PWC SECTION В 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 12V battery, and wait at least 3 minutes before performing any service.

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION COMPONENT PARTS

Component Parts Location

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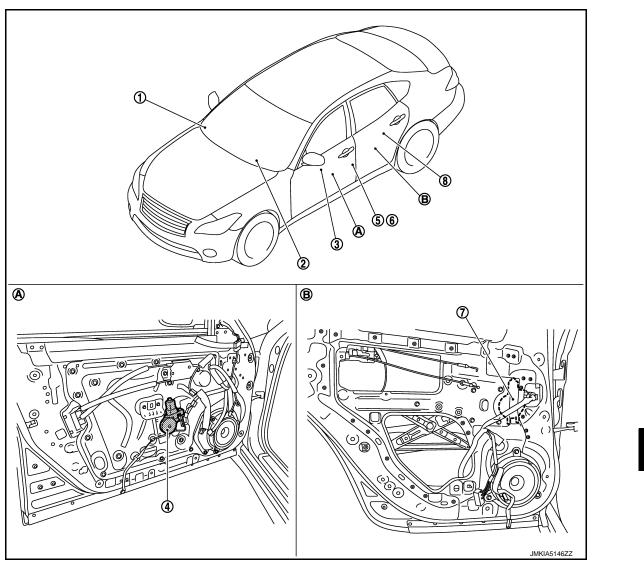
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- 1. Remote keyless entry receiver Refer to <u>DLK-9, "DOOR LOCK SYS-</u> <u>TEM : Component Parts Location"</u>
- 4. Front power window motor (driver side)
- 7. Rear power window motor LH
- A. View with front door finisher removed B.
- BCM Refer to <u>BCS-4, "BODY CONTROL</u> <u>SYSTEM : Component Parts Loca-</u> <u>tion"</u>
- 5. Front door switch (driver side)

2.

- 8. Rear power window switch LH
 - View with rear door finisher removed
- 3. Power window main switch
- 6. Front door lock assembly (driver side) (door key cylinder switch)

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COMPONENT PARTS

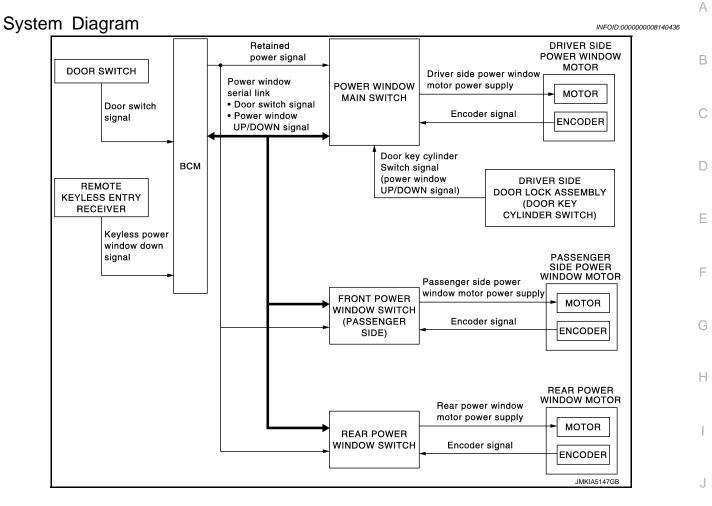
< SYSTEM DESCRIPTION >

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 switch.
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 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-33, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)"</u>. **NOTE:**

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< SYSTEM DESCRIPTION >

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

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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.

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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	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	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	Cub sustan aslastian item	Diagnosis mode		
	Sub system selection item	Work Support Data Monitor		Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp 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	r value) of the moment a particular DTC is detected	_	
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	E	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	C	
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"		
	ACC>ON		While turning power supply position from "ACC" to "IGN"	Г	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)		
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	6	
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)		
	ACC>OFF	Power position status of	While turning power supply position from "ACC" to "OFF"		
Vehicle Condition	OFF>LOCK	the moment a particular DTC is detected*	While turning power supply position from "OFF" to "LOCK"		
	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 position is "OFF".) to low power consumption mode	ŀ	
	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"		
	OFF		Power supply position is "OFF"		
	ACC		Power supply position is "ACC"		
	ON		Power supply position is "IGN"	,	
	ENGINE RUN		Power supply position is "RUN"		
	CRANKING		Power supply position is "CRANKING"	P	
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:

*: Refer to <u>PCS-34, "POWER DISTRIBUTION SYSTEM : System Description"</u> for details of the power supply position. **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.	D
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.	Γ

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:000000008140441

ECU	Reference
	BCS-34, "Reference Value"
ВСМ	BCS-54, "Fail-safe"
	BCS-54, "DTC Inspection Priority Chart"
	BCS-55, "DTC Index"

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT

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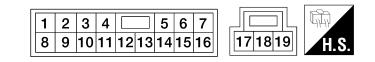
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PHYSICAL VALUES POWER WINDOW MAIN SWITCH

	inal No. e color)	Description		Condition	Voltage [V]	G
+	-	Signal name	Input/ Output	Condition	(Approx.)	
3 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer op- erates.	12	Н
4 (Y)	Ground	Battery power supply	Input	_	12	I
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	J
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	PWC
7 (B)	Ground	Ground	—	_	0	L
				IGN SW ON	12	
9	Ground	Retained power signal	Input	Within 45 second after ig- nition switch is turned to OFF	12	M
(O)		roaniez poror orginal		When driver side or pas- senger side door is opened during retained power operation	0	Ν
10 (LG)	Ground	Encoder ground	_	_	0	0
11 (P)	Ground	Encoder pulse signal 1	Input	When power window mo- tor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	Ρ

Revision: 2013 March

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 (V)	Ground	Power window serial link	Input/ Output	IGN SW ON or power win- dow timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB	
15 (BR)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral →Locked)	$5 \rightarrow 0$	
16 (GR)	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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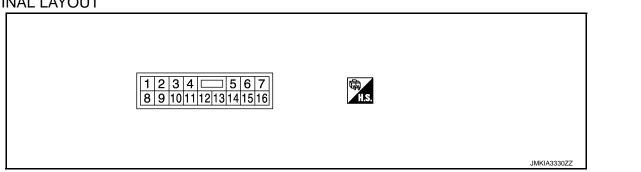
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TERMINAL LAYOUT



PHYSICAL VALUES FRONT POWER WINDOW SWITCH

Terminal No. (wire color)		Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	(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 (LG)	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) 6 4 2 0 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	Condition	(Approx.)	
15 (O)	Ground	Encoder pulse signal 2	Input	When power window motor operates	(V) 6 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 10 TO TO TO TO TO TO TO TO TO TO	

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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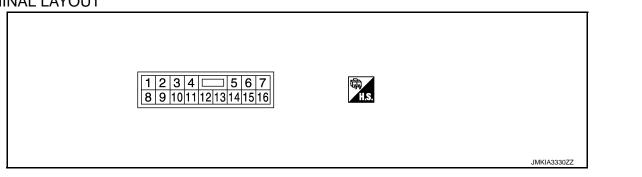
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TERMINAL LAYOUT



PHYSICAL VALUES

REAR POWER WINDOW SWITCH

Terminal No. (wire color)	Description		Condition	Voltage [V]
+ -	Signal name	Input/ Output	Condition	(Approx.)
3 (Y) 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 4 2 0 10 ms

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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:000000008140447

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.

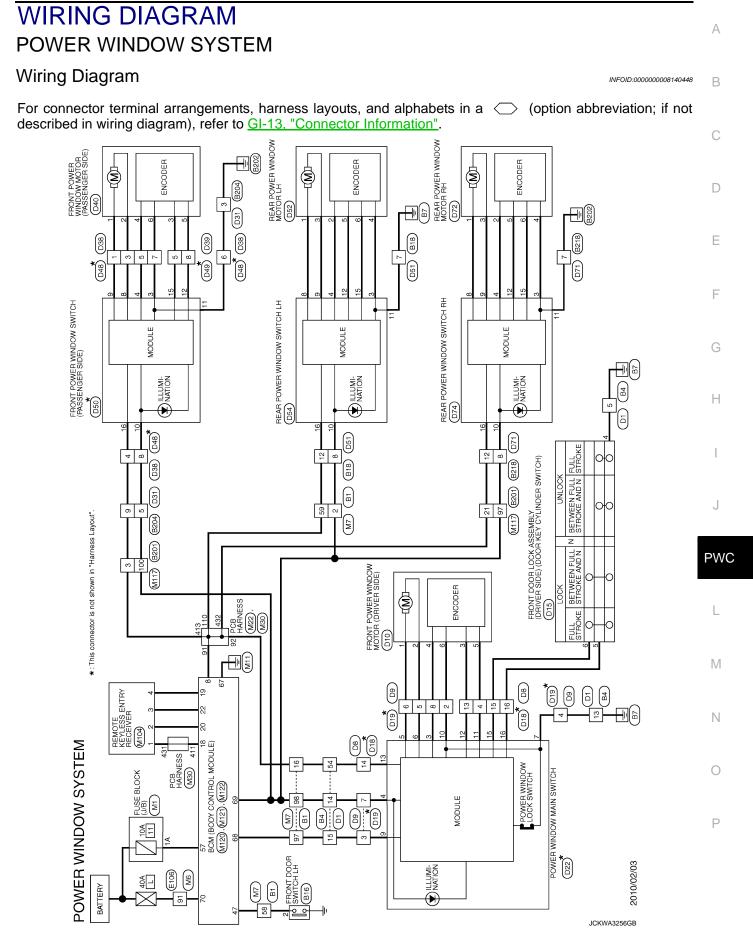
Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously 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 WORKFLOW

Work Flow

INFOID:000000008140449

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 "COMPONENT DIAGNOSIS"

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

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

ADDITIONAL SERVICE WHEN REMOVING 12V BATTERY NEGATIVE TERMI-NAL

< BASIC INSPECTION >
ADDITIONAL SERVICE WHEN REMOVING 12V BATTERY NEGATIVE
TERMINAL

Description INFOID:00000008140450	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 12V 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 12V 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. 	D
 Operation of regulator assembly as an independent unit. Removal and installation of door glass. Removal and installation of door glass run. 	E
The following specified operations can not be performed under the non-initialized condition.Auto-up operationAnti-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	
Check anti-pinch function. Refer to PWC-24, "Work Procedure".	
	J

>> END

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ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH

Description

INFOID:000000008140452

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 12V 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 12V 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:000000008140453

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to <u>PWC-23, "Work Procedure"</u>.

>> 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	^
Description	A
 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 12V 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 12V 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. Pomoval and installation of doer along. 	B C D
 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 	E
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.	
>> GO TO 4. 4. STEP 4	L
Check anti-pinch function. Refer to PWC-24, "Work Procedure".	M
>> END	Ν
	0

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 12V 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 12V 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 wood 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 March

INFOID:000000008140457

INFOID:00000008140456

< 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	Potton, power 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		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
M122	57	Orecord Detterms weltered		-	
	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-49, "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:000000008140458

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 window main switch			(—)	Voltage (V) (Approx.)
Connector	Termina	al		()
D22	4		Ground	12
	9		Cround	12
the inspection result	normal?			
YES >> GO TO 2.				
NO >> GO TO 3.				
CHECK GROUND	CIRCUIT			
. Turn ignition switc				
. Check continuity b	etween power window	v main switch harne	ess connector and	d ground.
	n			1
Powe	Power window main switch			
		al	Ground	Continuity
Connector	r window main switch Termina 7	al	Ground	Continuity
Connector D22	Termina 7	al	Ground	-
Connector D22 the inspection result	Termina 7	al	Ground	-
Connector D22 the inspection result YES >> GO TO 4.	Termina 7 normal?	al	Ground	-
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or	Termina 7 normal? replace harness.	al	Ground	-
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S	Termina 7 normal? replace harness. UPPLY CIRCUIT 2	al	Ground	-
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc	Termina 7 normal? replace harness. UPPLY CIRCUIT 2 h OFF.	al	Ground	-
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc . Disconnect BCM of	Termina 7 normal? replace harness. UPPLY CIRCUIT 2 h OFF. connector.			Existed
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc . Disconnect BCM of	Termina 7 normal? replace harness. UPPLY CIRCUIT 2 h OFF. connector.			-
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc Disconnect BCM of . Check continuity b	Termina 7 normal? replace harness. UPPLY CIRCUIT 2 h OFF. connector.	connector and pov		Existed switch harness connecto
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc Disconnect BCM of . Check continuity b	Termina 7 replace harness. UPPLY CIRCUIT 2 h OFF. connector. between BCM harness	connector and pov	ver window main	Existed
Connector D22 the inspection result YES >> GO TO 4. NO >> Repair or CHECK POWER S . Turn ignition switc Disconnect BCM of Check continuity b	Termina 7 replace harness. UPPLY CIRCUIT 2 h OFF. connector. between BCM harness	connector and pov	ver window main	Existed switch harness connecto

4. Check continuity between BCM harness connector and ground.

ВС	CM		Continuity
Connector	Connector Terminal		Continuity
M122	68	Ground	Not existed
WI122	69		NOT EXISTED

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-80</u>, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

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

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000008140460

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAG	NOSIS >			
	wer window switch (
3. Check voltage betw	een front power wind	dow switch (passeng	jer side) harness co	nnector and ground.
	(+)			
Front power window switch (passenger side)		()		Voltage (V) (Approx.)
Connector	Termina	al		
D50	10		Ground	12 (
Is the inspection result of YES >> GO TO 2. NO >> GO TO 3. 2.CHECK GROUND C	IRCUIT			[
Check continuity betwee	en front power windo	w switch (passenge	r side) harness coni	nector and ground.
	ower window switch assenger side)		Ground	Continuity
Connector	Termina	al		
D50 Is the inspection result (11			Existed
3.CHECK POWER SL 1. Disconnect BCM co	onnector.	s connector and fron	t power window sw	itch (passenger side) har-
BC	CM		window switch nger side)	Continuity
Connector	Terminal	Connector	Terminal	
M122	69	D50	10	Existed
3. Check continuity be	etween BCM harness	connector and grou	nd.	
	BCM			
Connector	Termina	al	Ground	Continuity
M122	69			Not existed
	CM. Refer to <u>BCS-80</u> eplace harness. ENT INCIDENT ttent Incident". ON END VINDOW SWITC	ЭН		INFOID:00000008140461
1.CHECK POWER SL		5	-	
1. Turn ignition switch	0.55			

Disconnect rear power window switch LH connector and rear power window switch RH connector.
 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 10		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 switch		Continuity	
	Connector		Terminal	Ground	Continuity
	LH	D54	11	Glound	Existed
	RH	D74			EXISTED

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.

B	BCM		Rear power window switch		
Connector	Terminal	Connector		Terminal	Continuity
M122	69	LH	D54	10	Existed
101122	09	RH	D74	10	Existed

4. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector	Connector Terminal		Continuity
M122	69		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-80, "Removal and Installation"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW MOTOR

				OTOR		
DTC/CIRCUIT						
POWER WIN		TOR				
RIVER SIDE	•					
RIVER SIDE	: Compone	nt Functio	n Check			INFOID:0000000814046
.CHECK POWE	R WINDOW M	OTOR CIRC	UIT			
		(driver side)	operation with pow	ver window	main switch	۱.
the inspection re						
	bower window to <u>PWC-29, "D</u>		: Diagnosis Proce	dure".		
RIVER SIDE	: Diagnosis	Procedur	e			INFOID:0000000814046
	-		R INPUT SIGNAL			
			INFOT SIGNAL			
Disconnect fro	nt power windo	ow motor (dri	ver side) connecto	r.		
Turn ignition s Check voltage		power windo	w motor (driver sid	le) harness	connector	and ground.
		•		,		
Front power windo	+) w motor (driver side	e) (–)		Condition		Voltage (V)
Connector	Terminal			0011011011		(Approx.)
	2				UP	12
D10	Z	Ground	Power window	main switch	DOWN	0
Dio	1	Croana	i ower window		UP	0
					DOWN	12
NO >> GO T(or (driver side). Re	fer to <u>GW-2</u>	<u>0. "Remova</u>	al and Installation".
Turn ignition s Disconnect po	witch OFF. wer window ma	ain switch co	nnector.	ess connect	or and from	t power window moto
Turn ignition s Disconnect po Check continu	witch OFF. wer window ma	ain switch co wer window	nnector.	ess connecto	or and fron	t power window moto
Turn ignition s Disconnect po Check continu (driver side) ha	witch OFF. wer window ma ity between po arness connect	ain switch co wer window or.	nnector. main switch harne Front power	window motor		t power window moto
Turn ignition s Disconnect po Check continu (driver side) ha	witch OFF. wer window ma ity between po arness connect window main switc	ain switch co wer window or. h	nnector. main switch harne Front power (driv	window motor er side)		t power window moto Continuity
Turn ignition s Disconnect po Check continu (driver side) ha	witch OFF. wer window ma ity between po arness connect window main switc	ain switch co wer window or. h minal	nnector. main switch harne Front power	window motor er side) Term	iinal	·
Turn ignition s Disconnect po Check continu (driver side) ha Power	witch OFF. wer window ma ity between po arness connect window main switc Ten	ain switch co wer window or. h	nnector. main switch harne Front power (driv	window motor er side)	inal	·
Turn ignition s Disconnect po Check continu (driver side) ha Power Connector D22	witch OFF. wer window ma ity between po arness connect window main switc	ain switch co wer window or. h minal 5 6	nnector. main switch harne Front power (driv Connector	window motor er side) Term 1 2	inal	Continuity Existed
Turn ignition s Disconnect po Check continu (driver side) ha Power Connector D22 Check continu	witch OFF. wer window ma ity between po arness connect window main switc	ain switch co wer window or. h minal 5 6 wer window i	nnector. main switch harne Front power (driv Connector D10	window motor er side) Term 1 2	inal	Continuity Existed
 Turn ignition s Disconnect po Check continu (driver side) ha Power Connector D22 Check continu 	witch OFF. wer window ma ity between po arness connect window main switc Terr ity between po	ain switch co wer window or. h minal 5 6 wer window i	nnector. main switch harne Front power (driv Connector D10	window motor er side) Term 1 2 ss connecto	inal	Continuity Existed
 Turn ignition s Disconnect po Check continu (driver side) hat Power Connector D22 Check continu 	witch OFF. wer window ma ity between po arness connect window main switc Terr ity between po	ain switch co wer window or. h minal 5 6 wer window n n switch	nnector. main switch harne Front power (driv Connector D10	window motor er side) Term 1 2	inal	Continuity Existed

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:000000008140464

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:000000008140465

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					
	2	Ground Front power window switch (passenger side)		UP	12	
D 40	2		Front power window switch	DOWN	0	
D40	1		(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	Connector Terminal		
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)	Ground	Continuity
Connector	Terminal		Continuity
D50	8	Ground	Not existed
D50	9		NUL EXISIEU

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 C	Chec	k			INFOID:000000008140466	٥
1.	CHECK POWE		OTOR CIR	CUIT					A
LH			LH operati	ion wi	ith power windo	w main switch	or rear p	ower window switch	В
Y	ES >> Rear p	power window n			osis Procedure"				С
RE	EAR LH : Dia	agnosis Proc	edure					INFOID:00000008140467	
1.	CHECK REAR	POWER WIND	оw мото	DR IN	PUT SIGNAL				D
1. 2. 3. 4.	Turn ignition s	ar power windov witch ON.			nector. notor LH harnes	s connector ar	nd ground.		E
-	((+)							F
-	Rear power w	indow motor LH	(-)			Condition		Voltage (V) (Approx.)	
_	Connector	Terminal							G
		1					UP	12	
	D52	D52	Grou	nd	Rear power wi	ndow switch LH	DOWN UP	0	Н
		3			DOWN		12		
N 2. 1. 2. 3.	CHECK POWE Turn ignition s Disconnect rea	R WINDOW MO witch OFF. ar power windov ity between rea	w switch L	H con	nector.	ess connector	and rear p	power window motor	J PW
-	Rear pov	ver window switch	H		Rear power w	indow motor LH		Continuity	L
-	Connector	Terr	ninal	Connector Terminal			Continuity		
	D54		3 9	-	D52	1		Existed	M
4.	Check continu	ity between rea	r power wi	indow	switch LH harr	ess connector	and grou	nd.	
-		Rear power wir	ndow switch	LH					Ν
_	Conn	ector		Term	ninal	Ground		Continuity	
	DS	54		8 9		Ground		Not existed	0
Y N				tch Lł	H. Refer to <u>PWC</u>	C-64, "Remova	I and Insta	allation".	Ρ
RE	EAR RH : Co	omponent Fu	Inction (Chec	:k			INFOID:000000008140468	
1.	CHECK POWE	ER WINDOW M	OTOR CIF	RCUIT	г				

< 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:000000008140469

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.

(+)		(-)			Voltage (V)
Rear power wind	Rear power window motor RH		Condition		(Approx.)
Connector	Terminal				
	1	- Ground	Rear power window switch RH	UP	12
D72	1			DOWN	0
DIZ	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	Terminal	Continuity	
D74	8	D72	1	Existed	
014	9	DIZ	3	LAISIEU	

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

Rear power wi	ndow switch RH		Continuity	
Connector	Terminal	Ground	Continuity	
D74	8	Ground	Not existed	
	9		NOT EXISTED	

Is the inspection result normal?

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

NO >> Repair or replace harness.

	: Compo	nent Functio	on Check		INFOID:0000000814
CHECK ENCO	-				INFOLD.0000000814
		lass performs	AUTO open/clo	se operation por	mally by power window ma
itch.	-				many by power window m
<u>he inspection re</u> ES >> Encod		<u>?</u>			
		"DRIVER SIDE	: Diagnosis Pro	<u>cedure"</u> .	
RIVER SIDE	: Diagnos	sis Procedui	re		INFOID:0000000814
CHECK ENCO	DER SIGNA	L			
Turn ignition s					
Check signal	petween pov	ver window mai	n switch harness	connector and g	round with oscilloscope.
	(+)				Signal
Connect	Power window	main switch Terminal		(-)	(Reference value)
		11		Cround	Defer to following signal
D22		12		Ground	Refer to following signal
	(V)			(V)	
Encoder si	gnal 1 ⁴ 0 1		Encoder s		
	(V)		_	(V)	
Encoder si	gnal 2 2 0		Encoder s	ignal 2 4 2 0	
		⊢10 ms Window UP		→ <mark>→</mark> 10 m Wind	s bown
	(Encoder sig	nal 2 starts 1/4 pulses	s earlier)	(Encoder signal 1 s	starts 1/4 pulses earlier) JMKIA5210GB
he inspection re		_			
ES >> Repla O >> GO T		ndow main swit	ch. Refer to <u>PWC</u>	C-63, "Removal a	ind Installation".
CHECK ENCO	RDER SIGN	AL CIRCUIT			
Turn ignition s		main switch co	nnector and from	t nower window	motor (driver side) connecto
Check continu	uity between	power window			and front power window mo
(driver side) h	arness conn	ector.			
Power	window main s	witch		ver window motor river side)	Continuity
Connector		Terminal	Connector	Termina	
D22		11	D10	5	Existed
		12		3	

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Power windo	ow main switch		Continuity	
Connector	Terminal	Ground	Continuity	
D22	11	Not exis	Not existed	
	12		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 power window main switch connector.

2. Turn ignition switch ON.

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

	(+)		Voltage (V) (Approx.)	
Front power windo	w motor (driver side)	()		
Connector	Terminal			
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	Connector Terminal		Continuity	
D22	D22 3		Not existed	

Is the inspection result normal?

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

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	Connector Terminal		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>.

6.CHECK GROUND CIRCUIT 2

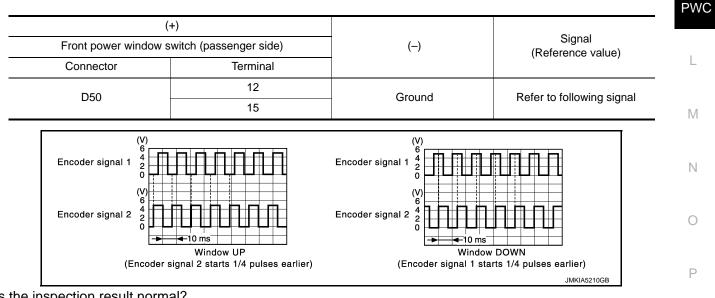
1. Disconnect power window main switch connector.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

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

Power window	w main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D22	10	D10 6		Existed
. Check continuity be	tween power window	v main switch harne	ess connector and g	ground.
Power	window main switch			Continuity
Connector	Termina	al	- Continuity Ground	
D22	10			Not existed
ASSENGER SID	E : Component F	Function Check	ζ.	INFOID:0000000814047
ASSENGER SID	E : Component F	Function Check	(INFOID:00000000814047.
.CHECK ENCODER	ide door glass perfo	rms AUTO open/clo		INFOID:00000000814047
.CHECK ENCODER heck that passenger s witch or front power wi	ide door glass perfor ndow switch (passen	rms AUTO open/clo		
CHECK ENCODER check that passenger s witch or front power wi the inspection result r YES >> Encoder is	ide door glass perfo ndow switch (passen <u>normal?</u>	rms AUTO open/clo ger side).	ose operation norm	
CHECK ENCODER check that passenger s witch or front power wi the inspection result r YES >> Encoder is	ide door glass perfor ndow switch (passen <u>normal?</u> OK. <u>VC-35. "PASSENGEF</u>	rms AUTO open/clo ger side). <u>R SIDE : Diagnosis</u>	ose operation norm	
.CHECK ENCODER theck that passenger s witch or front power wi the inspection result r YES >> Encoder is NO >> Refer to PV	ide door glass perfor ndow switch (passen <u>normal?</u> OK. VC-35. "PASSENGER E : Diagnosis Pro	rms AUTO open/clo ger side). <u>R SIDE : Diagnosis</u>	ose operation norm	ally by power window mair



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.

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- 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	
500	15	540	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	Continuity	
D50	12		Not existed	
	15		NOI EXISIED	

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	Connector Terminal		(11 -)
D40	D40 4		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 mo		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.

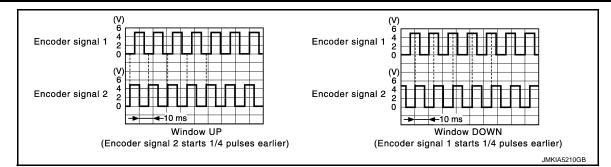
Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D50	4	D40	4	Existed

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

< DTC/CIRCUIT DIAGNOSIS >

Front power wind	dow switch (passenger si	de)		
Connector	Termin	al	Ground	Continuity
D50	4			Not existed
the inspection result n	ormal?			
YES >> Replace from tion". NO >> Repair or re		vitch (passenge	r side). Refer to <u>PW</u>	C-63, "Removal and Insta
CHECK GROUND CI	•			
 Disconnect front pov Check continuity bet window motor (pass 	ween front power w	indow switch (pa		ess connector and front pov
	- <i>i</i>	I		
Front power window sw		-	ndow motor (passenger s	Continuity
Connector	Terminal	Connector	Terminal	F 1 ()
D50	3	D40	6	Existed
Check continuity be	tween front power w	indow switch (p	assenger side) harn	ess connector and ground.
Front power wind	dow switch (passenger si	ide)		Continuity
Connector	Termin	al	Ground	
D50 <u>the inspection result n</u> YES >> Replace from <u>tion"</u> . NO >> Repair or re EAR LH	nt power window sv	vitch (passenge	r side). Refer to <u>PW</u>	Not existed
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH	ormal? nt power window sw place harness.		r side). Refer to <u>PW</u>	
the inspection result n YES >> Replace from tion". NO >> Repair or re	ormal? nt power window sw place harness.		r side). Refer to <u>PW</u>	
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH	ormal? nt power window sw place harness. nent Function C		r side). Refer to <u>PW</u>	C-63, "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT	Check		C-63, "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER (heck that rear door LH ear power window switch	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH.	Check		C-63. "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switch the inspection result n	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal?	Check		C-63. "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switch the inspection result n YES >> Encoder ope	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK.	Check	peration normally by	C-63. "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switch the inspection result n YES >> Encoder ope NO >> Refer to PW	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. 'C-37. "REAR LH : D	Check	peration normally by	VC-63, "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER (heck that rear door LH ear power window switce the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos	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	Check	peration normally by	C-63. "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER (heck that rear door LH ear power window switce the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .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 : I sis Procedure	Check	peration normally by	VC-63, "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switce the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .CHECK ENCODER S Turn ignition switch	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	peration normally by dure".	VC-63, "Removal and Insta
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switce the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .CHECK ENCODER S Turn ignition switch	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	peration normally by dure".	VC-63. "Removal and Insta INFOID:0000000081 power window main switch INFOID:0000000081
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER (heck that rear door LH ear power window switch the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .CHECK ENCODER S Turn ignition switch Check signal betwee	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 SIGNAL ON. en rear power windo	Check	peration normally by dure".	C-63. "Removal and Insta INFOID:0000000081 power window main switch INFOID:0000000081
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER (heck that rear door LH ear power window switch the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .CHECK ENCODER S Turn ignition switch Check signal betwee	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. (C-37. "REAR LH : I sis Procedure SIGNAL ON. en rear power windo (+)	Check O open/close o Diagnosis Proce w switch LH ha	peration normally by dure". rness connector and	VC-63. "Removal and Insta INFOID:0000000081 power window main switch INFOID:0000000081
the inspection result n YES >> Replace from tion". NO >> Repair or re EAR LH EAR LH : Compo .CHECK ENCODER C heck that rear door LH ear power window switch the inspection result n YES >> Encoder ope NO >> Refer to PW EAR LH : Diagnos .CHECK ENCODER S Turn ignition switch Check signal betwee	ormal? nt power window sw place harness. nent Function C DPERATION glass performs AUT ch LH. ormal? eration is OK. C-37. "REAR LH : I sis Procedure SIGNAL ON. en rear power windo (+) rer window switch LH	Check O open/close o Diagnosis Proce w switch LH ha	peration normally by dure". rness connector and	C-63. "Removal and Insta INFOID:0000000081 power window main switch INFOID:0000000081

< 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 v	vindow switch LH	Rear power wi	indow motor LH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D54	12	D52	5	Existed
004	15	052	6	

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 window 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.

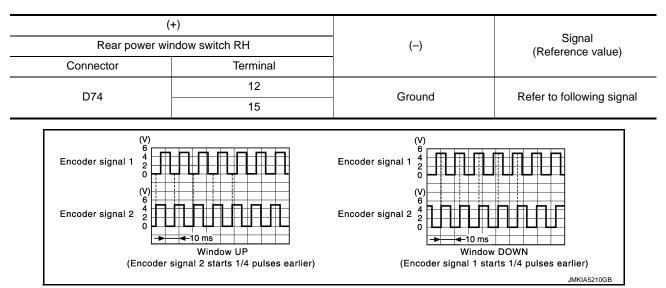
Rear power wi	ndow motor LH		Continuity
Connector	Terminal	Ground	Continuity
D52	4		Existed

DTC/CIRCUIT DIAG	SNOSIS >	ENGODER		
s the inspection result				
NO >> GO TO 6.	ear power window mot		-23, "Removal and Ir	nstallation".
D. CHECK ENCORDE	R POWER SUPPLY (CIRCUIT2		
	ower window switch Ll etween rear power wi		ness connector and	rear power window motor
Rear power w	indow switch LH	Rear power v	vindow motor LH	
Connector	Terminal	Connector	Terminal	Continuity
D54	4	D52	2	Existed
Check continuity b	etween rear power wi	ndow switch LH har	ness connector and	ground.
Rear po	wer window switch LH			
Connector	Termina	al	Ground	Continuity
D54	4			Not existed
				rear power window motor
Rear power w	indow switch LH	Rear power v	vindow motor LH	
Connector	Terminal	Connector	Terminal	
D54	3	D52	4	Existed
. Check continuity b	etween rear power wi	ndow switch LH har	ness connector and	ground.
Rear po	wer window switch LH			Continuity
Connector	Termina	al	Ground	
D54	3			Not existed
	ear power window swi eplace harness.		C-64, "Removal and	
1. CHECK ENCODER		JIECK		INFOID:000000008140476
		TO open/slass and		
or rear power window s	in diass performs AU	TO ODEN/CIOSE ODE	notion normally by	wor window main awith
	switch RH.		ration normally by po	ower window main switch
•	switch RH. normal?		ration normally by po	ower window main switch
YES >> Encoder o	switch RH.			ower window main switch
YES >> Encoder of NO >> Refer to P	switch RH. <u>normal?</u> peration is OK. <u>WC-39, "REAR RH : I</u>			ower window main switch
	switch RH. <u>normal?</u> peration is OK. <u>WC-39, "REAR RH : I</u> osis Procedure			

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

	Rear powe	er window motor RH			Continuity
	Connector	Termina	al 🛛	Ground	Continuity
	D72	4			Existed
	ne inspection result no		an DLL Defende		al la stallationall
IC IC		r power window mot	or RH. Refer to	<u>GW-23, "Removal ar</u>	<u>nd Installation"</u> .
_	CHECK ENCORDER	POWER SUPPLY C	CIRCUIT 2		
	Turn ignition switch C Disconnect rear power	DFF. er window switch RI ween rear power wir	H connector.	harness connector a	nd rear power window
	Rear power wind	ow switch RH	Rear po	wer window motor RH	Continuity
	Connector	Terminal	Connector	Terminal	Continuity
	D74	4	D72	2	Existed
	Check continuity betw	ween rear power wir	ndow switch RH	H harness connector a	and ground.
	Rear powe	er window switch RH			Continuity
	Rear powe Connector	er window switch RH Termina	1	Ground	Continuity
/Ε	Connector D74 ne inspection result no S >> Replace rear	Termina 4 <u>ormal?</u> r power window swit		Ground D <u>PWC-64, "Removal</u>	Not existed
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector	Termina 4 <u>prmal?</u> power window swit place harness. RCUIT 2 er window switch RI ween rear power wir or.	ch RH. Refer to H harness conr ndow switch RH	p <u>PWC-64, "Removal</u> nector. I harness connector a	Not existed
YE NC	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or.	ch RH. Refer to H harness conr ndow switch RH Rear po	D <u>PWC-64, "Removal</u> nector. I harness connector a	Not existed
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector	Termina 4 <u>prmal?</u> power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. ow switch RH Terminal	ch RH. Refer to H harness conr ndow switch RH Rear po Connector	D <u>PWC-64, "Removal</u> nector. I harness connector a ower window motor RH Terminal	Not existed and Installation". nd rear power window Continuity
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector D74	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. 0w switch RH Terminal 3	ch RH. Refer to H harness conr ndow switch RH Rear po Connector D72	D <u>PWC-64, "Removal</u> nector. I harness connector a wer window motor RH Terminal 4	Not existed and Installation". nd rear power window Continuity Existed
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector D74	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. 0w switch RH Terminal 3	ch RH. Refer to H harness conr ndow switch RH Rear po Connector D72	D <u>PWC-64, "Removal</u> nector. I harness connector a ower window motor RH Terminal	Not existed and Installation". nd rear power window Continuity Existed
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector D74 Check continuity betw	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. 0w switch RH Terminal 3	ch RH. Refer to H harness conr ndow switch RH Rear po Connector D72	D <u>PWC-64, "Removal</u> nector. I harness connector a wer window motor RH Terminal 4	Not existed and Installation". nd rear power window Continuity Existed and ground.
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector D74 Check continuity betw	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. ow switch RH Terminal 3 ween rear power wir	ch RH. Refer to H harness conr ndow switch RH Rear po Connector D72 ndow switch RH	D <u>PWC-64, "Removal</u> nector. I harness connector a wer window motor RH Terminal 4	Not existed and Installation". nd rear power window Continuity Existed
	Connector D74 ne inspection result no S >> Replace rear D >> Repair or rep CHECK GROUND CIF Disconnect rear power Check continuity betw RH harness connector Rear power wind Connector D74 Check continuity betw Rear power	Termina 4 20rmal? r power window swit blace harness. RCUIT 2 er window switch RI ween rear power wir or. 0w switch RH Terminal 3 ween rear power wir er window switch RH	ch RH. Refer to H harness conr ndow switch RH Rear po Connector D72 ndow switch RH	D <u>PWC-64, "Removal</u> nector. I harness connector a ower window motor RH Terminal 4 I harness connector a	Not existed and Installation". nd rear power window Continuity Existed and ground.

А

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Component Function Check

INFOID:000000008140478

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-33</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 <u>PWC-42</u>, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000008140479

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.

(-	+)		
Front door lock assembly (d swi	river side) (door key cylinder tch)	()	Voltage (V) (Approx.)
Connector	Terminal		
D15	5	Ground	F
015	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 main switch		Front door lock assembly (driver sid inder switch)	Continuity	
Connector	Terminal	Connector	Terminal	
D22	15	D15	6	Eviated
D22	16	- D15	5	Existed

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window r	nain switch		
Connector	Terminal		Continuity
	15	- Ground	Not evicted
D22	16	-	Not existed
s the inspection result normal? YES >> Replace power wind NO >> Repair or replace has CHECK DOOR KEY CYLIND Check continuity between front of and ground. Front door lock assembly (driver si Connector D15	low main switch. Refer to irness. ER SWITCH GROUND (door lock assembly (drive		
s the inspection result normal?			
YES >> GO TO 4.			
NO >> Repair or replace ha			
	ERSWILL	diadar owitch)	
	(almission aliala) (-l		
Check front door lock assembly	(driver side) (door key cy nspection".	linder switch).	
Check front door lock assembly Refer to <u>PWC-43, "Component I</u>	(driver side) (door key cy <u>nspection"</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	nspection".		witch). Refer to <u>DLK-167</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 : Rer</u>	nspection". lock assembly (driver s noval and Installation".		witch). Refer to <u>DLK-167</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 : Rer</u> D.CHECK INTERMITTENT INC	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-167</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 : Rer</u> D.CHECK INTERMITTENT INC	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-167</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 : Rer</u> D.CHECK INTERMITTENT INC	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-167</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 : Rer</u> D.CHECK INTERMITTENT INC Refer to <u>GI-49</u> , "Intermittent Incide >> INSPECTION END	nspection". lock assembly (driver s noval and Installation". IDENT		witch). Refer to <u>DLK-167</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-49</u> , "Intermittent Incid >> INSPECTION END Component Inspection	nspection". lock assembly (driver s noval and Installation". IDENT		
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 : Rer</u> D.CHECK INTERMITTENT INC Refer to <u>GI-49, "Intermittent Incid</u> >> INSPECTION END Component Inspection	nspection". lock assembly (driver s noval and Installation". IDENT dent".		
NO >> Replace front door <u>"DOOR LOCK : Rep</u> 5 .CHECK INTERMITTENT INC Refer to <u>GI-49, "Intermittent Incidenters</u> >> INSPECTION END Component Inspection COMPONENT INSPECTION 1 .CHECK DOOR KEY CYLIND	nspection". 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-49</u> , "Intermittent Incid >> INSPECTION END Component Inspection COMPONENT INSPECTION .CHECK DOOR KEY CYLIND . Turn ignition switch OFF.	nspection". lock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (ke	ide) (door key cylinder s	INFOID:0000000814048
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-49</u> , "Intermittent Incid >> INSPECTION END Component Inspection COMPONENT INSPECTION .CHECK DOOR KEY CYLIND . Turn ignition switch OFF. Disconnect front door lock a	nspection". lock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (ke nbly (driver side) (key cyli	ide) (door key cylinder s	INFOID:00000000814046
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-49</u> , "Intermittent Incid >> INSPECTION END Component Inspection COMPONENT INSPECTION .CHECK DOOR KEY CYLIND . Turn ignition switch OFF. Disconnect front door lock assem	Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (key nbly (driver side) (key cyli	ide) (door key cylinder s	INFOID:0000000814048
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-49</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	Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (key nbly (driver side) (key cyli	ide) (door key cylinder s y cylinder switch) connect inder switch). Key position Unlock	ror.
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-49</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) (key nbly (driver side) (key cyli	ide) (door key cylinder s	INFOID:0000000814046
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 Refer to <u>GI-49, "Intermittent Incide</u> >> 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	Inspection". Iock assembly (driver s noval and Installation". IDENT dent". ER SWITCH ssembly (driver side) (key hbly (driver side) (key cylinder switch)	ide) (door key cylinder s y cylinder switch) connect inder switch). Key position Unlock	ror.

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000008140481

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-31</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	
CDL UNLOCK SW	LOCK	: OFF	
ODE DIVEOCR 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:000000008140482

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	+) w main switch	()	in 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 >

Check continuity be		connector		window main swit	ch harness connector.
Connector	Terminal	Conn		Terminal	Continuity
M120	8	D2		13	Existed
Check continuity be	etween BCM harness	connector	and ground		
Connector	BCM Termina	1	Gr	ound	Continuity
M120	8	•			Not existed
		"Removal	and Installa	tion".	
>> INSPECTION	ON END WINDOW SWIT	CH (PA	SSENGE	R SIDE)	
RONT POWER V heck	VINDOW SWITC	H (PAS	SENGER	SIDE) : Com	
			NAL		

Monitor item	C	Condition	
CDL LOCK SW	LOCK	: ON	L
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDE UNEOCK SW	UNLOCK	: ON	IVI

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-45</u>, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000008140484

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1. CHECK POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

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

< DTC/CIRCUIT DIAGNOSIS >

(+) Front power window swi	tch (passenger side)	()	Signal	
Connector	Terminal		(Reference value)	
D50	16	Ground	(V) 15 10 5 0 10 ms JPMIA0013GB	

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <u>PWC-63</u>, "<u>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	w main switch	Front power window s	window switch (passenger side) tor Terminal Continuity	
Connector	Terminal	Connector		
D22	13	D50	16	Existed

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

Power windo	w 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-49, "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-31, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)"</u>.

Monitor item	(Condition	(
CDL LOCK SW	LOCK	: ON	
CDE LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDE UNECCK 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 window switch LH		()	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			
	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 wi	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	w 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 GI-49, "Intermittent Incident".

>> INSPECTION END REAR POWER WINDOW SWITCH RH

REAR POWER WINDOW SWITCH RH : Component Function Check

INFOID:000000008140487

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(I) 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	
	LOCK	: OFF	
CDL UNLOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

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

REAR POWER WINDOW SWITCH RH : Diagnosis Procedure

INFOID:000000008140488

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 win	dow switch RH	()	Signal (Reference value)	
Connector	Terminal			
D74	16	Ground	(V) 15 10 5 0 10 10 10 10 ms	JPMIA0013GB
he inspection result n	ormal?			
O >> GO TO 2.			/C-63, "Removal and	d Installation".
CHECK POWER WIN	IDOW SERIAL LINK	K SIGNAL		
Turn ignition switch				
Disconnect rear pow	er window switch R	H connector.		
	er window switch R		ess connector and g	round.
Disconnect rear pow Turn ignition switch	er window switch R DN. een rear power wind		ess connector and g	round.
Disconnect rear pow Turn ignition switch Check voltage betwe	rer window switch R ON. een rear power wind 			Voltage (V)
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe	er window switch R DN. een rear power wind (+) er window switch RH	ow switch RH harne	ess connector and gr (-)	
Disconnect rear pow Turn ignition switch Check voltage betwe	rer window switch R ON. een rear power wind 	ow switch RH harne		Voltage (V)
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe Connector D74	er window switch R DN. een rear power wind (+) er window switch RH Termina 16	ow switch RH harne	(-)	Voltage (V) (Approx.)
Disconnect rear pow Turn ignition switch of Check voltage betwe Rear pow Connector D74 ne inspection result n ES >> Replace pow	er window switch R DN. een rear power wind (+) er window switch RH Termina 16 ormal?	low switch RH harne	(-)	Voltage (V) (Approx.) 12
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe Connector D74 ne inspection result n S >> Replace pow D >> GO TO 3.	rer window switch R DN. een rear power wind (+) er window switch RH Termina 16 ormal? ver window main sw	itch. Refer to <u>PWC-</u>	(–) Ground	Voltage (V) (Approx.) 12
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe Connector D74 ne inspection result n S >> Replace pow D >> GO TO 3.	rer window switch R DN. een rear power wind (+) er window switch RH Termina 16 ormal? ver window main sw	itch. Refer to <u>PWC-</u>	(–) Ground	Voltage (V) (Approx.) 12
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe Connector D74 he inspection result n ES >> Replace pow	er window switch R DN. een rear power wind (+) er window switch RH Termina 16 ormal? ver window main sw IDOW SERIAL LINK indow main switch c tween power window	itch. Refer to <u>PWC-</u>	(-) Ground 63, "Removal and In	Voltage (V) (Approx.) 12 Istallation".
Disconnect rear pow Turn ignition switch of Check voltage betwee Rear powe Connector D74 he inspection result n ES >> Replace pow O >> GO TO 3. CHECK POWER WIN Disconnect power w Check continuity be	er window switch R DN. een rear power wind (+) er window switch RH Termina 16 <u>ormal?</u> ver window main switch of indow main switch of ween power window or.	itch. Refer to <u>PWC-</u> CCIRCUIT	(-) Ground 63, "Removal and In	Voltage (V) (Approx.) 12 Istallation". ear power window
Disconnect rear pow Turn ignition switch of Check voltage betwe Rear powe Connector D74 the inspection result n ES >> Replace pow O >> GO TO 3. CHECK POWER WIN Disconnect power w Check continuity be RH harness connect	er window switch R DN. een rear power wind (+) er window switch RH Termina 16 <u>ormal?</u> ver window main switch of indow main switch of ween power window or.	itch. Refer to <u>PWC-</u> CCIRCUIT	(-) Ground 63, "Removal and In ess connector and re	Voltage (V) (Approx.) 12 Istallation".

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

Power window main switch			Continuity	Ν
Connector	Terminal	Ground	Continuity	
D22	13		Not existed	
Is the inspection result norm	al?			0

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-49, "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:000000008140489

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-49, "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

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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? YES >> GO TO 2.	С
NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	D
Confirm the operation again. <u>Is the result normal?</u>	E
 YES >> Check intermittent incident. Refer to <u>GI-49. "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.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-49, "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-49. "Intermittent Incident"</u>

>> INSPECTION END WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:000000008140493

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-49, "Intermittent Incident"</u>.

NO >> GO TO 1.

Revision: 2013 March

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
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> .
Is the inspection result normal?
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.
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-49, "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</u> , " <u>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. <u>Is the result normal?</u>
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> . 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-49. "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:000000008140498

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:000000008140499

1.CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT

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

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-49, "Intermittent Incident"</u>.

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPER LY	ATE NORMAL-
< SYMPTOM DIAGNOSIS >	
AUTO OPERATION DOES NOT OPERATE BUT MANUAL C	PERATE NOR-
MALLY	
DRIVER SIDE	
DRIVER SIDE : Diagnosis Procedure	INFOID:000000008140500
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 \rightarrow GO TO 2. 2.CHECK ENCODER (DRIVER SIDE) CIRCUIT	
Check encoder (driver side) circuit.	
Refer to <u>PWC-33</u> , "DRIVER SIDE : Component Function Check".	
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	
3.CONFIRM THE OPERATION	(
Confirm the operation again.	
Is the result normal?	I
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> . NO >> GO TO 1.	
PASSENGER SIDE	
PASSENGER SIDE : Diagnosis Procedure	INFOID:00000008140501
1.PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is performed and operation is confirmed. Refer to PWC-21, "Work Procedure".	
Is the inspection result normal?	Р
YES >> INSPECTION END	
NO $>>$ GO TO 2.	
2.CHECK ENCODER (PASSENGER SIDE) CIRCUIT	
Check encoder (passenger side) circuit. Refer to <u>PWC-35, "PASSENGER SIDE : Component Function Check"</u> .	1
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	I
3. CONFIRM THE OPERATION	
Confirm the operation again.	(
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-49. "Intermittent Incident"</u> . NO >> GO TO 1.	
REAR LH	
REAR LH : Diagnosis Procedure	INFOID:00000008140502
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 <u>PWC-37, "REAR LH : 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.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u>.

NO >> GO TO 1.

REAR RH

REAR RH : Diagnosis Procedure

INFOID:000000008140503

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 <u>GI-49. "Intermittent Incident"</u>.

NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >	
ANTI-PINCH FUNCTION DOES NOT OPERATE	А
Diagnosis Procedure	
1. CHECK POWER WINDOW AUTO OPERATION	В
Check AUTO operation of the door when anti-pinch function does not operate.	
<u>Is the inspection result normal?</u> YES >> GO TO 2.	С
NO >> Refer to <u>PWC-55, "DRIVER SIDE : Diagnosis Procedure"</u> (driver side), <u>PWC-55, "PASSENGER</u> <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. <u>Is the inspection result normal?</u>	Ε
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> . NO >> GO TO 1.	F
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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:000000008140505

1.CHECK DOOR SWITCH

Check door switch.

Refer to DLK-61, "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.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to <u>GI-49, "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:000000008140506	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 PWC-42, "Component Function Check"		Ε
Is the inspection result normal?		
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.		F
3. CONFIRM THE OPERATION		
Confirm the operation again.		G
Is the result normal?		
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> NO >> GO TO 1.		Н

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

INFOID:000000008140507

NOTE:

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

Diagnosis Procedure

INFOID:000000008140508

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-18, "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-33, "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-49. "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:000000008140509	~
1.REPLACE POWER WINDOW MAIN SWITCH		В
Replace power window main switch. Refer to PWC-63, "Removal and Installation".		
>> INSPECTION END		С

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POWER WINDOW SWITCH DOES NOT ILLUMINA	ГЕ
< SYMPTOM DIAGNOSIS >	
POWER WINDOW SWITCH DOES NOT ILLUMINATE	
DRIVER SIDE	
DRIVER SIDE : Diagnosis Procedure	INFOID:00000008140510
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:00000008140511
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:00000008140512
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:00000008140513
1. REPLACE REAR POWER WINDOW SWITCH RH	
Replace rear power window switch RH. Refer to <u>PWC-64, "Removal and Installation"</u> .	
>> INSPECTION END	

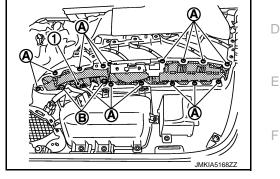
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION FRONT POWER WINDOW SWITCH

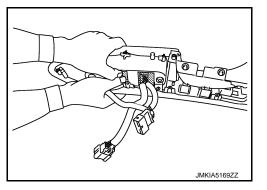
Removal and Installation

REMOVAL

- 1. Remove the front door finisher. Refer to <u>INT-26, "FRONT DOOR FINISHER : Removal and Installation"</u>.
- 2. Remove the armrst 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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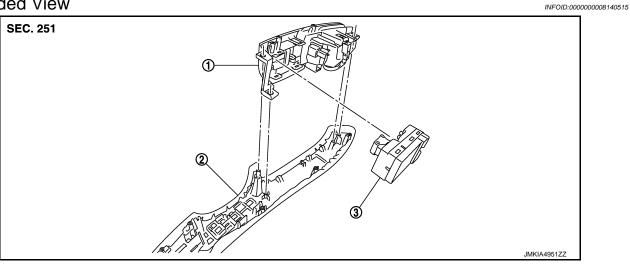
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REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

REAR POWER WINDOW SWITCH

Exploded View



- 1. Power window switch finisher
- 2. Rear armrest

3. Rear power window switch

INFOID:000000008140516

Removal and Installation

REMOVAL

- 1. Remove the rear door finisher. Refer to <u>INT-28, "REAR DOOR FINISHER : Removal and Installation"</u>.
- 2. Remove the armrst 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 a flat-bladed screwdriver. 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.

