between sliding door power window motor LH harness connector and ground.

Sliding door power window motor LH			Continuity
Connector	Terminal	Ground	Continuity
	1	Not exis	Not existed
D02	3		Not existed

#### Is the inspection result normal?

YES >> Replace sliding door power window switch LH. Refer to PWC-62, "Removal and Installation".

NO >> Repair or replace harness.

#### SLIDING DOOR RH

## SLIDING DOOR RH: Component Function Check

INFOID:0000000007495606

# 1. CHECK FUNCTION

#### POWER WINDOW MOTOR

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

Check sliding door power window motor RH operation with power window main switch or sliding door power window switch RH.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-37, "SLIDING DOOR RH: Diagnosis Procedure".

# SLIDING DOOR RH: Diagnosis Procedure

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# 1. CHECK SLIDING DOOR POWER WINDOW MOTOR RH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window motor RH connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between sliding door power window motor RH harness connector and ground.

(+)			Condition		Voltage (V)
Sliding door power window motor RH		(-)			
Connector	Terminal				
	1	4		NEUTRAL	0 - 1
D102	1	Ground	Sliding door power	UP	9 – 16
3	Giouna	window switch RH	NEUTRAL	0 – 1	
	3			DOWN	9 – 16

#### Is the inspection result normal?

YES >> Replace sliding door power window motor RH.

NO >> GO TO 2.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR RH CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch RH connector.
- Check continuity between sliding door power window motor RH harness connector and sliding door power window switch RH harness connector.

Sliding door powe	r window motor RH	Sliding door power window switch RH		Continuity
Connector	Terminal	Connector Terminal		Continuity
D102	1	D108	5	Existed
D102	3	5100	4	LAISIEU

Check continuity between sliding door power window motor RH harness connector and ground.

Sliding door powe	r window motor RH		Continuity
Connector	Terminal	Ground	Continuity
D102	1	Ground	Not existed
D102	3		Not existed

#### Is the inspection result normal?

YES >> Replace sliding door power window switch RH. Refer to PWC-62, "Removal and Installation".

NO >> Repair or replace harness.

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# **ENCODER CIRCUIT**

**DRIVER SIDE** 

# **DRIVER SIDE: Component Function Check**

INFOID:0000000007495608

# 1. CHECK FUNCTION

Check that front driver side door glass perform AUTO UP/DOWN operation normally when power window main switch is operated.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-38, "DRIVER SIDE : Diagnosis Procedure".

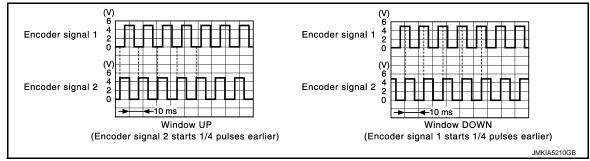
## DRIVER SIDE: Diagnosis Procedure

INFOID:000000007495609

# 1. CHECK ENCODER PULSE SIGNAL

- 1. Turn ignition switch ON.
- 2. Check signal between power window main switch harness connector and ground using an oscilloscope.

(+) Power window main switch		(-)	Signal (Reference value)
Connector	Terminal		(,
	9	Ground	Poter to the following signal
В	13	Ground	Refer to the following signal



#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> GO TO 2.

# 2. CHECK ENCODER SIGNAL CIRCUIT

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

Power wind	ow main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D5	9	D7	3	Existed
טט	13	יט	5	Existed

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	9	Ground	Not existed
DS	13		Not existed

#### **ENCODER CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK ENCODER POWER SUPPLY

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

(+)			
Front power window motor (driver side)		(-)	Voltage (V)
Connector	Connector Terminal		
D7	4	Ground	9 – 16

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4. CHECK ENCODER POWER SUPPLY CIRCUIT

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

Power windo	w main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	15	D7	4	Existed

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

Power windo	w main switch		Continuity
Connector	Connector Terminal		Continuity
D5	15		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> Repair or replace harness.

# CHECK ENCODER GROUND CIRCUIT 1

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

Power windo	w main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	2	D7	6	Existed

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

Power windo	w main switch		Continuity
Connector	Terminal	Ground	Continuity
D5	2		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 6.CHECK ENCODER GROUND CIRCUIT $_{ m 2}$

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#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect power window main switch connector.
- 2. Check continuity between power window main switch harness connector and ground.

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	2		Existed

#### Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to GW-28, "Removal and Installation".

NO >> Replace power window main switch. Refer to <a href="PWC-61">PWC-61</a>, "Removal and Installation".

## PASSENGER SIDE

## PASSENGER SIDE: Component Function Check

INFOID:0000000007495610

#### 1. CHECK FUNCTION

Check that front passenger side door glass perform AUTO UP/DOWN operation normally when front power window switch (passenger side) is operated.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-40, "PASSENGER SIDE : Diagnosis Procedure".

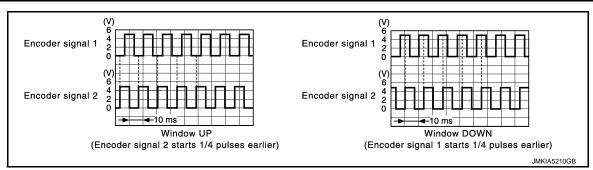
#### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007495611

# 1. CHECK ENCODER PULSE SIGNAL

- 1. Turn ignition switch ON.
- Check signal between front power window switch (passenger side) harness connector and ground using an oscilloscope.

(	+)		Oi ann ail	
Front power window switch (passenger side)		(-)	Signal (Reference value)	
Connector	Terminal		(	
D55	12	Ground	Refer to the following signal	
DOO	15	Ground	Refer to the following signal	



#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-61">PWC-61</a>, "Removal and Installation".

NO >> GO TO 2.

# 2.CHECK ENCODER SIGNAL CIRCUIT

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

#### [FRONT WINDOW ANTI-PINCH]

Front power window	switch (passenger side)	Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D55	12	D46	5	Existed
D33	15	D40	3	LXISIEU

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

Front power window switch (passenger side)			Continuity	
Connector	Terminal	Ground	Continuity	
D55	12	Giodila	Not existed	
	15	1	NOT EXISTED	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3.CHECK ENCODER POWER SUPPLY

- Connect front power window switch (passenger side) connector.
- Turn ignition switch ON.
- Check voltage between front power window motor (passenger side) harness connector and ground.

(+)				
Front power window motor (passenger side)		(-)	Voltage (V)	
Connector	Terminal			
D46	4	Ground	9 – 16	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4. CHECK ENCODER POWER SUPPLY CIRCUIT

- Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector.

Front power window s	switch (passenger side)	Front power window motor (passenger side)  Connector Terminal		Continuity	
Connector	Terminal			Continuity	
D55	4	D46	4	Existed	

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

Front power window s	switch (passenger side)		Continuity	
Connector	Terminal	Ground	Continuity	
D55	4		Not existed	

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-61, "Removal and Installation".

NO >> Repair or replace harness.

# CHECK ENCODER GROUND CIRCUIT 1

- Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector.

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#### **ENCODER CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

Front power window s	switch (passenger side)	Front power window motor (passenger side)  Connector Terminal		Continuity	
Connector	Terminal			Continuity	
D55	3	D46	6	Existed	

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

Front power window switch (passenger side)			Continuity
Connector	Terminal	Ground	Continuity
D55	3		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

# 6. CHECK ENCODER GROUND CIRCUIT 2

- Connect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) harness connector and ground.

Front power window switch (passenger side)			Continuity	
Connector	Connector Terminal		Continuity	
D55	3		Existed	

#### Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-28. "Removal and Installation". NO

>> Replace front power window switch (passenger side). Refer to PWC-61, "Removal and Installation".

#### DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# DOOR KEY CYLINDER SWITCH

# Component Function Check

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# 1. CHECK FUNCTION

- Select "DOOR LOCK" of "BCM" using CONSULT.
- Select "KEY CYL LK-SW", "KEY CYL UN-SW" in "DATA MONITOR" mode. 2.
- Check that the function operates normally according to the following conditions.

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

#### Is the inspection result normal?

YES >> INSPECTION END

>> Refer to PWC-43, "Diagnosis Procedure". NO

# Diagnosis Procedure

INFOID:0000000007495613

# 1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) (key cylinder switch) connector.
- Turn ignition switch ON.
- 4. Check voltage between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

	+)			
Front door lock assembly (dr	iver side) (key cylinder switch)	(–)	Voltage (V)	
Connector	Terminal			
	5	Ground	4 – 6	
D40	6	Ground	4-0	

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#### Is the inspection result normal?

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

# 2.CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

- Turn ignition switch OFF.
- Disconnect power window main switch connector.
- Check continuity between power window main switch harness connector and front door lock assembly (driver side) (key cylinder switch) harness connector.

Power window main	switch	Front door lock assembly (driver side) (key cylinder switch)		Continuity
Connector	Terminal	Connector Terminal		
	D5 D48		6	Existed
D3	6	Б48	5	Existed

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

Revision: 2011 September

#### DOOR KEY CYLINDER SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

#### [FRONT WINDOW ANTI-PINCH]

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
	4	Ground	Not existed
DS	6		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> Repair or replace harness.

# 3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Check continuity between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

Front door lock assembly (driver s	side) (key cylinder switch)		Continuity	
Connector Terminal		Ground	Continuity	
D48	4		Existed	

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

# 4. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (key cylinder switch).

Refer to PWC-44, "Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace front door lock assembly (driver side) (key cylinder switch).

# Component Inspection

INFOID:0000000007495614

#### COMPONENT INSPECTION

# 1. CHECK DOOR KEY CYLINDER SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) (key cylinder switch) connector.
- 3. Check front door lock assembly (driver side) (key cylinder switch) terminals under the following conditions.

Front door lock assembly (driver side) (key cylinder switch)		Key position	Continuity
Terminal		rtoy position	
5		Unlock	Existed
J	4	Neutral / Lock	Not existed
6	4	Lock	Existed
0		Neutral / Unlock	Not existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front door lock assembly (driver side) (key cylinder switch).

#### **POWER WINDOW SERIAL LINK**

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

# POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007495615

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# 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- Turn ignition switch ON.
- 2. Check signal between power window main switch harness connector and ground using an oscilloscope.

(+) Power window main switch		(–)	Signal (Reference value)
Connector	Terminal		
D5	14	Ground	(V) 15 10 5 0 10 ms  JPMIA0013GB

#### Is the inspection result normal?

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

NO >> GO TO 2.

# 2.CHECK POWER WINDOW SERIAL LINK SIGNAL

- 1. Turn ignition switch OFF.
- Disconnect power window main switch connector. 2.
- Turn ignition switch ON. 3.
- Check voltage between power window main switch harness connector and ground.

(+)			
Power window main switch		(–)	Voltage (V)
Connector	Terminal		
D5	14	Ground	9 – 16
	_		

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-61, "Removal and Installation".

NO >> GO TO 3.

# 3.check power window serial link circuit

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

В	BCM Power wind		w main switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M121	8	D5	14	Existed

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M121	8		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

**PWC-45** Revision: 2011 September **2012 QUEST** 

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#### **POWER WINDOW SERIAL LINK**

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

NO >> Repair or replace harness.

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

INFOID:0000000007495616

# 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check signal between front power window switch (passenger side) harness connector and ground using an oscilloscope.

(+)  Front power window switch (passenger side)  Connector Terminal		(-)	Signal (Reference value)
D55	16	Ground	(V) 15 10 5 0 10 ms 10 ms

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-61">PWC-61</a>, "Removal and Installation".

NO >> GO TO 2.

# 2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

- Turn ignition switch OFF.
- Disconnect power window main switch connector and front power window switch (passenger side) connector.
- Check continuity between power window main switch harness connector and front power window switch (passenger side) harness connector.

Power windo	w main switch	Front power window s	witch (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	14	D55	16	Existed

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	14		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-61">PWC-61</a>, "Removal and Installation".

NO >> Repair or replace harness.

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

#### [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH В Diagnosis Procedure INFOID:0000000007495617 $oldsymbol{1}$ . CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-75, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT Check power window main switch power supply and ground circuit. Refer to PWC-29, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure". F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.check power window main switch serial link circuit Check power window main switch serial link circuit. Н Refer to PWC-45, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. 4. CONFIRM THE OPERATION Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO >> GO TO 1.

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## DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# DRIVER SIDE POWER WINDOW DOES NOT OPERATE

# Diagnosis Procedure

INFOID:0000000007495618

# 1. CHECK DRIVER SIDE POWER WINDOW MOTOR

Check front power window motor (driver side).

Refer to PWC-34, "DRIVER SIDE: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch. Refer to PWC-61. "Removal and Installation".

#### Is the inspection result normal?

YES >> INSPECTION END

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

#### [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED В WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED: Diagnosis Procedure INFOID:0000000007495619 ${f 1}$ .CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIR-CUIT Check front power window switch (passenger side) power supply and ground circuit. D Refer to PWC-30, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 2. Е NO >> Repair or replace the malfunctioning parts. 2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) Check front power window motor (passenger side). Refer to PWC-35, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CONFIRM THE OPERATION Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO >> GO TO 1. WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED: Diagnosis Procedure INFOID:0000000007495620 **PWC** 1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE) Replace front power window switch (passenger side). Refer to PWC-61, "Removal and Installation" >> INSPECTION END M WHEN POWER WINDOW MAIN SWITCH IS OPERATED WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure INFOID:000000000749562 N ${f 1}$ .CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT Check front power window switch (passenger side) serial link circuit. Refer to PWC-46, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure". Is the inspection result normal? Р YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". >> GO TO 1. NO

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**2012 QUEST** 

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FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

## SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE
WHEN POWER WINDOW MAIN AND SLIDING DOOR LH POWER WINDOW
SWITCHES ARE OPERATED

WHEN POWER WINDOW MAIN AND SLIDING DOOR LH POWER WINDOW SWITCHES ARE OPERATED: Diagnosis Procedure

# 1. CHECK SLIDING DOOR POWER WINDOW SWITCH LH

Check sliding door power window switch LH.

Refer to PWC-32, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR LH

Check sliding door power window motor LH.

Refer to PWC-36, "SLIDING DOOR LH: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

## WHEN SLIDING DOOR LH POWER WINDOW SWITCH IS OPERATED

# WHEN SLIDING DOOR LH POWER WINDOW SWITCH IS OPERATED : Diagnosis Procedure

# ${f 1.}$ CHECK SLIDING DOOR POWER WINDOW SWITCH LH POWER SUPPLY AND GROUND CIRCUIT

Check sliding door power window switch LH power supply and ground circuit.

Refer to PWC-30, "SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW SWITCH LH

Check sliding door power window switch LH.

Refer to PWC-32, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

#### Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

#### WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# **SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE**

SYMPTOM DIAGNOSIS :

[FRONT WINDOW ANTI-PINCH]

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure	
1. CHECK SLIDING DOOR POWER WINDOW SWITCH LH	
Check sliding door power window switch LH. Refer to PWC-32, "Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	
Confirm the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u> . NO >> GO TO 1.	

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## SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE
WHEN POWER WINDOW MAIN AND SLIDING DOOR RH POWER WINDOW
SWITCHES ARE OPERATED

WHEN POWER WINDOW MAIN AND SLIDING DOOR RH POWER WINDOW SWITCHES ARE OPERATED: Diagnosis Procedure

# 1.check sliding door power window switch RH

Check sliding door power window switch RH.

Refer to PWC-32, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR RH

Check sliding door power window motor RH.

Refer to PWC-36, "SLIDING DOOR RH: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

## WHEN SLIDING DOOR RH POWER WINDOW SWITCH IS OPERATED

# WHEN SLIDING DOOR RH POWER WINDOW SWITCH IS OPERATED: Diagnosis Procedure

# ${f 1.}$ CHECK SLIDING DOOR POWER WINDOW SWITCH RH POWER SUPPLY AND GROUND CIRCUIT

Check sliding door power window switch RH power supply and ground circuit.

Refer to PWC-30, "SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW SWITCH RH

Check sliding door power window switch RH.

Refer to PWC-32, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

#### Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

#### WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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# WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure 1. Check sliding door power window switch RH В Check sliding door power window switch RH. Refer to PWC-32, "Component Function Check". Is the inspection result normal? C YES >> GO TO 2. >> Repair or replace the malfunctioning parts. NO 2. CONFIRM THE OPERATION D Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". Е NO >> GO TO 1. F Н J **PWC** Ν

Revision: 2011 September PWC-53 2012 QUEST

## AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY

**DRIVER SIDE** 

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007495628

#### 1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-27, "Work Procedure".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK ENCODER CIRCUIT (DRIVER SIDE)

Check encoder circuit (driver side). Refer to PWC-38, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007495629

# 1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-27, "Work Procedure".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK ENCODER CIRCUIT (PASSENGER SIDE)

Check encoder circuit (passenger side). Refer to <a href="PWC-40">PWC-40</a>, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (FRONT SIDE) [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (FRONT SIDE) Α DRIVER SIDE **DRIVER SIDE**: Diagnosis Procedure INFOID:0000000007495630 В 1. CHECK POWER WINDOW AUTO OPERATION Check AUTO operation when anti-pinch function does not operate. Is the inspection result normal? YES >> GO TO 2. NO >> Refer to PWC-54, "DRIVER SIDE : Diagnosis Procedure". D 2.CONFIRM THE OPERATION Confirm the operation again. Е Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO >> GO TO 1. F PASSENGER SIDE PASSENGER SIDE: Diagnosis Procedure INFOID:0000000007495631 1. CHECK POWER WINDOW AUTO OPERATION Check AUTO operation when anti-pinch function does not operate. Н Is the inspection result normal? YES >> GO TO 2. NO >> Refer to PWC-54, "PASSENGER SIDE: Diagnosis Procedure". 2.confirm the operation Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO >> GO TO 1.

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# POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NOR-MALLY

#### < SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NORMALLY

**Diagnosis Procedure** 

INFOID:0000000007495632

# 1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to DLK-209, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

## DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS [FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

**Diagnosis Procedure** 

1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-27, "Work Procedure".

Is the inspection result normal?

>> INSPECTION END YES

NO >> GO TO 2.

2.CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (DOOR KEY CYLINDER SWITCH)

Check driver side door lock assembly (door key cylinder switch).

Refer to PWC-43, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

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**PWC-57** Revision: 2011 September **2012 QUEST**  Α

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## **KEYLESS POWER WINDOW DOWN DOES NOT OPERATE**

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

## KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

# Diagnosis Procedure

INFOID:0000000007495634

# 1. CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent key button?

YES >> GO TO 2.

NO >> Refer to <u>DLK-44</u>, "<u>REMOTE KEYLESS ENTRY FUNCTION</u>: <u>System Description</u>".

# 2 .CHECK POWER WINDOW OPERATION

Check power window operation.

Does power window up/down with power window main switch?

YES >> GO TO 3.

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

 ${f 3.}$ CHECK "PW DOWN SET" SETTING IN "WORK SUPPORT"

Check "PW DOWN SET" setting in "WORK SUPPORT".

Refer to DLK-95, "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Set "PW DOWN SET" setting in "WORK SUPPORT".

# 4. CONFIRM THE OPERATION

Confirm the operation again.

## Is the result normal?

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

NO >> GO TO 1.

## POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

# [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION Α Diagnosis Procedure INFOID:0000000007495635 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. Refer to PWC-61, "Removal and Installation". С >> INSPECTION END D Е F G Н J PWC L M Ν 0

Revision: 2011 September PWC-59 2012 QUEST

# POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

# POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007495636

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to PWC-61, "Removal and Installation".

>> INSPECTION END

PASSENGER SIDE

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007495637

1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

Refer to PWC-61, "Removal and Installation".

>> INSPECTION END

SLIDING DOOR LH

SLIDING DOOR LH: Diagnosis Procedure

INFOID:0000000007495638

1. REPLACE SLIDING DOOR POWER WINDOW SWITCH LH

Replace sliding door power window switch LH. Refer to <u>PWC-62</u>, "Removal and Installation".

>> INSPECTION END SLIDING DOOR RH

SLIDING DOOR RH: Diagnosis Procedure

INFOID:0000000007495639

1. REPLACE SLIDING DOOR POWER WINDOW SWITCH RH

Replace sliding door power window switch RH.

Refer to PWC-62, "Removal and Installation".

>> INSPECTION END

#### **POWER WINDOW MAIN SWITCH**

< REMOVAL AND INSTALLATION >

[FRONT WINDOW ANTI-PINCH]

# REMOVAL AND INSTALLATION

# POWER WINDOW MAIN SWITCH

#### Removal and Installation

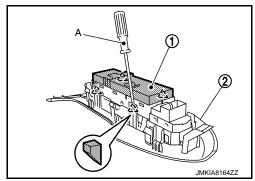
#### **REMOVAL**

- 1. Remove the power window main switch finisher. Refer to <a href="INT-13">INT-13</a>, "Removal and Installation".
- 2. Remove power window main switch (1) from power window main switch finisher (2) using a remover tool (A).



#### NOTE:

The same procedure is also performed for front power window switch (passenger side).



#### INSTALLATION

Install in the reverse order of removal.

#### NOTE:

If power window main switch or front power window (passenger side) is replaced or is removed, it is necessary to perform the initialization procedure.

Refer to PWC-27, "Work Procedure".

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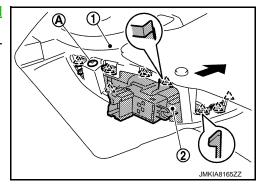
# SLIDING DOOR POWER WINDOW SWITCH

## Removal and Installation

#### **REMOVAL**

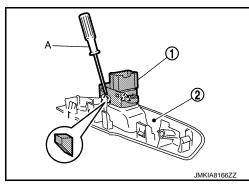
- 1. Remove sliding door finisher. Refer to <a href="INT-16">INT-16</a>, "Removal and Installation".
- 2. Remove screw (A), disconnect pawls from sliding door finisher (1), and then remove power window switch finisher (2).

<u>^</u> `	:	Pawl
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3. Remove power window switch (1) from power window switch finisher (2) using a remover tool (A).





#### **INSTALLATION**

Install in the reverse order of removal.

# **PRECAUTION**

#### **PRECAUTIONS**

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### **WARNING:**

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that 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 "SRS AIR BAG".
- Never 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:**

Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the
  ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with
  a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing
  serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

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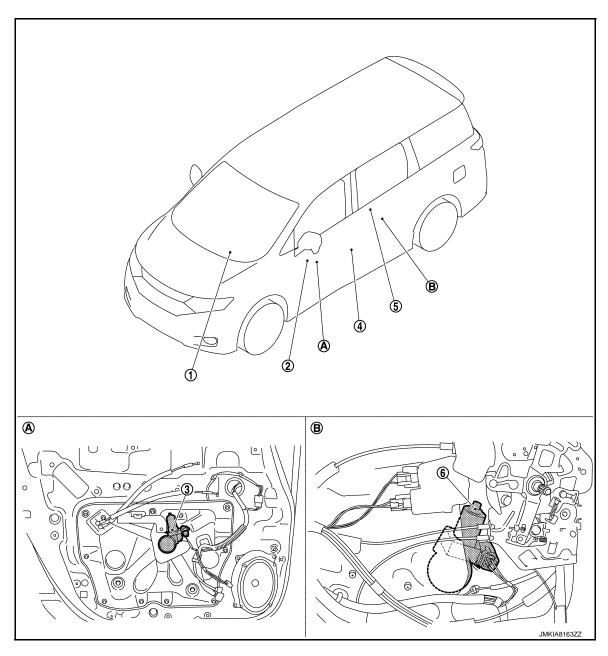
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# SYSTEM DESCRIPTION

# **COMPONENT PARTS**

Component Parts Location

INFOID:0000000007495643



A. View with front door finisher removed B. View with sliding door finisher removed

No.	Component parts	Description
1.	ВСМ	Supplies power supply to power window switch.     Controls retained power.  Refer to BCS-4, "BODY CONTROL SYSTEM: Component Parts Location" for detailed installation location.
2.	Power window main switch	Refer to PWC-65, "Power Window Main Switch".
3.	Front power window motor (driver side)	Refer to PWC-65, "Front Power Window Motor (Driver Side)".
4.	Front door switch (driver side)	Detects door open/close condition and transmits to BCM. Refer to <u>DLK-28</u> , <u>"Front Door Switch"</u> .

#### **COMPONENT PARTS**

#### < SYSTEM DESCRIPTION >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

No.	Component parts	Description
5.	Sliding door power window switch LH	Refer to PWC-65, "Sliding Door Power Window Switch".
6.	Sliding door power window motor LH	Refer to PWC-65, "Sliding Door Power Window Motor".

#### Power Window Main Switch

INFOID:0000000007836986

- Directly controls all power window motor of all doors.
- Controls anti-pinch operation of power window.

# Front Power Window Motor (Driver Side)

INFOID:0000000007836987

- Integrates the encoder and power window motor.
- Operates with signals from power window main switch.
- Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.

# Sliding Door Power Window Switch

INFOID:0000000007836988

Controls power window motor of sliding door.

#### Sliding Door Power Window Motor

INFOID:0000000007836989

Operates with signals from power window main switch and sliding door power window switch.

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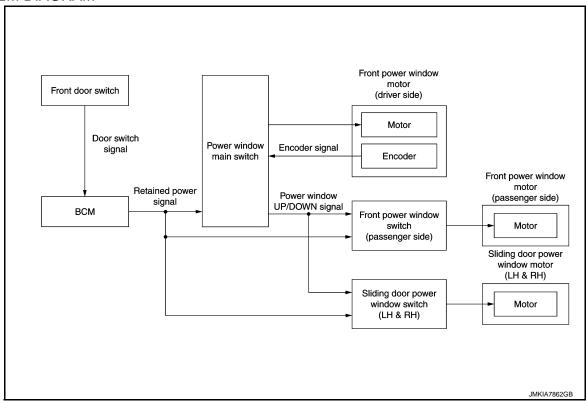
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#### SYSTEM

# System Description

#### INFOID:0000000007495644

#### SYSTEM DIAGRAM



#### DESCRIPTION

- Power window system is activated by power window switch when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.
- Power window main switch opens/closes all door glass.
- Front and sliding door power window switch opens/closes the corresponding door glass.
- AUTO UP/DOWN operation can be performed when power window main switch turns to AUTO.
- Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is the specified value or more while power window of driver seat is in AUTO-UP operation, power window of driver seat operates in the reverse direction.

#### Power Window AUTO-Operation

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

#### **Retained Power Operation**

Retained power operation is an additional power supply function that enables power window system to operate for 45 seconds even when ignition switch is turned OFF.

#### **Retained Power Cancel Conditions**

- Front door CLOSE (door switch OFF)  $\rightarrow$  OPEN (door switch ON).
- · When ignition switch is ON again.
- When timer time passes (45 seconds).

#### Power Window Lock Function

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

#### **SYSTEM**

#### < SYSTEM DESCRIPTION >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

Anti-Pinch System

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.9 in) when detected.
- Encoder continues detecting the movement of front power window motor (driver side) and transmits to power window main switch as the encoder pulse signal while front power window motor (driver side) is operating.
- Resistance is applied to the front power window motor (driver side) rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window main switch controls to lower the window glass for 150 mm (5.9 in) after it detects encoder pulse signal frequency change.

**Operation Condition** 

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

#### NOTE:

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

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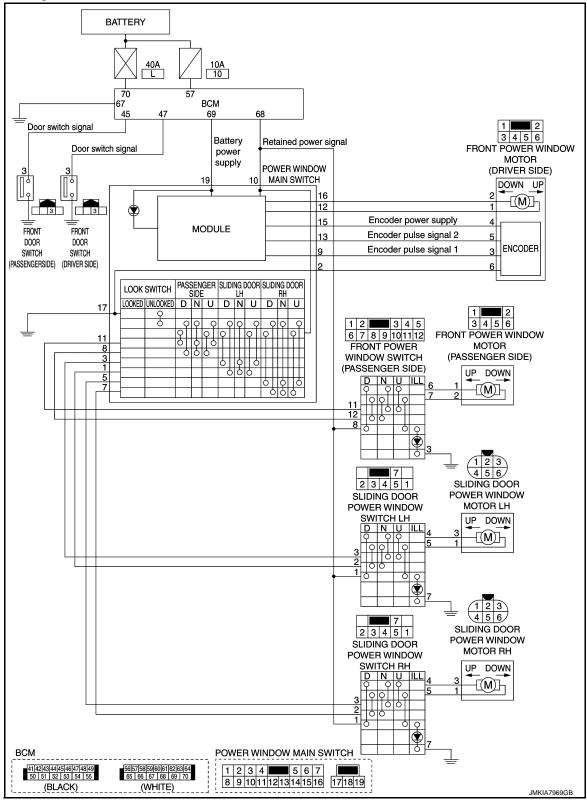
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Circuit Diagram

OID:0000000007495645



Fail-safe

#### **FAIL-SAFE CONTROL**

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

#### **SYSTEM**

#### [DRIVER SIDE WINDOW ANTI-PINCH]

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 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 than the value of glass full stroke during glass open/close operation.

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

- Auto-up operation
- Anti-pinch function

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

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# **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000007829620

#### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	<ul> <li>Read and save the vehicle specification.</li> <li>Write the vehicle specification when replacing BCM.</li> </ul>

#### SYSTEM APPLICATION

BCM can perform the following functions for each system.

#### NOTE:

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

×: Applicable item

System	Cub quaters coloction items	Diagnosis mode		
System	Sub system selection item	Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp control system	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioning control system	AIR CONDITONER		×	×*
<ul><li>Intelligent Key system</li><li>Engine start system</li></ul>	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

#### NOTE

## FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT.

<sup>\*:</sup> For models with automatic air conditioning control system, this diagnosis mode is not used.

# **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

## [DRIVER SIDE WINDOW ANTI-PINCH]

CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (LOCK)]	-
	SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode [Power supply position is OFF (OFF)]	-	
	LOCK>ACC	Power position status of the moment a particular DTC is detected*	While turning power supply position from OFF (LOCK) to ACC	
	ACC>ON		While turning power supply position from ACC to ON	-
	RUN>ACC		While turning power supply position from RUN to ACC (Except emergency stop operation)	•
	CRANK>RUN		While turning power supply position from CRANK to RUN	-
	RUN>URGENT		While turning power supply position from RUN to ACC (Emergency stop operation)	•
	ACC>OFF		While turning power supply position from ACC to OFF (OFF)	-
Vehicle Condition	OFF>LOCK		While turning power supply position from OFF (OFF) to OFF (LOCK)	•
	OFF>ACC		While turning power supply position from OFF (OFF) to ACC	-
	ON>CRANK		While turning power supply position from ON to CRANK	
	OFF>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (OFF)] to low power consumption mode	_
	LOCK>SLEEP		While turning BCM status from normal mode [Power supply position is OFF (LOCK)] to low power consumption mode	•
	LOCK		Power supply position is OFF (LOCK)	•
	OFF		Power supply position is OFF (OFF)	
	ACC		Power supply position is ACC	
	ON		Power supply position is ON	
	ENGINE RUN		Power supply position is RUN	
	CRANKING		Power supply position is CRANK	P
IGN Counter	0 - 39	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>		

\*: Refer to the following for details of the power supply position.

- OFF (OFF, LOCK): Ignition switch OFF
- ACC: Ignition switch ACC
- IGN: Ignition switch ON with engine stopped
- RUN: Ignition switch ON with engine running
- CRANK: At engine cranking

Power supply position shifts to "OFF (LOCK)" from "OFF (OFF)", when ignition switch is in the OFF position, shift position is in the P position, and any of the following conditions are met.

- · Closing door
- · Opening door
- · Door is locked using door request switch
- · Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "OFF (LOCK)".

#### **RETAIND PWR**

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# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[DRIVER SIDE WINDOW ANTI-PINCH]

RETAIND PWR: CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000007495648

#### **DATA MONITOR**

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

# **BCM (BODY CONTROL MODULE)**

< ECU DIAGNOSIS INFORMATION >

[DRIVER SIDE WINDOW ANTI-PINCH]

# **ECU DIAGNOSIS INFORMATION**

# **BCM (BODY CONTROL MODULE)**

List of ECU Reference

ECU		Reference
		BCS-36, "Reference Value"
ВСМ		BCS-58, "Fail-safe"
		BCS-58, "DTC Inspection Priority Chart"
		BCS-59, "DTC Index"

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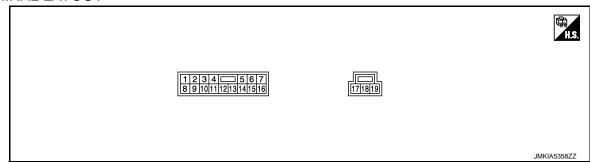
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# **POWER WINDOW MAIN SWITCH**

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

	nal No. color)	Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output	Condition	voltage (v)
1 (O)	Ground	Sliding door power window motor LH UP signal	Output	When sliding door LH switch in power window main switch is in UP operation.	9 – 16
2 (W)	Ground	Encoder ground	_	_	0 – 1
3 (BR)	Ground	Sliding door power window motor LH DOWN signal	Output	When sliding door LH switch in power window main switch is in DOWN operation.	9 – 16
5 (SB)	Ground	Sliding door power window motor RH DOWN signal	Output	When sliding door RH switch in power window main switch is in DOWN operation.	9 – 16
7 (P)	Ground	Sliding door power window motor RH UP signal	Output	When sliding door RH switch in power window main switch is in UP operation.	9 – 16
8 (BR)	Ground	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is in UP operation.	9 – 16
9 (SB)	Ground	Encoder pulse signal 2	Input	When front power window motor (driver side) operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
				Ignition switch ON	9 - 16
10				Within 45 seconds after ignition switch is turned to OFF.	9 – 16
(V)	Ground	Retained power signal	Input	When driver side or passenger side door is opened during retained power operation.	0 – 1

### **POWER WINDOW MAIN SWITCH**

#### < ECU DIAGNOSIS INFORMATION >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

	nal No. color)	Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output	Condition	voltage (v)
11 (GR)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is in DOWN operation.	9 – 16
12 (LG)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is in DOWN operation.	9 – 16
13 (Y)	Ground	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
15 (R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operating.	9 – 16
16 (L)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is in UP operation.	9 – 16
17 (B)	Ground	Ground		_	0 – 1
19 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	9 – 16

Fail-safe

#### FAIL-SAFE CONTROL

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

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.			

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

- Auto-up operation
- Anti-pinch function

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

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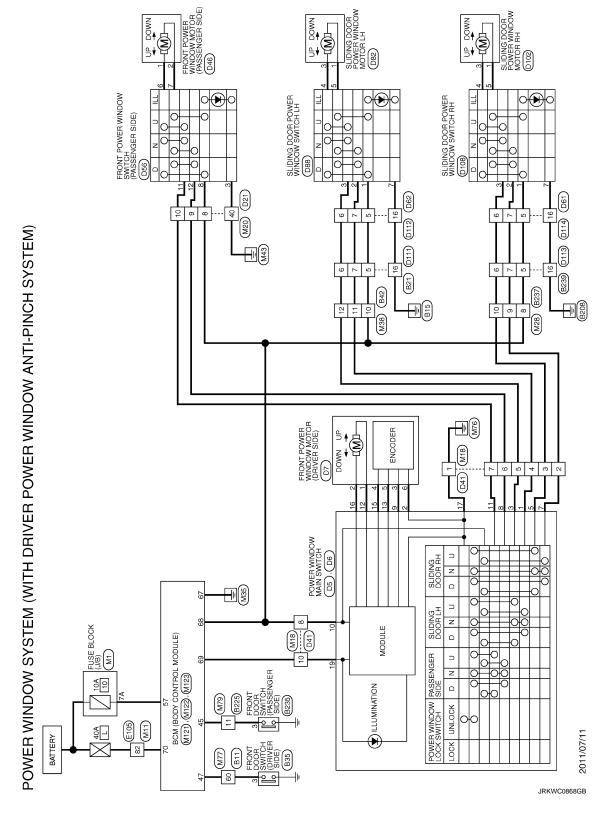
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# WIRING DIAGRAM

# POWER WINDOW SYSTEM

Wiring Diagram

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



#### **DIAGNOSIS AND REPAIR WORK FLOW**

< BASIC INSPECTION >

[DRIVER SIDE WINDOW ANTI-PINCH]

# **BASIC INSPECTION**

### DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

# 1. OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

# 2. REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.

Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO to 3. 3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

4.IDENTIFY MALFUNCTIONING PARTS WITH "DTC/CIRCUIT DIAGNOSIS"

Perform the diagnosis with "DTC/CIRCUIT DIAGNOSIS" of the applicable system.

5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

#### 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.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

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>> GO TO 5.

>> GO TO 6.

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### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL [DRIVER SIDE WINDOW ANTI-PINCH]

< BASIC INSPECTION >

# ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-NAL

Description INFOID:0000000007495654

When the battery negative terminal is disconnected, the initialization is necessary for normal operation of power window system.

#### **CAUTION:**

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

- Auto-up operation
- Anti-pinch function

Work Procedure INFOID:0000000007495655

# 1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-80, "Work Procedure".

>> GO TO 2.

# 2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-81, "Work Procedure".

>> END

### ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH [DRIVER SIDE WINDOW ANTI-PINCH]

< BASIC INSPECTION >

# ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN **SWITCH**

Description INFOID:0000000007495656

When the power window main switch replaced, the initialization in necessary for normal operation of power window system.

#### **CAUTION:**

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

- Auto-up operation
- Anti-pinch function

Work Procedure

# 1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-80, "Work Procedure".

>> GO TO 2. 2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-81, "Work Procedure".

>> END

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**2012 QUEST** 

#### SYSTEM INITIALIZATION

Description INFOID:000000007495658

If any of the following operations are performed, the initialization is necessary for normal operation of power window system.

- Disconnection and connection of battery cable from negative terminal.
- · When power window main switch replaced.
- Electric power supply to power window main switch or power window motor (driver side) is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Disconnection and connection of power window main switch harness connector.
- Removal of power window motor (driver side) from regulator assembly.
- Operation of regulator assembly as an independent unit.
- · Removal and installation of glass.
- · Removal and installation of door glass run.

#### **CAUTION:**

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

- Auto-up operation
- Anti-pinch function

Work Procedure

### **1.**STEP 1

- 1. Turn ignition switch ON.
- 2. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 3. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 2 seconds or more.
- 4. Check that AUTO-UP function operates normally.

>> GO TO 2.

#### 2.STEP 2

Check anti-pinch function. Refer to PWC-81, "Work Procedure".

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#### CHECK ANTI-PINCH FUNCTION

< BASIC INSPECTION >

[DRIVER SIDE WINDOW ANTI-PINCH]

### **CHECK ANTI-PINCH FUNCTION**

Description INFOID:0000000007495660

If any of the following operations are performed, the initialization is necessary for normal operation of antipinch function.

- Disconnection and connection of battery cable from negative terminal.
- When power window main switch replaced.
- Electric power supply to power window main switch or power window motor (driver side) is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Disconnection and connection of power window main switch harness connector.
- Removal of power window motor (driver side) from regulator assembly.
- Operation of regulator assembly as an independent unit.
- · Removal and installation of glass.
- Removal and installation of door glass run.

Work Procedure

# 1. CHECK ANTI-PINCH FUNCTION

- Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- 4. Check the following conditions.
- Check that glass lowers for approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that glass does not rise not when operating the power window main switch while lowering.

#### **CAUTION:**

- Perform initial setting when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Do not check with hands and other body parts because they may be pinched. Do not get pinched.

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### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007495662

# 1. CHECK POWER SUPPLY

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

(+) Power window main switch		(-)	Condition		Voltage (V)
Connector	Terminal				
D5	10	Ground	Ignition switch	ON	9 – 16
D6	19	Ground	ignition switch	OFF	9 – 16

#### Is the inspection result normal?

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

# 2.CHECK POWER SUPPLY CIRCUIT

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

В	CM	Power window main switch		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
M123	68	D5	10	Existed	
IVI 123	69	D6	19	Existed	

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M123	68	Giodila	Not existed	
WIIZ3	69	-	Not existed	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

NO >> Repair or replace harness.

# 3.CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Check continuity between power window main switch harness connector and ground.

Power windo	w main switch		Continuity
Connector	Connector Terminal		Continuity
D6	17		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

### [DRIVER SIDE WINDOW ANTI-PINCH]

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

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# 1. CHECK POWER SUPPLY

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

(+)			
Front power window switch (passenger side)		(-)	Voltage (V)
Connector	Terminal		
D56	8	Ground	9 – 16

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

# 2. CHECK POWER SUPPLY CIRCUIT

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

В	CM	Front power window s	switch (passenger side)	Continuity
Connector	Terminal	Connector Terminal		Continuity
M123	68	D56	8	Existed

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M123	68		Not existed	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-82, "Removal and Installation".

NO >> Repair or replace harness.

#### SLIDING DOOR POWER WINDOW SWITCH

# SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure

# SLIDING DOOK POWER WINDOW SWITCH . Diagnosis Procedure

# 1. CHECK POWER SUPPLY

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connector.
- Turn ignition switch ON.
- 4. Check voltage between sliding door power window switch harness connector and ground.

	(+)			
Slic	ding door power window su	(-)	Voltage (V)	
Con	Connector Terminal			
LH	D88	1	Ground	9 – 16
RH	D108	I	Ground	9 – 10

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

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### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between BCM harness connector and sliding door power window switch harness connector.

ВСМ		Sliding door power window switch			Continuity
Connector	Terminal	Connector		Terminal	Continuity
M123	M123 68	LH	D88	1	Existed
IVI 123		RH	D108	1	LAISIGU

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M123	68		Not existed	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82</u>, "Removal and Installation".

NO >> Repair or replace harness.

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

# Component Function Check

## 1. CHECK FUNCTION

Check front power window motor (passenger side) operation with front power window switch (passenger side). Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-85, "Diagnosis Procedure".

## Diagnosis Procedure

# ${\bf 1.} {\sf CHECK} \; {\sf FRONT} \; {\sf POWER} \; {\sf WINDOW} \; {\sf SWITCH} \; ({\sf PASSENGER} \; {\sf SIDE}) \; {\sf INPUT} \; {\sf SIGNAL}$

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

(+)			Condition		Voltage (V)
Front power window switch (passenger side)		(-)			
Connector	Terminal				
	11	- Ground	Power window main switch (passenger side)	NEUTRAL	0 - 1
D56				DOWN	9 – 16
D30	12			NEUTRAL	0 – 1
				UP	9 – 16

#### Is the inspection result normal?

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

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

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

Front power window switch (passenger side) Power window main switch			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
D56	11	D5	11	Existed
D56	12	D3	8	LXISIGU

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

Front power window	v switch (passenger side)		Continuity	
Connector	Connector Terminal		Continuity	
D56	11	— Ground	Not existed	
	12		Not existed	

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

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

Check front power window switch (passenger side).

Refer to PWC-86, "Component Inspection".

#### Is the inspection result normal?

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# FRONT POWER WINDOW SWITCH (PASSENGER SIDE) [DRIVER SIDE WINDOW ANTI-PINCH]

#### < DTC/CIRCUIT DIAGNOSIS >

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window switch (passenger side). Refer to PWC-109, "Removal and Installation".

# Component Inspection

YES

INFOID:0000000007495667

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

- Turn ignition switch OFF.
- 2. Disconnect front power window switch (passenger side) connector.
- 3. Check front power window switch (passenger side) terminals under the following conditions.

Front power window s	Front power window switch (passenger side)		Continuity	
Teri	Terminal			
8	7	UP		
11	6			
11	6	- NEUTRAL	Existed	
12	7	NEOTIVAL	LXISIGU	
8	6	DOWN		
12	7	_ DOWN		

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front power window switch (passenger side). Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

### **SLIDING DOOR POWER WINDOW SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# SLIDING DOOR POWER WINDOW SWITCH

# Component Function Check

#### INFOID:0000000007495668

### 1. CHECK FUNCTION

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Check sliding door power window motor operation with sliding door power window switch.

#### Is the inspection result normal?

YES >> INSPECTION END

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

# Diagnosis Procedure

#### INFOID:0000000007495669

# 1. CHECK SLIDING DOOR POWER WINDOW SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between sliding door power window switch harness connector and ground.

(+) Sliding door power window switch		(-) Conditi		ition	Voltage (V)	
Connector Terminal						
		2	Power window main switch (sliding door LH side)	NEUTRAL	0 - 1	
LH	2	2			UP	9 – 16
LH	D88	3			NEUTRAL	0 - 1
					DOWN	9 – 16
		0	2 Ground Power window main	NEUTRAL	0 - 1	
	D400	_			UP	9 – 16
RH D108	3		switch (sliding door RH side)	NEUTRAL	0 - 1	
			,	DOWN	9 – 16	

#### Is the inspection result normal?

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

# 2.check sliding door power window switch circuit

- 1. Turn ignition switch OFF.
- 2. Disconnect power window main switch connector.
- 3. Check continuity between sliding door power window switch harness connector and power window main switch harness connector.

Sliding door power window switch			Power windo	Continuity	
Connector T		Terminal	Connector Terminal		Continuity
LH	LII Doo			1	
LH	D88	3	D5	3	Existed
DU	RH D108	2		7	
KH		3		5	

4. Check continuity between sliding door power window switch harness connector and ground.

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### **SLIDING DOOR POWER WINDOW SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

### [DRIVER SIDE WINDOW ANTI-PINCH]

Slid	Sliding door power window switch			Continuity	
Conr	nector	Terminal		Continuity	
LH	D88	2	Ground		
LIT	D00	3	Ground	Not existed	
RH	D109	2		Not existed	
KΠ	D108	3			

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> Repair or replace harness.

# 3.check sliding door power window switch

Check sliding door power window switch.

Refer to PWC-88. "Component Inspection".

#### Is the inspection result normal?

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

NO >> Replace sliding door power window switch. Refer to PWC-110, "Removal and Installation".

### Component Inspection

INFOID:0000000007495670

# 1. CHECK SLIDING DOOR POWER WINDOW SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch connector.
- 3. Check sliding door power window switch terminals under the following conditions.

Sliding door power window switch  Terminal		Condition	Continuity
1	5	UP	
3	4		
2	5	- NEUTRAL	Existed
3	4	NEOTIVAL	LAISIGU
1	4	DOWN	
2	5	DOWN	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace sliding door power window switch. Refer to PWC-110, "Removal and Installation".

**DRIVER SIDE** 

DRIVER SIDE : Component Function Check

INFOID:0000000007495671

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## 1. CHECK FUNCTION

Check front power window motor (driver side) operation with power window main switch.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-89, "DRIVER SIDE : Diagnosis Procedure".

### DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007495672

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

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

(+)			Condition		Voltage (V)
Front power window	Front power window motor (driver side)				
Connector	Terminal				
	1	- Ground	Power window main switch (driver side)	NEUTRAL	0 – 1
D7				DOWN	9 – 16
Di	2			NEUTRAL	0 - 1
	2			UP	9 – 16

#### Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-28, "Removal and Installation"</u>.

NO >> GO TO 2.

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

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

Front power window	w motor (driver side)	Power window main switch				Continuity
Connector	Terminal	Connector	Terminal	Continuity		
D7	1	D5	12	Existed		
Di	2	D3	16	LXISIEU		

4. Check continuity between front power window motor (driver side) harness connector and ground.

Front power window	Front power window motor (driver side)		Continuity
Connector	Terminal	Ground	Continuity
	1	Ground	Not existed
DI.	2		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

#### PASSENGER SIDE

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#### < DTC/CIRCUIT DIAGNOSIS >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

### PASSENGER SIDE: Component Function Check

INFOID:0000000007495673

### 1. CHECK FUNCTION

Check front power window motor (passenger side) operation with power window main switch or front power window switch (passenger side).

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-90, "PASSENGER SIDE : Diagnosis Procedure".

### PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007495674

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

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

(+) Front power window motor (passenger side)		(-)	Condit	tion	Voltage (V)
Connector	Terminal				
	4			NEUTRAL	0 – 1
D46	'	Ground	Front power window switch (passenger side)	DOWN	9 – 16
D40	2			NEUTRAL	0 – 1
				UP	9 - 16

#### Is the inspection result normal?

YES >> Replace front power window motor (passenger side).

NO >> GO TO 2.

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

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

Front power window	motor (passenger side)	Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D46	1	D56	6	Existed
D40	2	D30	7	LAISIEU

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

Front power window motor (passenger side)			Continuity
Connector	Terminal	Ground	Continuity
	1	Ground	Not existed
D40	2		Not existed

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> Repair or replace harness.

#### SLIDING DOOR LH

#### < DTC/CIRCUIT DIAGNOSIS >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

## SLIDING DOOR LH: Component Function Check

#### INFOID:0000000007495675

### 1. CHECK FUNCTION

Check sliding door power window motor LH operation with power window main switch or sliding door power window switch LH.

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#### Is the inspection result normal?

YES >> INSPECTION END

>> Refer to PWC-91, "SLIDING DOOR LH: Diagnosis Procedure". NO

### SLIDING DOOR LH : Diagnosis Procedure

#### INFOID:0000000007495676

# ${f 1}$ .CHECK SLIDING DOOR POWER WINDOW MOTOR LH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect sliding door power window motor LH connector.
- Turn ignition switch ON.
- Check voltage between sliding door power window motor LH harness connector and ground.

(+)			Condition		
Sliding door powe	Sliding door power window motor LH				Voltage (V)
Connector	Terminal				
	1	Ground	Sliding door power window switch LH	NEUTRAL	0 – 1
D82	!			UP	9 – 16
D62	2	Giodila		NEUTRAL	0 – 1
	3			DOWN	9 – 16

#### Is the inspection result normal?

YES >> Replace sliding door power window motor LH.

NO >> GO TO 2.

# 2.check sliding door power window motor LH circuit

- Turn ignition switch OFF.
- Disconnect sliding door power window switch LH connector.
- Check continuity between sliding door power window motor LH harness connector and sliding door power window switch LH harness connector.

Sliding door powe	r window motor LH	Sliding door power window switch LH		Continuity
Connector	Terminal	Connector Terminal		Continuity
D83	1	D88	5	Existed
D02	D82 3		4	LAISIEU

Check continuity between sliding door power window motor LH harness connector and ground.

Sliding door powe	r window motor LH		Continuity
Connector	Terminal	Ground	Continuity
D82	1	Ground	Not existed
D02	3		Not existed

#### Is the inspection result normal?

YES >> Replace sliding door power window switch LH. Refer to PWC-110, "Removal and Installation".

NO >> Repair or replace harness.

#### SLIDING DOOR RH

#### SLIDING DOOR RH: Component Function Check

#### INFOID:0000000007495677

# CHECK FUNCTION

Revision: 2011 September

#### < DTC/CIRCUIT DIAGNOSIS >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

Check sliding door power window motor RH operation with power window main switch or sliding door power window switch RH.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-92, "SLIDING DOOR RH: Diagnosis Procedure".

### SLIDING DOOR RH: Diagnosis Procedure

INFOID:0000000007495678

# 1. CHECK SLIDING DOOR POWER WINDOW MOTOR RH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window motor RH connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between sliding door power window motor RH harness connector and ground.

(+)			Condition		Voltage (V)
Sliding door power v	Sliding door power window motor RH				
Connector	Terminal				
	4			NEUTRAL	0 - 1
D102	'	Ground	Sliding door power window switch RH	UP	9 – 16
D102	3			NEUTRAL	0 - 1
				DOWN	9 – 16

#### Is the inspection result normal?

YES >> Replace sliding door power window motor RH.

NO >> GO TO 2.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR RH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect sliding door power window switch RH connector.
- Check continuity between sliding door power window motor RH harness connector and sliding door power window switch RH harness connector.

Sliding door powe	r window motor RH	Sliding door power window switch RH		Continuity
Connector	Terminal	Connector Terminal		Continuity
D102	1	D108	5	Existed
D102	3	5100	4	LAISIGU

Check continuity between sliding door power window motor RH harness connector and ground.

Sliding door power	window motor RH		Continuity	
Connector	Terminal	Ground	Continuity	
D102	1	Ground	Not existed	
D102	3		NOT EXISTED	

#### Is the inspection result normal?

YES >> Replace sliding door power window switch RH. Refer to PWC-110, "Removal and Installation".

NO >> Repair or replace harness.

### **ENCODER CIRCUIT**

## Component Function Check

#### INFOID:0000000007495679

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### 1. CHECK FUNCTION

Check that front driver side door glass perform AUTO UP/DOWN operation normally when power window main switch is operated.

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to PWC-93, "Diagnosis Procedure".

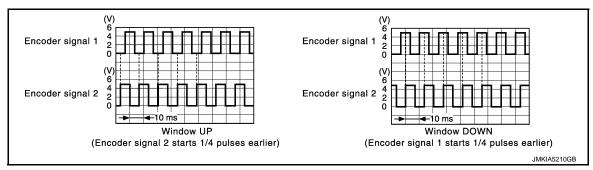
### Diagnosis Procedure

#### INFOID:0000000007495680

# 1. CHECK ENCODER PULSE SIGNAL

- 1. Turn ignition switch ON.
- 2. Check signal between power window main switch harness connector and ground using an oscilloscope.

(+) Power window main switch		(-)	Signal (Reference value)
Connector	Terminal		(11010101100 141100)
	9	Ground	Refer to the following signal
D3	13	Ground	Refer to the following signal



#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> GO TO 2.

# 2.check encoder signal circuit

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

Power windo	w main switch	Front power window	w motor (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	9	D7	3	Existed
D3	13		5	LXISIEU

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	9	Ground	Not existed
D3	13		NOT EXISTED

#### Is the inspection result normal?

#### **ENCODER CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

YES >> GO TO 3.

NO >> Repair or replace harness.

# 3. CHECK ENCODER POWER SUPPLY

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

(+)			
Front power window motor (driver side)		(-)	Voltage (V)
Connector	Terminal		
D7	4	Ground	9 – 16

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

# 4. CHECK ENCODER POWER SUPPLY CIRCUIT

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

Power windo	w main switch	Front power window	w motor (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	15	D7	4	Existed

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

Power window main switch			Continuity
 Connector	Terminal	Ground	Continuity
 D5	15		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> Repair or replace harness.

# CHECK ENCODER GROUND CIRCUIT 1

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

Power windo	w main switch	Front power window	w motor (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D5	2	D7	6	Existed

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	2		Not existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

#### 6. CHECK ENCODER GROUND CIRCUIT 2

1. Connect power window main switch connector.

#### **ENCODER CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

#### [DRIVER SIDE WINDOW ANTI-PINCH]

2. Check continuity between power window main switch harness connector and ground.

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	2		Existed

#### Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-28, "Removal and Installation"</u>.

NO >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

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### NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH [DRIVER SIDE WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS

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

### Diagnosis Procedure

INFOID:0000000007495681

# ${f 1}$ .CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-75, "Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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

Check power window main switch power supply and ground circuit.

Refer to PWC-82, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

### DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >	[DRIVER SIDE WINDOW ANTI-PINCH]
DRIVER SIDE POWER WINDOW DOES NO	T OPERATE
Diagnosis Procedure	INFOID:000000007495682
1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)	
Check front power window motor (driver side).  Refer to PWC-89, "DRIVER SIDE: Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.	
2.REPLACE POWER WINDOW MAIN SWITCH	]
Replace power window main switch. Refer to <u>PWC-109</u> , "Removals the inspection result normal?	
YES >> INSPECTION END	
NO >> Check intermittent incident. Refer to GI-42, "Intermitted	ent Incident".
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### FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED

WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED: Diagnosis Procedure

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to PWC-85, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

Refer to PWC-90, "PASSENGER SIDE: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

# WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED:

Diagnosis Procedure

INFOID:0000000007495684

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT

Check front power window switch (passenger side) power supply and ground circuit.

Refer to PWC-83, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to PWC-85, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	. A
1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	,
Check front power window switch (passenger side). Refer to PWC-85, "Component Function Check".	Е
Is the inspection result normal?  YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.	C
2.CONFIRM THE OPERATION	
Confirm the operation again.  Is the result normal?  YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".  NO >> GO TO 1.	Е
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### SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE
WHEN POWER WINDOW MAIN AND SLIDING DOOR LH POWER WINDOW
SWITCHES ARE OPERATED

WHEN POWER WINDOW MAIN AND SLIDING DOOR LH POWER WINDOW SWITCHES ARE OPERATED: Diagnosis Procedure

# 1. CHECK SLIDING DOOR POWER WINDOW SWITCH LH

Check sliding door power window switch LH.

Refer to PWC-87, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR LH

Check sliding door power window motor LH.

Refer to PWC-91, "SLIDING DOOR LH: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

### WHEN SLIDING DOOR LH POWER WINDOW SWITCH IS OPERATED

# WHEN SLIDING DOOR LH POWER WINDOW SWITCH IS OPERATED : Diagnosis Procedure

# ${f 1.}$ CHECK SLIDING DOOR POWER WINDOW SWITCH LH POWER SUPPLY AND GROUND CIRCUIT

Check sliding door power window switch LH power supply and ground circuit.

Refer to PWC-83, "SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2. CHECK SLIDING DOOR POWER WINDOW SWITCH LH

Check sliding door power window switch LH.

Refer to PWC-87, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

#### Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

#### WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# SLIDING DOOR LH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Proce	
1.CHECK SLIDING DOOR POWER WINDOW SWITCH LH	
Check sliding door power window switch LH. Refer to PWC-87, "Component Function Check".  Is the inspection result normal?	E
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.  2.CONFIRM THE OPERATION	(
Confirm the operation again.	
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-42. "Intermittent Incident"</u> . NO >> GO TO 1.	E
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Revision: 2011 September PWC-101 2012 QUEST

### SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE
WHEN POWER WINDOW MAIN AND SLIDING DOOR RH POWER WINDOW
SWITCHES ARE OPERATED

WHEN POWER WINDOW MAIN AND SLIDING DOOR RH POWER WINDOW SWITCHES ARE OPERATED: Diagnosis Procedure

# 1.check sliding door power window switch RH

Check sliding door power window switch RH.

Refer to PWC-87, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK SLIDING DOOR POWER WINDOW MOTOR RH

Check sliding door power window motor RH.

Refer to PWC-91, "SLIDING DOOR RH: Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

## 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

### WHEN SLIDING DOOR RH POWER WINDOW SWITCH IS OPERATED

# WHEN SLIDING DOOR RH POWER WINDOW SWITCH IS OPERATED : Diagnosis Procedure

# ${f 1.}$ CHECK SLIDING DOOR POWER WINDOW SWITCH RH POWER SUPPLY AND GROUND CIRCUIT

Check sliding door power window switch RH power supply and ground circuit.

Refer to PWC-83, "SLIDING DOOR POWER WINDOW SWITCH: Diagnosis Procedure".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CHECK SLIDING DOOR POWER WINDOW SWITCH RH

Check sliding door power window switch RH.

Refer to PWC-87, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

#### Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

#### WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# SLIDING DOOR RH POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

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# WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure 1. Check sliding door power window switch RH В Check sliding door power window switch RH. Refer to PWC-87, "Component Function Check". Is the inspection result normal? C YES >> GO TO 2. >> Repair or replace the malfunctioning parts. NO 2. CONFIRM THE OPERATION D Confirm the operation again. Is the result normal? YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". Е NO >> GO TO 1. F Н J **PWC** Ν

Revision: 2011 September PWC-103 2012 QUEST

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

### < SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

## Diagnosis Procedure

INFOID:0000000007495692

# 1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-80, "Work Procedure".

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

# 2. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-93, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

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

#### [DRIVER SIDE WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS >

# ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) Α Diagnosis Procedure INFOID:0000000007495693 1. CHECK POWER WINDOW AUTO OPERATION В Check AUTO operation when anti-pinch function does not operate. Is the inspection result normal? C YES >> GO TO 2. NO >> Refer to <a href="PWC-104">PWC-104</a>, "Diagnosis Procedure". 2.CONFIRM THE OPERATION D Confirm the operation again. Is the result normal? YES Е >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO >> GO TO 1. F Н J **PWC** M Ν

**PWC-105** Revision: 2011 September **2012 QUEST**  Р

# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

### < SYMPTOM DIAGNOSIS >

[DRIVER SIDE WINDOW ANTI-PINCH]

# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

**Diagnosis Procedure** 

INFOID:0000000007495694

# 1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to DLK-209, "Component Function Check".

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

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

NO >> GO TO 1.

### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

# [DRIVER SIDE WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION Α Diagnosis Procedure INFOID:0000000007495695 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. C >> Refer to PWC-109, "Removal and Installation". D Е F Н J PWC L M Ν 0

Revision: 2011 September PWC-107 2012 QUEST

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### POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE [DRIVER SIDE WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

DRIVER SIDE

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007495696

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to PWC-109, "Removal and Installation".

>> INSPECTION END

PASSENGER SIDE

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007495697

1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

Refer to PWC-109, "Removal and Installation".

>> INSPECTION END

SLIDING DOOR LH

SLIDING DOOR LH: Diagnosis Procedure

INFOID:0000000007495698

 ${\sf 1.}$ REPLACE SLIDING DOOR POWER WINDOW SWITCH LH

Replace sliding door power window switch LH.

Refer to PWC-110, "Removal and Installation".

>> INSPECTION END

SLIDING DOOR RH

SLIDING DOOR RH: Diagnosis Procedure

INFOID:0000000007495699

 ${f 1}$  . REPLACE SLIDING DOOR POWER WINDOW SWITCH RH

Replace sliding door power window switch RH.

Refer to PWC-110, "Removal and Installation".

>> INSPECTION END

#### **POWER WINDOW MAIN SWITCH**

< REMOVAL AND INSTALLATION >

[DRIVER SIDE WINDOW ANTI-PINCH]

# REMOVAL AND INSTALLATION

# POWER WINDOW MAIN SWITCH

#### Removal and Installation

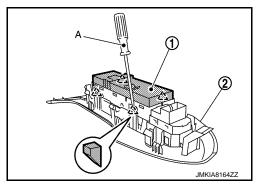
#### **REMOVAL**

- 1. Remove the power window main switch finisher. Refer to <a href="INT-13">INT-13</a>, "Removal and Installation".
- 2. Remove power window main switch (1) from power window main switch finisher (2) using a remover tool (A).



#### NOTE:

The same procedure is also performed for front power window switch (passenger side).



#### INSTALLATION

Install in the reverse order of removal.

#### NOTE:

If power window main switch is replaced or is removed, it is necessary to perform the initialization procedure. Refer to <a href="https://example.com/PWC-80">PWC-80</a>, "Work Procedure".

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INFOID:0000000007495700

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### **SLIDING DOOR POWER WINDOW SWITCH**

< REMOVAL AND INSTALLATION >

[DRIVER SIDE WINDOW ANTI-PINCH]

INFOID:0000000007495701

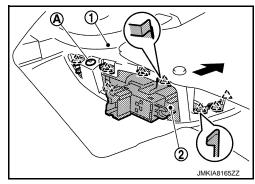
# SLIDING DOOR POWER WINDOW SWITCH

#### Removal and Installation

#### **REMOVAL**

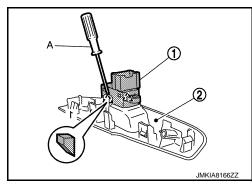
- 1. Remove sliding door finisher. Refer to <a href="INT-16">INT-16</a>, "Removal and Installation".
- 2. Remove screw (A), disconnect pawls from sliding door finisher (1), and then remove power window switch finisher (2).

^	: Pawl
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3. Remove power window switch (1) from power window switch finisher (2) using a remover tool (A).





#### **INSTALLATION**

Install in the reverse order of removal.