SECTION POWER WINDOW CONTROL SYSTEM

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< PRECAUTION >

PRECAUTION PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. 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

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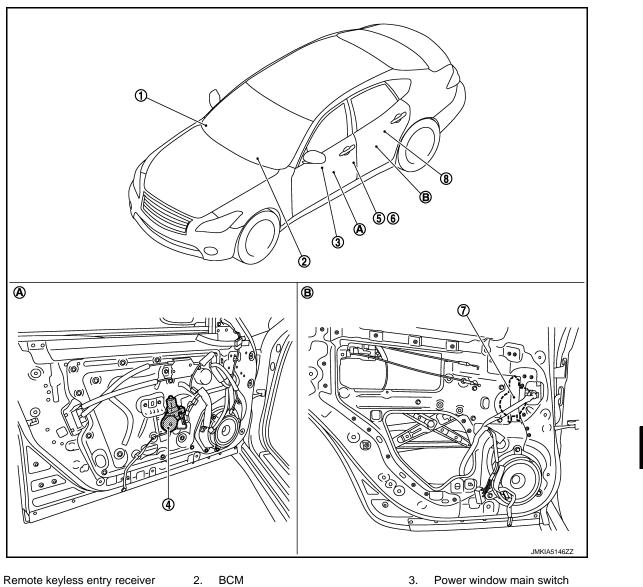
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- 1. Remote keyless entry receiver Refer to <u>DLK-10, "DOOR LOCK</u> <u>SYSTEM :</u> <u>Component Parts Location"</u>
- 4. Front power window motor (driver side)
- 7. Rear power window motor LH
- A. View with front door finisher removed B.
- BCM Refer to <u>BCS-4</u>, "BODY CONTROL <u>SYSTEM : Component Parts Loca-</u> tion"
- 5. Front door switch (driver side)
- 8. Rear power window switch LH
 - View with rear door finisher removed
- 6. Front door lock assembly (driver side) (door key cylinder switch)

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COMPONENT PARTS

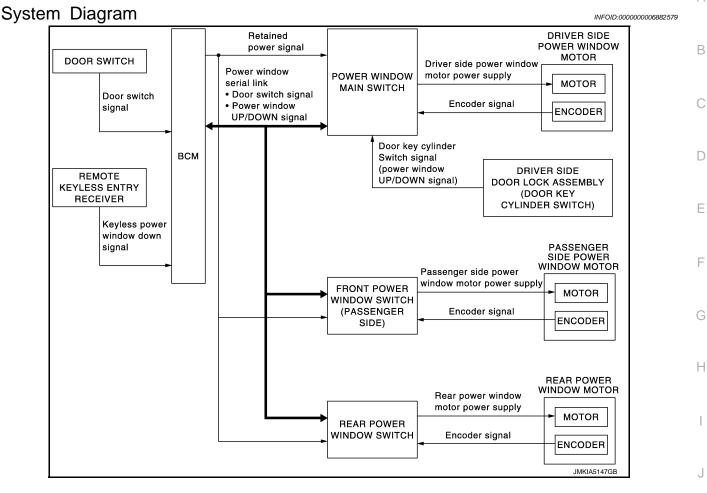
< SYSTEM DESCRIPTION >

Component Description

Component	Function	
BCM	Supplies power supply to power window switch.Controls retained power.	
Power window main switch	Directly controls all power window motor of all doors. Controls anti-pinch operation of power window.	
Front power window switch (passenger side)	Controls anti-pinch operation of power window. Controls power window motor of passenger door.	
Rear power window switch	Controls anti-pinch operation of power window.Controls power window motor of rear right and left doors.	
Power window motor	 Integrates the ENCODER and WINDOW MOTOR. Starts operating with signals from each power window switch. Transmits power window motor rotation as a pulse signal to power window switch. 	
Remote keyless entry receiver	Receives lock/unlock signal from the intelligent key, and then transmits to BCM.	
Front door lock assembly (door key cyl- inder switch)	Transmits operation condition of door key cylinder switch to power window main switc	
Front door switch (driver side/passen- ger side)	Front door open/close condition and transmits to BCM.	

SYSTEM

< SYSTEM DESCRIPTION > SYSTEM



System Description

POWER WINDOW OPERATION

- Power window system is activated by power window switch operation when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.
- Power window main switch can open/close door glass.
- Front and rear power window switch can open/close the corresponding door glass.
- Power window lock switch can lock all power windows other than driver seat.
- All power windows open when pressing Intelligent Key unlock button for 3 seconds.
- If door glass receives resistance that is the specified value or more while power window of each seat is in AUTO-UP operation, power window operates in the reverse direction.
- Power window serial link transmits the signals from power window main switch to each power window switch.
- AUTO UP/DOWN operation can be performed when front power window switch turns to AUTO.

POWER WINDOW AUTO-OPERATION

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

POWER WINDOW SERIAL LINK

Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link.

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SYSTEM

< SYSTEM DESCRIPTION >

The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

- Keyless power window down signal
- Door switch signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

- Front passenger side door window and rear door window operation signal
- Power window control by door key cylinder switch signal
- Power window lock switch signal

Retained power operation signal

RETAINED POWER OPERATION

• 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 function cancel conditions

- Front door CLOSE (door switch OFF)→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 power window switch operation except with the power window main switch.

ANTI-PINCH OPERATION

- Anti-pinch foreign lowers door glass 150 mm (5.9 in) when foreign material is pinched in door glass during AUTO-UP operation.
- 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 all 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 all power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

OPERATION CONDITION

- 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 FUNCTION

All 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-34, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)"</u>. **NOTE:**

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SYSTEM

< SYSTEM DESCRIPTION >

Use CONSULT to change settings. MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec)

Fail-safe

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FAIL-SAFE CONTROL

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

Malfunction Malfunction condition Pulse sensor malfunction When one pulse signal that is the specified value or more is detected continuously for the time or more, while door glass is being operated UP or DOWN.		
		Both pulse sensors mal- function
Pulse direction malfunc- tion When a pulse signal indicating that window is moving in the opposite direction against the p dow motor is detected for the specified value or more, while door glass is being operated DOWN.		
Glass recognition position malfunction 1When the actual door glass position that is out of specified value is detected compared to th glass fully closed position memorized in module, while door glass is being operated UP or D		
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.	

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Retained power function

When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

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< SYSTEM DESCRIPTION > 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	isplays the diagnosis results judged by BCM.		
CAN Diag Support Monitor	Ionitors 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	Read and save the vehicle specification.Write the vehicle specification when replacing BCM.		

SYSTEM APPLICATION

BCM can perform the following functions for each system. **NOTE:**

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

System	Out and a start and attention item.	Diagnosis mode		
	Sub system selection item	Work Support Data Monitor A		Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
—	AIR CONDITONER*		×	×
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
IVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk lid open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
_	AIR PRESSURE MONITOR*	×	×	×

*: This item is not used.

FREEZE FRAME DATA (FFD)

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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 normal mode (Power supply position is "LOCK"*)		
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK" *to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
	CRANK>RUN	Power position status of the moment a particular DTC is detected	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)	
	ACC>OFF		While turning power supply position from "ACC" to "OFF"	
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*	
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"	
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply posi- tion is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode	
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)*	
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
	ACC		Power supply position is "ACC" (Ignition switch ACC)	
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)	
-	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)	
	CRANKING		Power supply position is "CRANKING" (At engine cranking)	
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 		

NOTE:

*: For models without steering lock unit, power supply position changes from "OFF" to "LOCK" when steering lock conditions are satisfied.

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

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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.

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

List of ECU Reference

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ECU	Reference
	BCS-34, "Reference Value"
всм	BCS-54, "Fail-safe"
	BCS-56, "DTC Inspection Priority Chart"
	BCS-57, "DTC Index"

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



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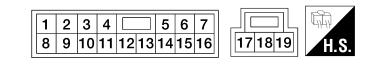
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PHYSICAL VALUES

	inal No. e color)	Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
3 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	12
4 (Y)	Ground	Battery power supply	Input	_	12
5 (G)	Ground	Front driver side power win- dow motor DOWN signal	Output	When front LH switch in power window main switch is operated DOWN	12
6 (L)	Ground	Front driver side power win- dow motor UP signal	Output	When front LH switch in power window main switch is operated UP	12
7 (B)	Ground	Ground	_	_	0
				IGN SW ON	12
9	Ground	d Retained power signal	Input	Within 45 second after ig- nition switch is turned to OFF	12
(O)		ricianica ponol oignai	par	When driver side or pas- senger side door is opened during retained power operation	0
10 (LG)	Ground	Encoder ground	_	_	0
11 (P)	Ground	Encoder pulse signal 1	Input	When power window mo- tor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description		Condition	Voltage [V]	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
12 (LG)	Ground	Encoder pulse signal 2	Input	When power window mo- tor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
13 (W)	Ground	Power window serial link	Input/ Output	IGN SW ON or power win- dow timer operating.	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10	
15 (R)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral →Locked)	$5 \rightarrow 0$	
16 (G)	Ground	Door key cylinder switch UN- LOCK signal	Input	Key position (Neutral →Unlocked)	$5 \rightarrow 0$	

Fail-safe

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FAIL-SAFE CONTROL

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

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow motor is detected for the specified value or more, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 1	When the actual door glass position that is out of specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Retained power function

When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

FRONT POWER WINDOW SWITCH

Reference Value

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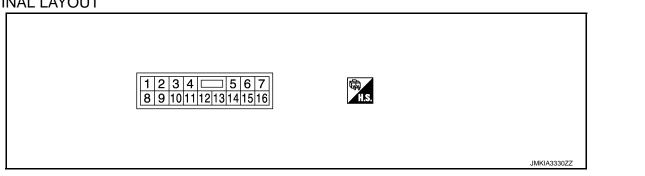
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TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition	Voltage [V]	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
3 (LG)	Ground	Encoder ground	_	_	0	
4 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	12	
8 (L)	Ground	Power window motor UP signal	Output	When power window motor is operated UP	12	
9 (G)	Ground	Power window motor DOWN signal	Output	When power window motor is operated DOWN	12	
10 (Y)	Ground	Battery power supply	Input	_	12	
11 (B)	Ground	Ground	_	_	0	
12 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates	(V) 64 20 10 ms JMKIA0070GB	

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FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output		(Approx.)
15 (O)	Ground	Encoder pulse signal 2	Input	When power window motor operates	(V) 6 4 2 0 10 ms JMKIA0070GB
16 (V)	Ground	Power window serial link	Input/ Output	When ignition switch ON or power window timer operates	(V) 15 10 10 ms JPMIA0013GB

Fail-safe

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FAIL-SAFE CONTROL

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

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow motor is detected for the specified value or more, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 1	When the actual door glass position that is out of specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

• Auto-up operation

- Anti-pinch function
- Retained power function

When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

REAR POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

REAR POWER WINDOW SWITCH

Reference Value

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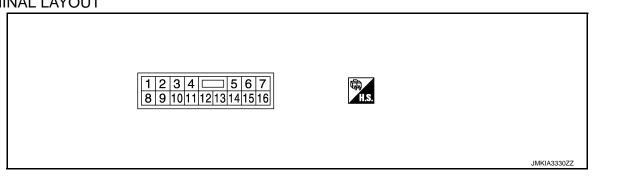
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TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
3 (BR)	Ground	Encoder ground	_	—	0
4 (V)	Ground	Encoder power supply	Output	When ignition switch ON or pow- er window timer operates	12
8 (P)	Ground	Power window motor UP signal	Output	When power window motor is operated UP	12
9 (G)	Ground	Power window motor DOWN signal	Output	When power window motor is operated DOWN	12
10 (P)	Ground	Battery power supply	Input	—	12
11 (B)	Ground	Ground	_	_	0
12 (W)	Ground	Encoder pulse signal 1	Input	When power window motor oper- ates	(V) 6 2 0 10 ms JMKIA0070GB

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REAR POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

Terminal No. (wire color)		Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
15 (O)	Ground	Encoder pulse signal 2	Input	When power window motor oper- ates.	(V) 6 4 2 0 10 ms JMKIA0070GB
16 (LG)	Ground	Power window serial link	Input/ Output	When ignition switch ON or pow- er window timer operates	(V) 15 10 5 0 5 10 ms JPMIA0013GB

Fail-safe

INFOID:000000006882590

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 a signal that is out of the specified value is detected between the fully closed position and the actual position of the glass.

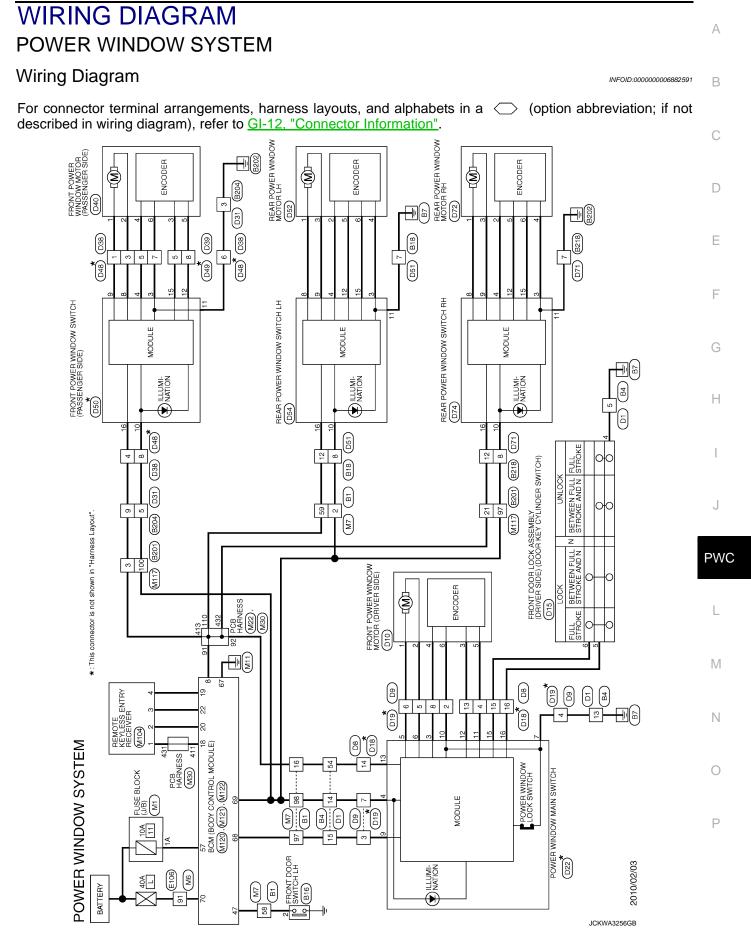
Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow motor is detected for the specified value or more, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 1	When the actual door glass position that is out of specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

• Auto-up operation

- Anti-pinch function
- Retained power function

When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.



< BASIC INSPECTION >

BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000006882592

DETAILED 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.

>> 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

<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-</u> NAL

Description INFOID:000000008882593	В
 Initialize the system if any of the following work has been done. When control unit replaced. Electric power supply to power window switch or motor is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc. Removal and installation of regulator assembly. 	С
 Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown. Disconnection and connection of power window main switch harness connector. 	D
 Removal and installation of motor from regulator assembly. Operation of regulator assembly as an independent unit. Removal and installation of door glass. 	Е
 Removal and installation of door glass run. The following specified operations can not be performed under the non-initialized condition. Auto-up operation Anti-pinch function 	F
Work Procedure	G
1.SYSTEM INITIALIZATION	
Perform system initialization. Refer to PWC-23, "Work Procedure".	Н
>> GO TO 2. 2.CHECK ANTI-PINCH FUNCTION	I
Check anti-pinch function. Refer to PWC-24, "Work Procedure".	
	J

>> END

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ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:000000006882595

Initialize the system if any of the following work has been done.

- When control unit replaced.
- Electric power supply to power window switch or motor is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc.
- Removal and installation of regulator assembly.
- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- · Removal and installation of door glass.
- Removal and installation of door glass run.
- The following specified operations can not be performed under the non-initialized condition.
- Auto-up operation
- Anti-pinch function

Work Procedure

INFOID:000000006882596

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-23, "Work Procedure".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-24, "Work Procedure".

>> END

SYSTEM INITIALIZATION

< BASIC INSPECTION >	
SYSTEM INITIALIZATION	А
Description INFOID:00000006882597	~
 Initialize the system if any of the following work has been done. When control unit replaced. Electric power supply to power window switch or motor is interrupted by blown fuse or disconnection and connection of the negative terminal of battery, etc. Removal and installation of regulator assembly. Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or if the battery fuse is blown. Disconnection and connection of power window main switch harness connector. Removal and installation of motor from regulator assembly. Operation of regulator assembly as an independent unit. Removal and installation of door glass. Removal and installation of door glass run. The following specified operations can not be performed under the non-initialized condition. 	B C D E
Auto-up operationAnti-pinch function	F
Work Procedure	
1. STEP 1	G
 Turn ignition switch ON. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open) 	Н
>> GO TO 2. 2. STEP 2	I
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.	J
>> GO TO 3.	
3.STEP 3	PWC
Check that auto-up function operates normally.	I
>> GO TO 4.	L
4. STEP 4	B. 4
Check anti-pinch function. Refer to PWC-24, "Work Procedure".	Μ
>> END	Ν
	0
	0

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CHECK ANTI-PINCH FUNCTION

< BASIC INSPECTION >

CHECK ANTI-PINCH FUNCTION

Description

Initialize the system if any of the following work has been done.

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

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

Auto-up operation

Anti-pinch function

Work Procedure

1.STEP 1

Fully open the door window.

>> GO TO 2.

2.STEP 2

Place a piece of food near fully closed position.

>> GO TO 3.

3.STEP 3

Close door glass completely with AUTO-UP.

>> GO TO 4.

4.STEP 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.
- It may switch to fail-safe mode if open/close operation is performed continuously without full close. Perform initial setting in that situation. Refer to <u>PWC-23, "Work Procedure"</u>.

>> END

Revision: 2013 September

INFOID:000000006882599

INFOID:000000006882600

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

1.CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
57	Pottony nower supply	11 (10A)
70	Battery power supply	L (40A)

Is the fuse fusing?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

	(+) BCM		Voltage (Approx.)	
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
M400	57	Ground	Dottory voltore	
M122	70	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

 $\mathbf{3.}$ CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

 B	CM		Continuity	
 Connector	Terminal	Ground	Continuity	
 M122	67		Existed	IVI

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

2. Disconnect power window main switch connectors.

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INFOID:000000006882601

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

3. Turn ignition switch ON.

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

	(+)				
Power	Power window main switch		(—)	Voltage (V) (Approx.)	
Connector	Termina	I		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
D22	4		Ground	12	
022	9		Ground	12	
the inspection result	normal?				
YES >> GO TO 2. NO >> GO TO 3.					
CHECK GROUND	CIRCUIT				
 Turn ignition switch Check continuity be 	o OFF. etween power window	main switch harnes	s connector and	hund	
		main ownon namos		ground.	
Power	Power window main switch			Continuity	
Connector	Termina	1	Ground	Continuity	
D22	7				
the inspection result	normal?				
YES >> GO TO 4.					
	eplace harness.				
\mathbf{B} .CHECK POWER SI	JPPLY CIRCUIT 2				
. Turn ignition switch	OFF.				
. Disconnect BCM c					
. Check continuity b	etween BCM harness	connector and powe	er window main sv	witch harness connector	
P	СМ		w main switch		
	-			Continuity	
Connector	Terminal 68	Connector	Terminal 9		
	00		9		
M122	69	D22	4	Existed	

4. Check continuity between BCM harness connector and ground.

ВС	CM		Continuity
Connector	Terminal	Ground	Continuity
M122	68	Ground	Not existed
101122	69		NOT EXISTED

Is the inspection result normal?

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

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006882603

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

POWER SUPPLY AND GROUND CIRCUIT

I licconnect tront now	OSIS > er window switch (pa	assender side) conr	vector	
 Disconnect front pow Check voltage between 				onnector and ground.
	(+)			
	ver window switch senger side)		()	Voltage (V) (Approx.)
Connector	Terminal			
D50	10		Ground	12
s the inspection result no YES >> GO TO 2. NO >> GO TO 3. 2.CHECK GROUND CIF	RCUIT	itele (n		
Check continuity between	i front power window	switch (passenger	side) harness cor	inector and ground.
-	ver window switch senger side)		Ground	Continuity
Connector	Terminal		Ground	
D50 s the inspection result no	11			Existed
 Disconnect BCM con Check continuity betw 		connector and front	power window sv	vitch (passenger side) har
	veen BCM harness o	Front power	power window sw window switch iger side)	vitch (passenger side) har
2. Check continuity betw ness connector. BCM Connector	veen BCM harness o	Front power	window switch	vitch (passenger side) har
2. Check continuity betw ness connector. BCM Connector M122	Terminal	Front power (passer Connector D50	window switch nger side) Terminal 10	
2. Check continuity betw ness connector. BCM Connector	Terminal	Front power (passer Connector D50	window switch nger side) Terminal 10	Continuity
2. Check continuity betw ness connector. BCM Connector M122	Terminal	Front power (passer Connector D50	window switch nger side) Terminal 10	Continuity
2. Check continuity betw ness connector. BCM Connector M122	veen BCM harness of Terminal 69 veen BCM harness of	Front power (passer Connector D50 connector and grou	window switch nger side) Terminal 10	Continuity
2. Check continuity betw ness connector. BCM Connector M122 3. Check continuity betw	veen BCM harness of Terminal 69 veen BCM harness of BCM Terminal 69	Front power (passer Connector D50 connector and grou	window switch oger side) Terminal 10 nd.	Continuity
2. Check continuity betw ness connector. BCM Connector M122 3. Check continuity betw Connector M122 3. Check continuity betw Connector M122 S the inspection result no YES >> Replace BCM NO >> Repair or rep 4.CHECK INTERMITTEL Refer to GI-44, "Intermitted >> INSPECTION REAR POWER WIL	veen BCM harness of Terminal 69 veen BCM harness of BCM Terminal 69 ormal? A. Refer to BCS-82, ' lace harness. NT INCIDENT ent Incident". NEND NDOW SWITCH	Front power (passer Connector D50 connector and groun Removal and Insta	window switch ager side) Terminal 10 nd. Ground Ilation".	Continuity Existed Continuity
2. Check continuity betw ness connector. BCM Connector M122 3. Check continuity betw Connector M122 s the inspection result no YES >> Replace BCM NO >> Repair or rep 4.CHECK INTERMITTEI Refer to GI-44, "Intermitter >> INSPECTION	veen BCM harness of Terminal 69 veen BCM harness of BCM Terminal 69 veen BCM harness of BCM 169 veen BCM harness of 169 Veen BCM harness of 160 Veen BCM harness of 160 160 160 160 160 160 160 160	Front power (passer Connector D50 connector and groun Removal and Insta	window switch ager side) Terminal 10 nd. Ground Ilation".	Continuity Existed Continuity

2. Disconnect rear power window switch LH connector and rear power window switch RH connector.

3. Turn ignition switch ON.

4. Check voltage between rear power window switch harnes connector and ground.

PWC-27

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	(+)		-	Voltage (V/)	
	Rear power window switch			Voltage (V) (Approx.)	
Con	Connector Terminal			(
LH	D54	- 10	Ground	12	
RH	D74		Giouria	12	

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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

	Rear power window switcl		Continuity	
Con	nector	Terminal	Ground	Continuity
LH	D54	11	Giouna	Existed
RH	D74			LAISIEU

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. Disconnect BCM connector.

3. Check continuity between BCM harness connector and rear power window switch harness connector.

BCM		Rear power window switch			Continuity
Connector	Terminal	Connector Termina			Continuity
M122	69	LH	D54	10	Existed
11122	09	RH	D74	10	Existed

4. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector	Terminal	Ground	Continuity
M122	M122 69		Not existed

Is the inspection result normal?

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

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW MOTOR

		POWI	ER WIN	DOW MO	OTOR		
< DTC/CIRCUIT D							
POWER WIN	DOW N	<i>I</i> OTOR					
DRIVER SIDE							
DRIVER SIDE	: Compo	onent Funct	ion Che	ck			INFOID:000000006882605
1. CHECK POWER	R WINDOV	V MOTOR CIR	CUIT				
Check front power		•	e) operatio	on with pow	er window	main switch	٦.
s the inspection re YES >> Front p		<u>u ?</u> low motor (driv	er side) is	OK.			
		, "DRIVER SID			<u>dure"</u> .		
DRIVER SIDE	: Diagno	osis Procedu	lre				INFOID:00000006882606
1.CHECK FRONT	POWER		or inpu	T SIGNAL			
1. Turn ignition su							
 Disconnect from Turn ignition system 		vindow motor (c	lriver side) connector			
4. Check voltage		ront power wind	dow motor	r (driver sid	e) harness	connector	and ground.
(-	+)						
Front power window	v motor (drive	er side) (-)			Condition		Voltage (V) (Approx.)
Connector	Termin	al					(/ () () () () () () () () () () () () ()
	2					UP	12
D10		Grour	nd Po	Power window main switch	DOWN	0	
	1					UP DOWN	0
s the inspection re	sult norma	12				DOWN	12
YES >> Replac	e front po		otor (drive	r side). Ref	er to <u>GW-2</u>	<u>0, "Remova</u>	al and Installation".
NO >> GO TC			·	,			_
CHECK POWE		V MOTOR CIR	CUIT				_
 Turn ignition sv Disconnect pov 		w main switch o	connector.				
 Check continui 	ty betweer	n power windo		vitch harne	ss connecte	or and fron	t power window motor
(driver side) ha	Irness con	nector.					
Power v	vindow main	switch			window motor er side)		
Connector		Terminal	Con	nector	Term	ninal	Continuity
		5			1		
D22		6		010	2	2	Existed
. Check continui	ty betweer	n power window	v main sw	itch harnes	s connecto	r and grour	nd.
P	ower window	/ main switch					
Connecto		Termin	al	-	0		Continuity
D22		5		-	Ground		Not existed
		6					
s the inspection re	<u>sult norma</u>	<u>I?</u> rindow main sw					

YES >> Replace power window main switch. Refer to <u>PWC-63. "Removal and Installation"</u>. NO >> Repair or replace harness. PASSENGER SIDE

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< DTC/CIRCUIT DIAGNOSIS >

PASSENGER SIDE : Component Function Check

INFOID:000000006882607

1. CHECK POWER WINDOW MOTOR CIRCUIT

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 >> Front power window motor (passenger side) is OK.
- NO >> Refer to PWC-30, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000006882608

1.CHECK FRONT POWER WINDOW MOTOR 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)		()	Condition		Voltage (V) (Approx.)
Connector	Terminal				
D40 —	2	- Ground		UP	12
			Front power window switch	DOWN	0
			(passenger side)	UP	0
				DOWN	12

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to <u>GW-20, "Removal and Installa-</u> tion".

NO >> GO TO 2.

2.CHECK POWER WINDOW MOTOR CIRCUIT

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

Front power window switch (passenger side)		Front power window r	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
D50	8	D40	2	Existed	
D50	9		1	LAISIEU	

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

Front power window s	witch (passenger side)		Continuity	
Connector	Terminal	Ground	Continuity	
DEO	8	Giouna	Not existed	
D50	9		NUL EXISTED	

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side). Refer to <u>PWC-63, "Removal and Installa-</u> tion".
- NO >> Repair or replace harness.

REAR LH

RE	EAR LH : Co	mponent Fu	nction Ch	ieck			INFOID:000000006882609	
1.	CHECK POWE	R WINDOW MC	TOR CIRC	UIT				А
Ch LH	eck rear power	window motor I			ow main switch	or rear po	ower window switch	В
Y	ES >> Rear p	power window m		DK. agnosis Procedure'				С
RE	EAR LH : Dia	agnosis Proc	edure				INFOID:00000006882610	
1.	CHECK REAR			R INPUT SIGNAL				D
1. 2. 3. 4.	Turn ignition s	ar power windov witch ON.		connector. w motor LH harnes	s connector an	nd ground.		E
-	((+)						F
_	Rear power w	indow motor LH	()		Condition		Voltage (V) (Approx.)	
-	Connector	Terminal						G
		1				UP	12	
	D52		Ground	Rear power wi	ndow switch LH	DOWN UP	0	Н
		3				DOWN	0 12	
2. 1. 2. 3.	Turn ignition s Disconnect rea	ar power windov ity between rea	v switch LH	connector.	ess connector	and rear p	ower window motor	J PWC
-	Rear pov	ver window switch L	H	Rear power w	indow motor LH			1
-	Connector	Term		Connector	Terminal		Continuity	
-	D54	8		D52	1		Existed	M
4.	Check continu	ity between real		dow switch LH harr	3 ness connector	and grour	ıd.	
-		Rear power win	dow switch LH	1				Ν
-	Conn	-		' Terminal			Continuity	
-	DS	- 4		8	Ground		Not evicted	0
-				9			Not existed	
Y N				h LH. Refer to <u>PW</u>	<u> 2-64, "Remova</u>	I and Insta	<u>llation"</u> .	Ρ
RE	EAR RH : Co	omponent Fu	nction Cł	neck			INFOID:00000006882611	
1.	CHECK POWE			UIT				

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Check rear power window motor RH operation with power window main switch or rear power window switch RH.

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Refer to <u>PWC-32</u>, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:000000006882612

1. CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

1. Turn ignition switch OFF.

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

(+)					
Rear power wind	Rear power window motor RH		Condition		Voltage (V) (Approx.)
Connector	Terminal				()
	1	- Ground	Rear power window switch RH	UP	12
D72	I			DOWN	0
DTZ	3			UP	0
	3			DOWN	12

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to <u>GW-23, "Removal and Installation"</u>.

NO >> GO TO 2.

2. CHECK POWER WINDOW MOTOR CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect rear power window switch RH connector.
- 3. Check continuity between rear power window switch RH harness connector and rear power window motor RH harness connector.

Rear power wi	Rear power window switch RH		Rear power window motor RH		
Connector	Terminal	Connector	Connector Terminal		
D74	8	D72	1	Existed	
D74	9	DIZ	3	Existed	

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

Rear power wir	ndow switch RH		Continuity	
Connector	Terminal	Ground	Continuity	
D74	8	Ground	Not existed	
074	9			

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-64, "Removal and Installation".

NO >> Repair or replace harness.

RIVER SIDE : 0	Component Fund	ction Check		INFOID:0000000688261
CHECK ENCODE	२			
	e door glass perfor	ms AUTO open/close	e operation norr	mally by power window mair
itch. the inspection resul	t normal?			
ES >> Encoder i	s OK.			
_		<u>IDE : Diagnosis Proce</u>	<u>edure"</u> .	
	Diagnosis Proce	uule		INFOID:0000000688261
Turn ignition swite Check signal betw		main switch harness	connector and g	round with oscilloscope.
	(+)			
Pow	er window main switch		(-)	Signal (Reference value)
Connector	Term			
D22	1		Ground	Refer to following signal
	(V)		00	
Encoder signal		Encoder sig	(V) 6 Inal 1 4	
Encoder signal a		Encoder sig		
	0 10 ms		0 4 4 4 10 ms	
(Window UP Encoder signal 2 starts 1/4 p	ulses earlier)		w DOWN arts 1/4 pulses earlier)
the inspection resul	t normal?			JMKIA5210GB
ES >> Replace p O >> GO TO 2		witch. Refer to <u>PWC</u>	63, "Removal a	nd Installation".
	ER SIGNAL CIRCUI	г		
Turn ignition swite	ch OFF.			
				notor (driver side) connector. Ind front power window motol
(driver side) harn	ess connector.			
Power wind	low main switch		er window motor ver side)	Ogentinuitu
Connector	Terminal	Connector	Terminal	Continuity
D22	11	D10	5	Existed
	12		3	LAISIEU

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

Power windo	ow main switch		Continuity
Connector	Terminal	Ground	Continuity
D22	11	Ground	Not existed
	12		INOL EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

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 windo	w motor (driver side)	(-)	Voltage (V) (Approx.)	
Connector	Terminal		(11 -)	
D10	4	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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 window main switch		Front power window	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
D22	3	D10	4	Existed

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

Power window main switch			Continuity	
Connector	Terminal	Ground	Continuity	
D22	3		Not existed	

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

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

Front power window	v motor (driver side)		Continuity	
Connector	Terminal	Ground	Continuity	
D10	6		Existed	

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-20, "Removal and Installation"</u>. NO >> GO TO 6.

6.CHECK GROUND CIRCUIT 2

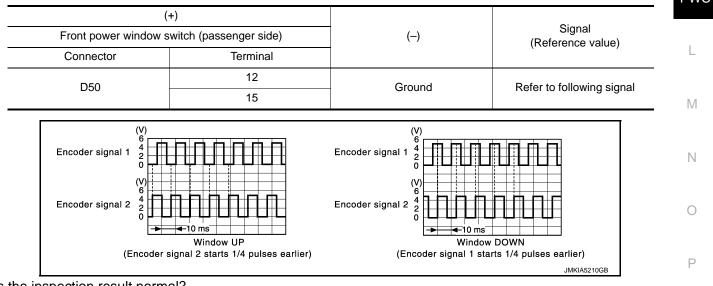
1. Disconnect power window main switch connector.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

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

	main switch	Front power window	Continuity	
Connector	Terminal	Connector	or Terminal Contil	
D22	10	D10	6	Existed
Check continuity bet	ween power window	main switch harness	s connector and gro	und.
Power v	vindow main switch	ow main switch		Continuity
Connector	Termina	l (Ground	Continuity
D22	10			Not existed
CHECK ENCODER	de door glass perfor	ms AUTO open/close		v by power window mai
eck that passenger si				
itch or front power wir <u>he inspection result n</u> ES >> Encoder is 0	idow switch (passen ormal? DK.	ger side).		
itch or front power wir <u>he inspection result n</u> ES >> Encoder is 0	idow switch (passen ormal? DK. C-35, "PASSENGEF	ger side). <u>R SIDE : Diagnosis P</u> i		INFOID:00000000688261
itch or front power wir <u>he inspection result n</u> ES >> Encoder is 0 O >> Refer to <u>PW</u>	idow switch (passen ormal? DK. <u>C-35, "PASSENGEF</u> E : Diagnosis Pro	ger side). <u>R SIDE : Diagnosis P</u> i		



Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-63, "Removal and Installation".

2. CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D50	12	D40	5	Existed
D50	15	040	3	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 - Not existe	Conditionly	
D50	12		Not ovisted	
	15		Not existed	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

1. Connect front power window switch (passenger side) connector.

2. Turn ignition switch ON.

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

(+) Front power window motor (passenger side)		(-)	Voltage (V) (Approx.)	
Connector	Terminal			
D40	4	Ground	12	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

4.CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

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

Front power window motor (passenger side)			Continuity
Connector	Terminal	Ground	Continuity
D40	6	*	Existed

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to <u>GW-20, "Removal and Installation"</u>. NO >> GO TO 6.

5.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. 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.

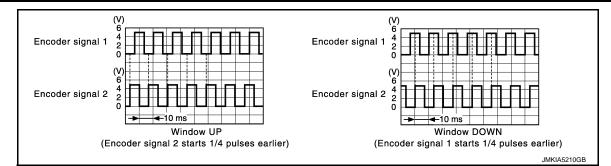
Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
D50	4	D40	4	Existed	

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

< DTC/CIRCUIT DIAGNOSIS >

	low switch (passenger si				Continuity
Connector	Termin	al	Ground		-
D50	4			١	Not existed
<u>s the inspection result n</u> YES >> Replace from <u>tion"</u> . NO >> Repair or rep CHECK GROUND CI	nt power window sv place harness.	vitch (passenge	er side). Refer to <u>PV</u>	<u>/C-63, "Re</u>	moval and Instal
 Disconnect front pov Check continuity bet window motor (pass 	ween front power w	indow switch (p	e) connector. bassenger side) harn	ess connec	tor and front pov
Front power window sw	vitch (passenger side)	Front power v	vindow motor (passenger	side)	
Connector	Terminal	Connecto	r Terminal		Continuity
D50	3	D40	6		Existed
. Check continuity bet	ween front power w	vindow switch (passenger side) harr	ess conne	ctor and ground.
Eront power wind	low switch (passenger si	ide)			
Connector	Termin		Ground		Continuity
		<u> </u>	Ground		
D50	3			1	Not existed
s the inspection result n	ormal? nt power window sv	vitch (passenge	er side). Refer to <u>PV</u>		
<u>s the inspection result n</u> YES >> Replace from <u>tion"</u> . NO >> Repair or re	ormal? nt power window sw place harness.		er side). Refer to <u>PV</u>		
<u>s the inspection result n</u> YES >> Replace from <u>tion"</u> . NO >> Repair or re REAR LH	ormal? nt power window sw place harness. nent Function C		er side). Refer to <u>PV</u>		moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or regression REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK that rear door switch s the inspection result n YES YES >> Encoder ope	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK.	Check	operation normally by	/ <u>C-63, "Re</u>	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or regression REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK that rear door switch s the inspection result n YES YES >> Encoder ope	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT th LH. ormal? eration is OK. C-37. "REAR LH : I	Check	operation normally by	/ <u>C-63, "Re</u>	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or replace REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK that rear door LH ear power window switch .s the inspection result n YES >> Encoder ope NO >> Refer to PW	ormal? ht power window sw place harness. nent Function C DPERATION glass performs AUT h LH. ormal? eration is OK. C-37. "REAR LH : I sis Procedure	Check	operation normally by	/ <u>C-63, "Re</u>	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or regression or result n CHECK ENCODER C Check that rear door LH ear power window switce s the inspection result n YES >> Encoder ope NO >> Refer to PW REAR LH : Diagnos .CHECK ENCODER S .CHECK ENCODER S .CHECK ENCODER S	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. C-37. "REAR LH : E sis Procedure SIGNAL ON.	Check	operation normally by	/C-63, "Re	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or regression or result n CHECK ENCODER C Check that rear door LH ear power window switce s the inspection result n YES >> Encoder ope NO >> Refer to PW REAR LH : Diagnos .CHECK ENCODER S .CHECK ENCODER S .CHECK ENCODER S	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. C-37. "REAR LH : E sis Procedure SIGNAL ON.	Check	operation normally by edure".	/C-63, "Re	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or replace REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C S the inspection result n YES YES >> Encoder ope NO >> Refer to PW REAR LH : Diagnos .CHECK ENCODER S .CHECK ENCODER S . Turn ignition switch . Check signal betweed	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT th LH. ormal? eration is OK. C-37. "REAR LH : I SIGNAL ON. en rear power windo	Check	operation normally by edure".	/C-63, "Re	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or replace REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C S the inspection result n YES YES >> Encoder ope NO >> Refer to PW REAR LH : Diagnos .CHECK ENCODER S .CHECK ENCODER S . Turn ignition switch . Check signal betweed	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. C-37. "REAR LH : E sis Procedure SIGNAL ON. en rear power windo (+)	Check O open/close of Diagnosis Proce	operation normally by edure". arness connector and	/C-63, "Re	moval and Instal
s the inspection result n YES >> Replace from YES >> Replace from NO >> Repair or replace REAR LH REAR LH REAR LH : Compo .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C Check that rear door LH .CHECK ENCODER C S the inspection result n YES YES >> Encoder ope NO >> Refer to PW REAR LH : Diagnos .CHECK ENCODER S .CHECK ENCODER S .CHECK ENCODER S . Turn ignition switch .Check signal between	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT th LH. ormal? eration is OK. C-37. "REAR LH : I SIGNAL ON. en rear power windo (+) er window switch LH	Check O open/close of Diagnosis Proce	operation normally by edure". arness connector and	/C-63, "Re power win d ground wi	moval and Instal

< DTC/CIRCUIT DIAGNOSIS >



Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to <u>PWC-64, "Removal and Installation"</u>. NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

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

Rear power w	vindow switch LH	Rear power wi	ndow motor LH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D54	12	D52	5	Existed
004	15	052	6	LAISIEU

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

Rear power wi	Rear power window switch LH		Continuity
Connector	Terminal	Ground	Continuity
 D54	12	Ground	Not existed
	15		NUT EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

${f 3.}$ CHECK ENCORDER POWER SUPPLY CIRCUIT 1

- 1. Connect rear power window switch LH connector.
- 2. Turn ignition switch ON.

3. Check voltage between rear power window motor LH harness connector and ground.

Rear power wi	+) ndow motor LH	(-)	Voltage (V) (Approx.)
Connector	Terminal		(
D52	2	Ground	12

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

4.CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

2. Check continuity between rear power window motor LH harness connector and ground.

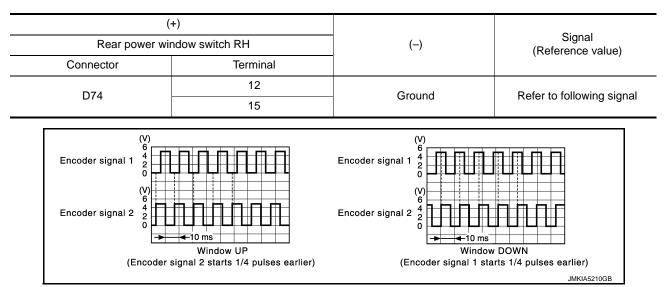
Rear power wi	ndow motor LH		Continuity
Connector	Terminal	Ground	Continuity
D52	4		Existed

		LNOODLN		
DTC/CIRCUIT DIAG				
the inspection result				6 H 61 H
′ES >> Replace re IO >> GO TO 6.	ar power window mot	tor LH. Refer to <u>GW</u>	-23, "Removal and Ir	<u>istallation"</u> .
	R POWER SUPPLY (CIRCUIT2		
Turn ignition switch				
Disconnect rear po	wer window switch Ll			
LH harness connect		ndow switch LH har	ness connector and	rear power window motor
El manicos connec				
Rear power wi	ndow switch LH	Rear power v	vindow motor LH	Continuity
Connector	Terminal	Connector	Terminal	
D54	4	D52	2	Existed
Check continuity be	etween rear power wi	ndow switch LH har	ness connector and	ground.
Rear po	wer window switch LH			Continuity
Connector	Termina	al	Ground	Continuity
D54	4			Not existed
he inspection result	normal?			
	ar power window swit	tch LH. Refer to <u>PW</u>	<u>C-64, "Removal and </u>	Installation".
•	eplace harness.			
CHECK GROUND (SIRCUIT 2			
Disconnect rear po	wer window switch Ll	H harness connecto	r.	
		ndow switch LH har	ness connector and	rear power window motor
LH harness connec	ctor.			
Rear power wi	ndow switch LH	Rear power v	vindow motor LH	
Connector	Terminal	Connector	Terminal	
D54	3	D52	4	Existed
Check continuity be	etween rear power wi	ndow switch LH har	ness connector and	ground.
Rear po	wer window switch LH			
Connector	Termina	al	Ground	Continuity
D54	3			Not existed
ne inspection result	normal?			
S >> Replace re	ar power window swit	tch LH. Refer to <u>PW</u>	C-64, "Removal and	Installation".
) >> Repair or r	eplace harness.			
AR RH				
AR RH : Comp	onent Function C	Check		INFOID:000000006882619
•				
CHECK ENCODER				_
		TO open/close ope	ration normally by po	ower window main switch
ear power window s				
ne inspection result ES >> Encoder op				
	<u>10-39, KLAN NIT. L</u>	Diagnosis Procedure	<u>e"</u> .	
		Diagnosis Procedure	<u>3"</u> .	INFOID:000000006882620
•	osis Procedure	Diagnosis Procedure	<u></u> .	INFOID:000000006882620
CHECK ENCODER	osis Procedure	Diagnosis Procedure	<u>)"</u> .	INF01D:000000006882620

1. Turn ignition switch ON.

2. Check signal between rear power window switch RH harness connector and ground with oscilloscope.

< DTC/CIRCUIT DIAGNOSIS >



Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to <u>PWC-64, "Removal and Installation"</u>. NO >> GO TO 2.

2. CHECK ENCODER SIGNAL CIRCUIT

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

Rear power w	ndow switch RH	Rear power wi	ndow motor RH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D74	12	D72	5	Existed
074	15	012	6	LAISIEU

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

Rear power wi	Rear power window switch RH		Continuity
Connector	Terminal	Ground	Continuity
D74	12	Ground	Not existed
	15		NOT EXISTED

Is the inspection result normal?

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

3.CHECK ENCODER POWER SUPPLY CIRCUIT 1

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

	(+) Rear power window motor RH		Voltage (V) (Approx.)
Connector	Terminal		
D72	2	Ground	12

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

< DTC/CIRCUIT DIAGNOSIS >

4.CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

2. Check continuity between rear power window motor RH harness connector and ground.

Rear	ower window motor RH			Continuity	,
Connector	Termin	al	Ground		
D72	4			Existed	
IO >> GO TO 6	ear power window mo		er to <u>GW-23, "Remova</u>	and Installation".	
	ower window switch R between rear power wi		r. n RH harness connecto	r and rear power wir	ndow r
Rear power	vindow switch RH	Re	ar power window motor RH	Contin	
Connector	Terminal	Conn	ector Termin	al Contin	uity
D74	4	D7	2 2	Exist	əd
Check continuity	between rear power w	indow switc	h RH harness connecte	or and ground.	
Rear p	ower window switch RH				
Rear p Connector	ower window switch RH	al	Ground	Continuity	,
Connector D74 the inspection resu	Termin 4 It normal?		Ground	Not existed	
Connector D74 the inspection resu (ES >> Replace i NO >> Repair or .CHECK GROUND Disconnect rear p	Termin 4 <u>t normal?</u> rear power window swi replace harness. CIRCUIT 2 power window switch R between rear power wi	itch RH. Rei	er to <u>PWC-64, "Remov</u>	Not exister	d
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or .CHECK GROUND Disconnect rear p Check continuity RH harness conn	Termin 4 <u>t normal?</u> rear power window swi replace harness. CIRCUIT 2 power window switch R between rear power wi	itch RH. Ref RH harness o indow switch	er to <u>PWC-64, "Remov</u>	val and Installation".	d
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or .CHECK GROUND Disconnect rear p Check continuity RH harness conn	Termin 4 <u>4</u> ear power window swi replace harness. CIRCUIT 2 ower window switch R between rear power wi ector.	itch RH. Ref RH harness o indow switch	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH	val and Installation".	d
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or .CHECK GROUND Disconnect rear p Check continuity RH harness conn Rear power of	Termin 4 <u>t normal?</u> rear power window swi replace harness. CIRCUIT 2 power window switch R between rear power wi ector.	itch RH. Rei RH harness indow switch	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH ector Termin	val and Installation".	d ndow uity
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or .CHECK GROUND Disconnect rear p Check continuity RH harness conn Rear power of Connector D74	Termin 4 <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u></u>	itch RH. Ref	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH ector Termin	val and Installation". r and rear power wir al Contin Existe	d ndow uity
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or CHECK GROUND Disconnect rear p Check continuity RH harness conn Rear power of Connector D74 Check continuity	Termin 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 2 2 2 2 2 2 2 2 2 2 3 between rear power were were were were were were were	itch RH. Ref	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH ector Termin 2 4	ral and Installation".	d ndow uity ed
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or CHECK GROUND Disconnect rear p Check continuity RH harness conn Rear power of Connector D74 Check continuity	Termin 4 <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u>4</u> <u></u>	itch RH. Ref	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH ector Termin 2 4	Not existent val and Installation". or and rear power wind al Continal	d ndow uity ed
Connector D74 the inspection resu (ES >> Replace of NO >> Repair or CHECK GROUND Disconnect rear p Check continuity RH harness conn Rear power of Connector D74 Check continuity Rear p	Termin 4 1 normal? rear power window swi replace harness. CIRCUIT 2 roower window switch R between rear power wi ector. vindow switch RH 3 between rear power w rower window switch RH	itch RH. Ref	er to <u>PWC-64, "Remov</u> connector. In RH harness connector ar power window motor RH ector Termin 2 4 h RH harness connector	ral and Installation".	d ndow uity ed

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< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Component Function Check

INFOID:000000006882621

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to <u>DLK-34</u>, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

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

Is the inspection result normal?

YES >> Door key cylinder switch is OK.

NO >> Refer to PWC-42, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000006882622

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

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

(+)		
	friver side) (door key cylinder itch)	(-)	Voltage (V) (Approx.)
Connector	Terminal		
D15	5	Ground	5
010	6	Ground	5

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH 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 door lock assembly (driver side) (door key cylinder switch) harness connector.

Power window ma	in switch	Front door lock assembly (driver sid inder switch)	lock assembly (driver side) (door key cyl- inder switch)	
Connector	Terminal	Connector Terminal		
D22	15	- D15	6	Existed
022	16	- 610	5	Existed

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window n	nain switch		Orationity
Connector	Terminal	- Ground	Continuity
D22	15	Giouna	Not existed
DZZ	16		
NO >> Repair or replace ha CHECK DOOR KEY CYLIND	Irness. ER SWITCH GROUND (
heck continuity between front on d ground.	loor lock assembly (drive	er side) (door key cylinder	switch) harness connecto
Front door lock assembly (driver si	de) (door key cylinder switch)		Continuity
Connector	Terminal	Ground	Continuity
D15	4		Existed
s the inspection result normal? YES >> GO TO 4. NO >> Repair or replace ha			
LCHECK DOOR KEY CYLIND		(linder switch)	
Check front door lock assembly Refer to <u>PWC-43. "Component I</u> a the inspection result normal? YES >> GO TO 5.	nspection".		witch) Refer to DLK-163
Check front door lock assembly Refer to <u>PWC-43, "Component I</u> s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u>	nspection". lock assembly (driver s noval and Installation".		witch). Refer to <u>DLK-163</u>
Check front door lock assembly Refer to <u>PWC-43, "Component I</u> s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-163</u>
Check front door lock assembly Refer to <u>PWC-43. "Component I</u> <u>s the inspection result normal?</u> YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-163</u>
Check front door lock assembly Refer to <u>PWC-43</u> , " <u>Component I</u> <u>s the inspection result normal?</u> YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC Refer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-163</u>
Check front door lock assembly Refer to <u>PWC-43</u> , "Component I s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC Refer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END Component Inspection	inspection". lock assembly (driver s noval and Installation". IDENT dent".		·
NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC Refer to <u>GI-44, "Intermittent Incid</u>	inspection". lock assembly (driver s noval and Installation". IDENT dent".		·
Check front door lock assembly Refer to <u>PWC-43</u> , "Component I s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> D.CHECK INTERMITTENT INC Refer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END Component Inspection	Iock assembly (driver s noval and Installation". DENT dent". ER SWITCH	side) (door key cylinder s	INFOID:0000000688262
heck front door lock assembly efer to <u>PWC-43</u> , "Component I s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Ren</u> O.CHECK INTERMITTENT INC efer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END COMPONENT INSPECTION CHECK DOOR KEY CYLIND . Turn ignition switch OFF. Disconnect front door lock a	Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (ke nbly (driver side) (key cyli ide) (key cylinder switch)	side) (door key cylinder s	INFOID:0000000688262
heck front door lock assembly efer to <u>PWC-43</u> , "Component I s the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Rem</u> OCHECK INTERMITTENT INC efer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END Component Inspection COMPONENT INSPECTION .CHECK DOOR KEY CYLIND . Turn ignition switch OFF. Disconnect front door lock a . Check front door lock assem Front door lock assembly (driver s Terminal	Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (ke nbly (driver side) (key cyli ide) (key cylinder switch)	side) (door key cylinder s ey cylinder switch) connect inder switch).	INFOID:0000000688262
Sheck front door lock assembly defer to <u>PWC-43</u> , "Component I is the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Rem</u> DOOR LOCK : Rem CHECK INTERMITTENT INC defer to <u>GI-44</u> , "Intermittent Incident of <u>Section</u> Section Se	Iock assembly (driver s noval and Installation". DENT dent". ER SWITCH ssembly (driver side) (key cylinder switch)	side) (door key cylinder s ey cylinder switch) connect inder switch).	INFOID-00000000658262
Check front door lock assembly Refer to <u>PWC-43</u> , "Component I is the inspection result normal? YES >> GO TO 5. NO >> Replace front door <u>"DOOR LOCK : Rem</u> D.CHECK INTERMITTENT INC Refer to <u>GI-44</u> , "Intermittent Incid >> INSPECTION END COMPONENT INSPECTION COMPONENT INSPECTION .CHECK DOOR KEY CYLIND . Turn ignition switch OFF. Disconnect front door lock assem Front door lock assembly (driver s Terminal	Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (ke nbly (driver side) (key cyli ide) (key cylinder switch)	side) (door key cylinder s ey cylinder switch) connect inder switch). Key position Unlock	INFOID:0000000688262 or. Continuity Existed

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000006882624

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to <u>DLK-32</u>, "<u>DOOR LOCK</u> : <u>CONSULT Function</u> (<u>BCM - DOOR LOCK</u>)".

Monitor item	C	ondition	
CDL LOCK SW	LOCK	: ON	
CDE LOCK SW	UNLOCK	: OFF	
	LOCK	: OFF	
CDL UNLOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-44</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006882625

1. CHECK POWER WINDOW SWITCH INPUT SIGNAL

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

(+) power window	main switch	()	Signal (Reference value)
Connector	Terminal		
D22	13	Ground	(V) 15 0 10 ms JPMIA0013GB

Is the inspection result normal?

YES >> GO TO 4.

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

3. Turn ignition switch ON.

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

(Power windo	(+) Power window main switch		Voltage (V) (Approx.)	
Connector	Terminal		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
D22	13	Ground	12	

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63. "Removal and Installation".

< DTC/CIRCUIT DIAGNOSIS >

	nnector and power wi tween BCM harness o			ch harness connector.
BC	M	Power winde	ow main switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M120	8	D22	13	Existed
Check continuity be	tween BCM harness o	connector and grou	nd.	
Connector	BCM Terminal		Ground	Continuity
M120	8			Not existed
efer to <u>GI-44, "Intermit</u> >> INSPECTIC RONT POWER \	N END	CH (PASSEN(GER SIDE)	
	VINDOW SWITC	H (PASSENGE	R SIDE) : Com	ponent Function
RONT POWER V Check				INFOID:000000006882
heck	NDOW SWITCH OUT	PUT SIGNAL		INFOID:000000006882
CHECK POWER WI	", "CDL UNLOCK SV	V") in "DATA MONI		WER DOOR LOCK SY
CHECK POWER WI	", "CDL UNLOCK SV efer to <u>DLK-32, "DOC</u>	V") in "DATA MONI		WER DOOR LOCK SY

UNLOCK

LOCK

UNLOCK

>> Refer to PWC-45, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Proce-

: OFF

: OFF

: ON

1.CHECK POWER WINDOW SWITCH INPUT SIGNAL

>> Power window serial link is OK.

1. Turn ignition switch ON.

CDL LOCK SW

YES

NO

CDL UNLOCK SW

Is the inspection result normal?

dure".

2. Check signal between front power window switch (passenger side) harness connector and ground with oscilloscope.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006882627

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< DTC/CIRCUIT DIAGNOSIS >

(+) Front power window sw	itch (passenger side)	()	Signal
Connector	Terminal		(Reference value)
D50	16	Ground	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <u>PWC-63, "Removal and Installa-</u> tion".

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK 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.

1	(+) Front power window switch (passenger side)		Voltage (V) (Approx.)
Connector	Terminal		
D50	16	Ground	12

Is the inspection result normal?

YES >> Replace power window main switch. Refer to <u>PWC-63, "Removal and Installation"</u>.

NO >> GO TO 3.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect power window main switch connector.

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

Power windo	Power window main switch		Front power window switch (passenger side)		
Connector	Terminal	Connector Terminal		Continuity	
D22	13	D50	16	Existed	

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D22	13		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END REAR POWER WINDOW SWITCH LH

< DTC/CIRCUIT DIAGNOSIS >

REAR POWER WINDOW SWITCH LH : Component Function Check

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to <u>DLK-32, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)"</u>.

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-47, "REAR POWER WINDOW SWITCH LH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH LH : Diagnosis Procedure

1.CHECK POWER WINDOW SWITCH INPUT SIGNAL

- 1. Turn ignition switch ON.
- 2. Check signal between rear power window switch LH harness connector and ground with oscilloscope.

	(+) Rear power wind		()	Signal (Reference value)	
(Connector	Terminal	-		
	D54	16	Ground	(V) 15 0 0 10 10 10 10 10 10 10 10	J PWC

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to <u>PWC-63, "Removal and Installation"</u>. NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK SIGNAL

1. Turn ignition switch OFF.

2. Disconnect rear power window switch LH connector.

3. Turn ignition switch ON.

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

-	(+) Rear power window switch LH				0
-			()	Voltage (V) (Approx.)	
-	Connector Terminal			D	
_	D54	16	Ground	12	P

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".

NO >> GO TO 3.

3.CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect power window main switch connector.

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< DTC/CIRCUIT DIAGNOSIS >

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

Power window main switch		Rear power window switch LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D22	13	D54	16	Existed

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

Power window main switch			Continuity	
Connector	Connector Terminal		Continuity	
D22	13		Not existed	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to <u>GI-44, "Intermittent Incident"</u>.

>> INSPECTION END REAR POWER WINDOW SWITCH RH

REAR POWER WINDOW SWITCH RH : Component Function Check

INFOID:000000006882630

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYS-TEM" with CONSULT. Refer to <u>PWC-48, "REAR POWER WINDOW SWITCH RH : Diagnosis Procedure"</u>.

Monitor item	C	ondition	
CDL LOCK SW	LOCK	: ON	
CDE LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-48, "REAR POWER WINDOW SWITCH RH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH RH : Diagnosis Procedure

INFOID:000000006882631

1.CHECK POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

2. Check signal between rear power window switch RH harness connector and ground with oscilloscope.

	(+)		_	
Rear power w	vindow switch RH	(-)		Signal Reference value)
Connector	Terminal		(1101010	
D74	16	Ground	(V) 15 10 5 0 10 10 10 10 10	JPMIA0013GB
ne inspection result	normal?			
	ear power window swit	ch RH. Refer to <u>PV</u>	VC-63, "Removal and	d Installation".
O >> GO TO 2.				
CHECK POWER W	INDOW SERIAL LINK	SIGNAL		
	ower window switch RI	H connector.		
	ween rear power wind	ow switch RH harn	ess connector and g	round.
		ow switch RH harn	ess connector and g	
Check voltage betw	ween rear power wind	ow switch RH harn	ess connector and g	Voltage (V)
Check voltage betw	ween rear power wind (+)			
Check voltage betw Rear po Connector D74	ween rear power winde (+) wer window switch RH Termina 16			Voltage (V)
Check voltage betw Rear po Connector D74 he inspection result ES >> Replace po D >> GO TO 3. CHECK POWER W Disconnect power	ween rear power winde (+) wer window switch RH Termina 16 normal? ower window main switch content window main switch content oetween power window	tch. Refer to <u>PWC</u>	(–) Ground -63, "Removal and Ir	Voltage (V) (Approx.) 12 Istallation".
Check voltage betw Rear po Connector D74 he inspection result ES >> Replace po D >> GO TO 3. CHECK POWER W Disconnect power Check continuity b RH harness conne	ween rear power winde (+) wer window switch RH Termina 16 normal? ower window main switch contents Window main switch content	tch. Refer to <u>PWC</u> CIRCUIT onnector. v main switch harr	(-) Ground -63, "Removal and Ir ness connector and r	Voltage (V) (Approx.) 12 Istallation".
Check voltage betw Rear po Connector D74 he inspection result ES >> Replace po D >> GO TO 3. CHECK POWER W Disconnect power Check continuity b RH harness conne	ween rear power winde (+) wer window switch RH Termina 16 normal? ower window main switch window main switch context between power window totor.	tch. Refer to <u>PWC</u> CIRCUIT onnector. v main switch harr	(–) Ground -63, "Removal and Ir ness connector and r window switch RH	Voltage (V) (Approx.) 12 Istallation".
Check voltage betw Rear po Connector D74 e inspection result S >> Replace po >> GO TO 3. CHECK POWER W Disconnect power Check continuity b RH harness conne	ween rear power winde (+) wer window switch RH Termina 16 normal? ower window main switch contents Window main switch content	tch. Refer to <u>PWC</u> CIRCUIT onnector. v main switch harr	(-) Ground -63, "Removal and Ir ness connector and r	Voltage (V) (Approx.) 12 Istallation". ear power window sv

	Power window main switch			Continuity	Ν
-	Connector	Terminal	Ground	Continuity	
-	D22	13		Not existed	
ls	he inspection result norm	al?			0

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

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NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH < SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:000000006882632

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. <u>PWC-25, "BCM : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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

Check power window switch power supply and ground circuit. Refer to <u>PWC-25, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u>.

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 <u>GI-44, "Intermittent Incident"</u>.
- NO >> GO TO 1.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diver ober over window leone boed not of ervice	Δ
Diagnosis Procedure	
1. CHECK DRIVER SIDE POWER WINDOW MOTOR	В
Check driver side power window motor. Refer to <u>PWC-29, "DRIVER SIDE : Component Function Check"</u> .	
Is the measurement value within the specification?	С
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	D
Confirm the operation again.	_
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> .	
NO >> GO TO 1.	-
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FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE < SYMPTOM DIAGNOSIS >

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) POWER SUPPLY AND GROUND CIR-CUIT

Check front power window switch (passenger side) power supply and ground circuit. Refer to <u>PWC-26. "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit. Refer to <u>PWC-30, "PASSENGER SIDE : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 $\mathbf{3}$.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

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

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side). Refer to <u>GI-44. "Intermittent Incident"</u>

>> INSPECTION END WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:000000006882636

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT

Check front power window switch (passenger side) serial link circuit. Refer to <u>PWC-45. "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check"</u>. <u>Is the inspection result normal?</u>

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-44, "Intermittent Incident"</u>.

NO >> GO TO 1.

Revision: 2013 September

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE < SYMPTOM DIAGNOSIS >
REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED
WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED : Diagnosis Procedure
1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT $^{\circ}$
Check rear power window switch power supply and ground circuit. Refer to <u>PWC-27, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> .
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.
2. CHECK REAR POWER WINDOW MOTOR LH
Check rear power window motor LH. Refer to <u>PWC-31, "REAR LH : Component Function Check"</u> .
<u>Is the inspection result normal?</u> 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 <u>GI-44, "Intermittent Incident"</u> . NO >> GO TO 1. WHEN REAR POWER WINDOW SWITCH LH IS OPERATED
WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure
1.REPLACE REAR POWER WINDOW SWITCH LH
Replace rear power window switch LH. Refer to <u>PWC-64, "Removal and Installation"</u>
>> INSPECTION END WHEN POWER WINDOW MAIN SWITCH IS OPERATED
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure
1. CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT
Check rear power window switch LH serial link circuit. Refer to PWC-47, "REAR POWER WINDOW SWITCH LH : 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-44, "Intermittent Incident". NO >> GO TO 1.

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE < SYMPTOM DIAGNOSIS >

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED

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

1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check rear power window switch power supply and ground circuit. Refer to <u>PWC-27, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to PWC-31, "REAR 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 <u>GI-44, "Intermittent Incident"</u>.

NO >> GO TO 1. WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure

INFOID:000000006882641

1.REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH. Refer to <u>PWC-64, "Removal and Installation"</u>

>> INSPECTION END WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:000000006882642

1.CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT

Check rear power window switch RH serial link circuit. Refer to PWC-48, "REAR POWER WINDOW SWITCH RH : 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-44, "Intermittent Incident"</u>.

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPE	RATE NORMAL-
< SYMPTOM DIAGNOSIS >	
AUTO OPERATION DOES NOT OPERATE BUT MANUAL	OPERATE NOR-
MALLY	
DRIVER SIDE	
DRIVER SIDE : Diagnosis Procedure	INFOID:00000006882643
1.PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is performed and operation is confirmed. Refer to <u>PWC-21, "Work Procedure"</u> .	
Is the inspection result normal?	
YES >> INSPECTION END NO >> GO TO 2.	
2. CHECK ENCODER (DRIVER SIDE) CIRCUIT	
Check encoder (driver side) circuit.	
Refer to <u>PWC-33. "DRIVER SIDE : Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	
3.CONFIRM THE OPERATION	
Confirm the operation again. <u>Is the result normal?</u>	
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> .	
NO >> GO TO 1. PASSENGER SIDE	
PASSENGER SIDE : Diagnosis Procedure	INFOID:00000006882644
1.PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is performed and operation is confirmed. Refer to <u>PWC-21, "Work Procedure"</u> .	
Is the inspection result normal?	
YES >> INSPECTION END	
NO $>>$ GO TO 2. 2.CHECK ENCODER (PASSENGER SIDE) CIRCUIT	
Check encoder (passenger side) circuit.	
Refer to PWC-35, "PASSENGER SIDE : Component Function Check".	
<u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	
3. CONFIRM THE OPERATION	
Confirm the operation again.	
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".	
NO >> GO TO 1.	
REAR LH	
REAR LH : Diagnosis Procedure	INFOID:00000006882645
1. PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is performed and operation is confirmed	

Initialization procedure is performed and operation is confirmed.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-

< SYMPTOM DIAGNOSIS >

Refer to <u>PWC-21, "Work Procedure"</u>

Is the inspection result normal?

YES >> INSPECTION END NO >> GO TO 2.

2.CHECK ENCODER (REAR LH) CIRCUIT

Check encoder (rear LH) circuit.

Refer to PWC-37, "REAR 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 <u>GI-44, "Intermittent Incident"</u>.

NO >> GO TO 1.

REAR RH

REAR RH : Diagnosis Procedure

INFOID:000000006882646

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed. Refer to <u>PWC-21, "Work Procedure"</u>.

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK ENCODER (REAR RH) CIRCUIT

Check encoder (rear RH) circuit.

Refer to PWC-39, "REAR 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-44, "Intermittent Incident".

NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >	
ANTI-PINCH FUNCTION DOES NOT OPERATE	А
Diagnosis Procedure	Λ
1. CHECK POWER WINDOW AUTO OPERATION	В
Check AUTO operation of the door when anti-pinch function does not operate.	
Is the inspection result normal?	0
YES >> GO TO 2. NO >> Refer to <u>PWC-55</u> , " <u>DRIVER SIDE</u> : <u>Diagnosis Procedure</u> " (driver side), <u>PWC-55</u> , " <u>PASSENGER</u>	C
<u>SIDE : Diagnosis Procedure</u> " (passenjer side), <u>PWC-55, "REAR LH : Diagnosis Procedure</u> " (rear LH), <u>PWC-56, "REAR RH : Diagnosis Procedure</u> " (rear RH).	D
2.CONFIRM THE OPERATION	
Confirm the operation again.	Е
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> . NO >> GO TO 1.	
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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:000000006882648

1.CHECK DOOR SWITCH

Check door switch. Refer to DLK-60, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK POWER WINDOW MAIN SWITCH SERIAL LINK CIRCUIT

Check power window main switch serial link circuit. Refer to <u>PWC-44, "POWER WINDOW MAIN SWITCH : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 $\mathbf{3}$. Confirm the operation

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS < SYMPTOM DIAGNOSIS >

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-DOWS

Diagnosis Procedure	INFOID:000000006882649	В
1. PERFORM INITIALIZATION PROCEDURE		D
Perform Initialization procedure and check that inspection result is normal. Refer to <u>PWC-21, "Work Procedure"</u>		С
Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2.		D
2. CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (DOOR KEY CYLINDER SWITCH)		
Check driver side door lock assembly (door key cylinder switch). Refer to <u>PWC-42, "Component Function Check"</u>		Е
Is the inspection result normal?		
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.		F
3. CONFIRM THE OPERATION		0
Confirm the operation again.		G
Is the result normal?		
YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> NO >> GO TO 1.		Η

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

INFOID:000000006882650

NOTE:

Before performing the diagnosis in the following procedure, check "Work Flow". Refer to <u>DLK-44, "Work Flow"</u>.

Diagnosis Procedure

INFOID:000000006882651

1.CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent key button?

YES >> GO TO 2.

NO >> Go to <u>DLK-20, "REMOTE KEYLESS ENTRY FUNCTION : 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 >> Go to <u>PWC-25</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

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

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

Refer to DLK-34, "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.CHECK POWER WINDOW MAIN SWITCH SERIAL LINK CIRCUIT

Check power window main switch serial link circuit. Refer to <u>PWC-44, "POWER WINDOW MAIN SWITCH : Component Function Check"</u>.

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the malfunctioning parts.

5.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

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Diagnosis Procedure	INFOID:000000006882652	
1.REPLACE POWER WINDOW MAIN SWITCH		В
Replace power window main switch. Refer to <u>PWC-63, "Removal and Installation"</u> .		
>> INSPECTION END		С

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POWER WINDOW SWITCH DOES NOT ILLUMINAT	E
< SYMPTOM DIAGNOSIS >	
POWER WINDOW SWITCH DOES NOT ILLUMINATE	
DRIVER SIDE	
DRIVER SIDE : Diagnosis Procedure	INFOID:000000006882653
1.REPLACE POWER WINDOW MAIN SWITCH	
Replace power window main switch. Refer to <u>PWC-63, "Removal and Installation"</u> .	
>> INSPECTION END PASSENGER SIDE	
PASSENGER SIDE : Diagnosis Procedure	INFOID:000000006882654
1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	
Replace front power window switch (passenger side). Refer to <u>PWC-63, "Removal and Installation"</u> .	
>> INSPECTION END REAR LH	
REAR LH : Diagnosis Procedure	INFOID:000000006882655
1. REPLACE REAR POWER WINDOW SWITCH LH	
Replace rear power window switch LH. Refer to <u>PWC-64, "Removal and Installation"</u> .	
>> INSPECTION END REAR RH	
REAR RH : Diagnosis Procedure	INFOID:00000006882656
1.REPLACE REAR POWER WINDOW SWITCH RH	
Replace rear power window switch RH. Refer to <u>PWC-64, "Removal and Installation"</u> .	
>> INSPECTION END	

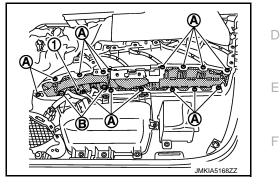
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION FRONT POWER WINDOW SWITCH

Removal and Installation

REMOVAL

- 1. Remove the front door finisher. Refer to <u>INT-25, "FRONT DOOR FINISHER : Removal and Installation"</u>.
- 2. Remove the armrest mounting screws (A), and then remove the armrest from the front door finisher.
- 3. Remove mounting screws (B) of power window main switch(1) from the armrest.



4. Push out and remove power window main switch (1) from lower side, as shown in the figure.

INSTALLATION

Install in the reverse order of removal.

NOTE:

- If power window main switch or front power window switch (passenger side) is replaced or is removed, it is necessary to perform the initialization procedure.
- The same procedure is also performed for front power window switch (passenger side).

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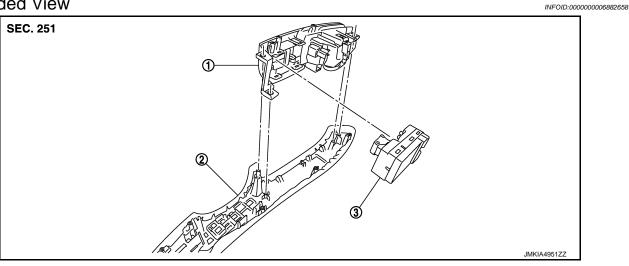
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REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

REAR POWER WINDOW SWITCH

Exploded View



1. Power window switch finisher

2. Rear armrest

3. Rear power window switch

INFOID:000000006882659

Removal and Installation

REMOVAL

- 1. Remove the rear door finisher. Refer to <u>INT-27, "REAR DOOR FINISHER : Removal and Installation"</u>.
- 2. Remove the armrest mounting screws (A), and then remove the armrest from the rear door finisher.
- 3. Remove grip finisher (2) from the armrest.
- Remove mounting screws (B) of power window switch finisher (1) from the armrest. Remove power window switch finisher (1) from the armrest.
- 5. Disengage pawls of power window switch finisher (1) from rear power window switch (3), using remover tool. Remove rear power window switch(3).

CAUTION:

Never bend finisher pawls when removing switch.

INSTALLATION

Install in the reverse order of removal.

NOTE:

If rear power window switch is replaced or is removed, it is necessary to perform the initialization procedure.

