SECTION PWC
POWER WINDOW CONTROL SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000008140433

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.

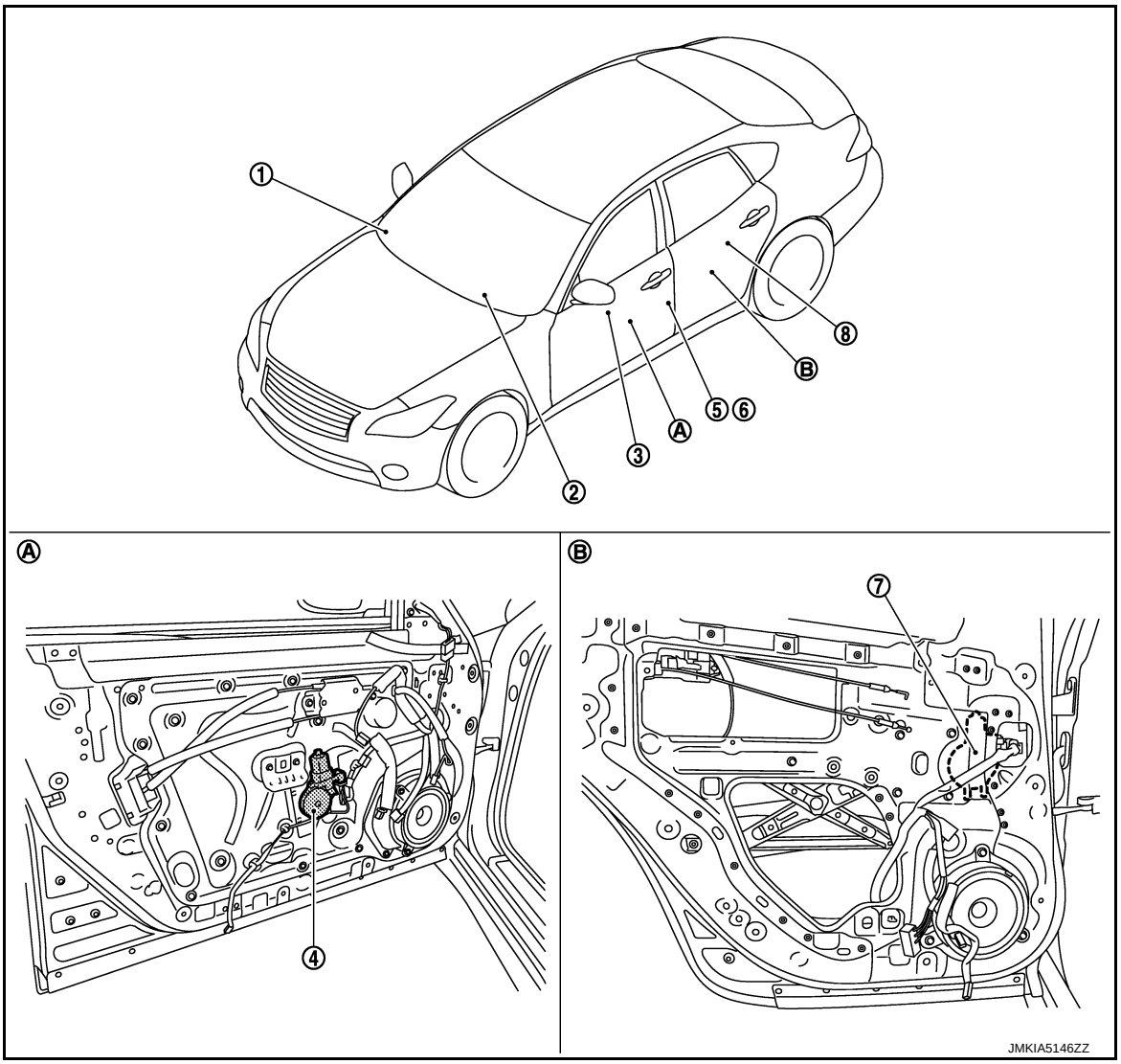
- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious 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

COMPONENT PARTS

Component Parts Location

INFOID:0000000008140434



1. Remote keyless entry receiver
   Refer to DLK-9, "DOOR LOCK SYSTEM : Component Parts Location"
2. BCM
   Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"
3. Power window main switch
4. Front power window motor (driver side)
5. Front door switch (driver side)
6. Front door lock assembly (driver side) (door key cylinder switch)
7. Rear power window motor LH
8. Rear power window switch LH

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

Component Description

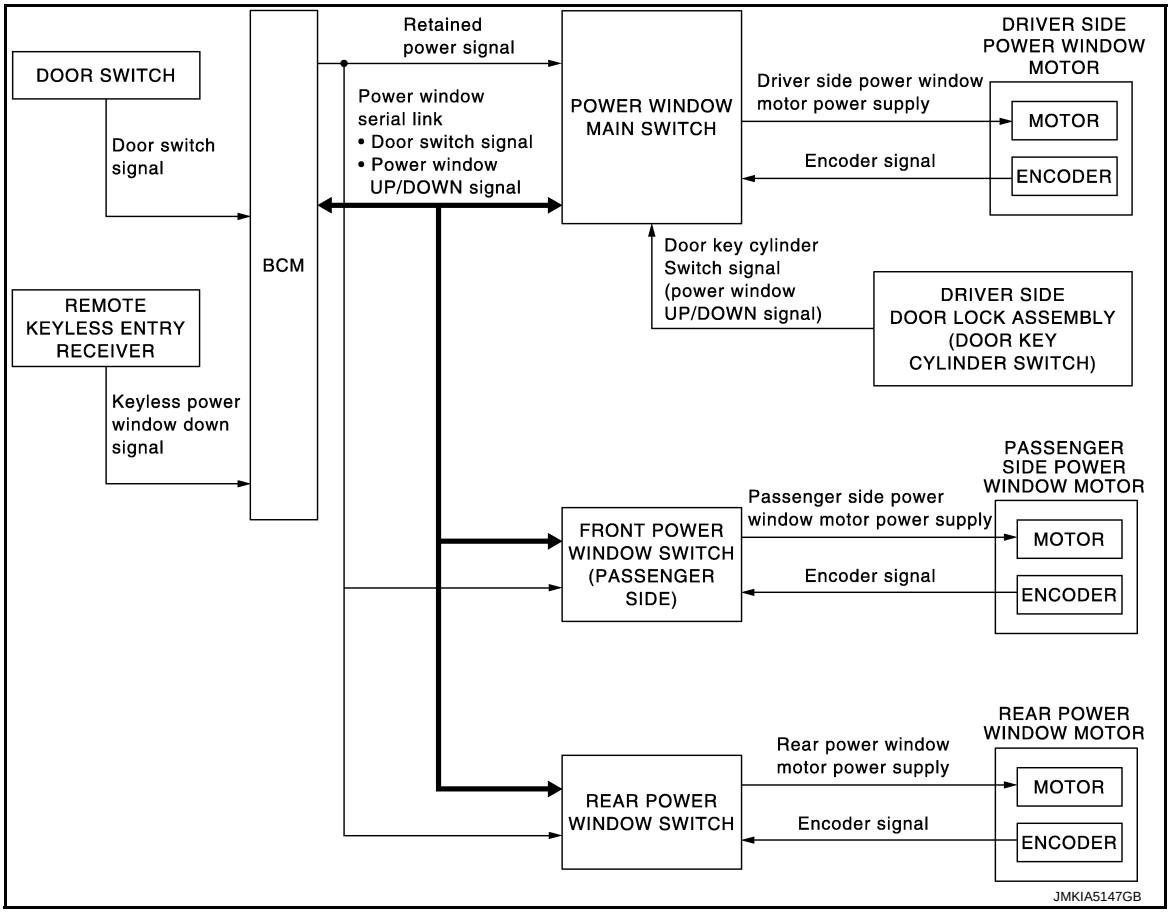
INFOID:0000000008140435

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 cylinder switch)	Transmits operation condition of door key cylinder switch to power window main switch.
Front door switch (driver side/passenger side)	Front door open/close condition and transmits to BCM.

SYSTEM

System Diagram

INFOID:0000000008140436



System Description

INFOID:0000000008140437

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.

< 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 SUPPORT”. Refer to DLK-33, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

NOTE:

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

Fail-safe

INFOID:0000000008140438

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 malfunction	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 malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window 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.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000008322153

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.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		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 system • Engine 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.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected*	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		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
	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”
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 → 3...38 → 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 PCS-34, "POWER DISTRIBUTION SYSTEM : System Description" for details of the power supply position.

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000008140440

Data monitor

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

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000008140441

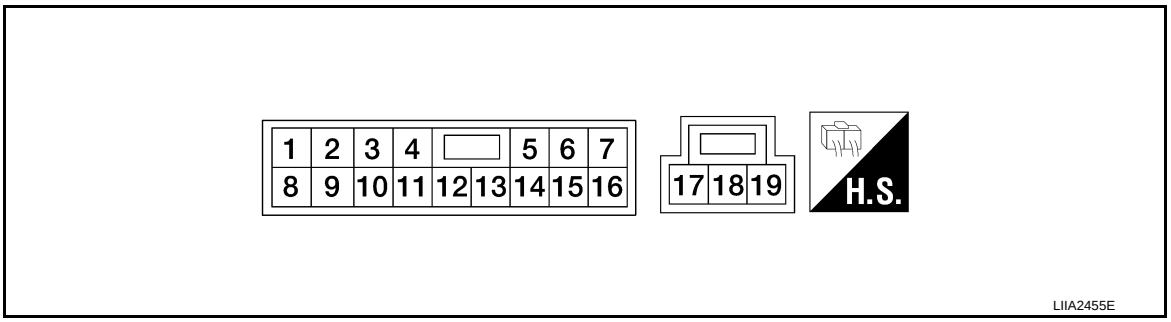
ECU	Reference
BCM	BCS-34, "Reference Value"
	BCS-54, "Fail-safe"
	BCS-54, "DTC Inspection Priority Chart"
	BCS-55, "DTC Index"

POWER WINDOW MAIN SWITCH

Reference Value

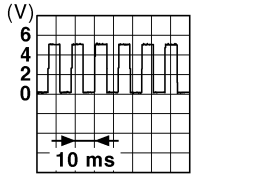
INFOID:0000000008140442

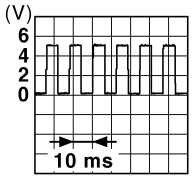
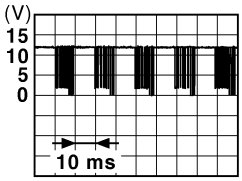
TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

Terminal No. (wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	12
4 (Y)	Ground	Battery power supply	Input	—	12
5 (G)	Ground	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is operated DOWN	12
6 (L)	Ground	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is operated UP	12
7 (B)	Ground	Ground	—	—	0
9 (O)	Ground	Retained power signal	Input	IGN SW ON	12
				Within 45 second after ignition switch is turned to OFF	12
				When driver side or passenger side door is opened during retained power operation	0
10 (LG)	Ground	Encoder ground	—	—	0
11 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	 JMKIA0070GB

Terminal No. (wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
12 (LG)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	 JMKIA0070GB
13 (V)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 JPMIA0013GB
15 (BR)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral →Locked)	5 → 0
16 (GR)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral →Unlocked)	5 → 0

Fail-safe

INFOID:0000000008140443

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 malfunction	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 malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window 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

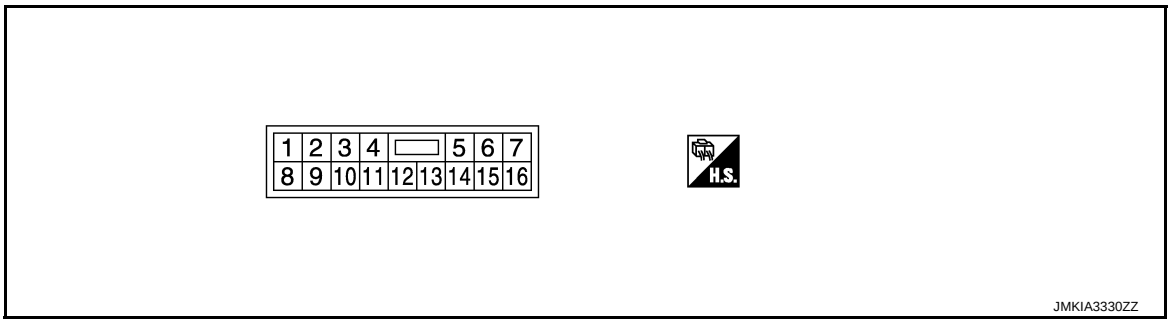
When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

FRONT POWER WINDOW SWITCH

Reference Value

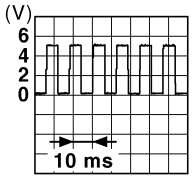
INFOID:0000000008140444

TERMINAL LAYOUT

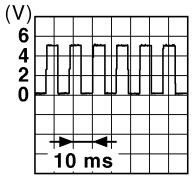
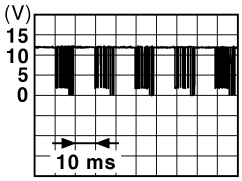


PHYSICAL VALUES

FRONT POWER WINDOW SWITCH

Terminal No. (wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
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	

JMKIA0070GB

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

Fail-safe

INFOID:0000000008140445

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 malfunction	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 malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window 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

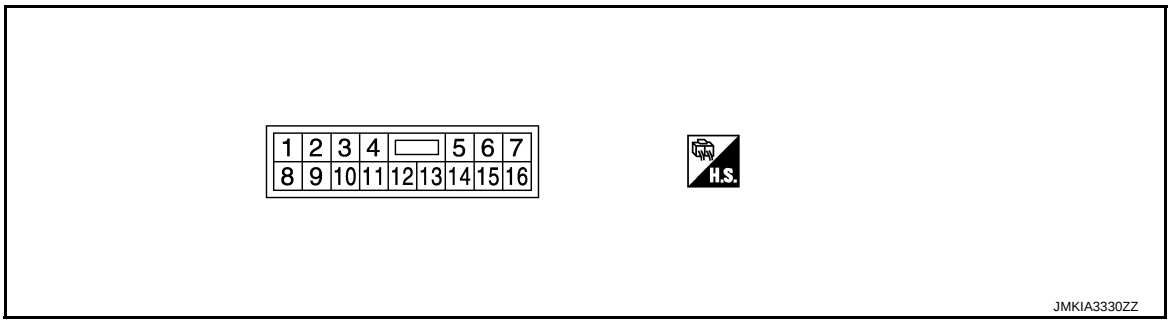
When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

REAR POWER WINDOW SWITCH

Reference Value

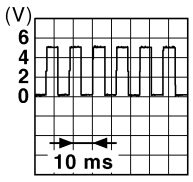
INFOID:0000000008140446

TERMINAL LAYOUT

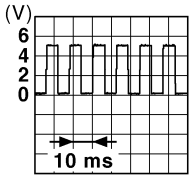
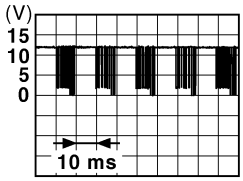


PHYSICAL VALUES

REAR POWER WINDOW SWITCH

Terminal No. (wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (Y)	Ground	Encoder ground	—	—	0
4 (V)	Ground	Encoder power supply	Output	When ignition switch ON or power 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 operates	

JMKIA0070GB

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

Fail-safe

INFOID:0000000008140447

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 malfunction	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 malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window 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.

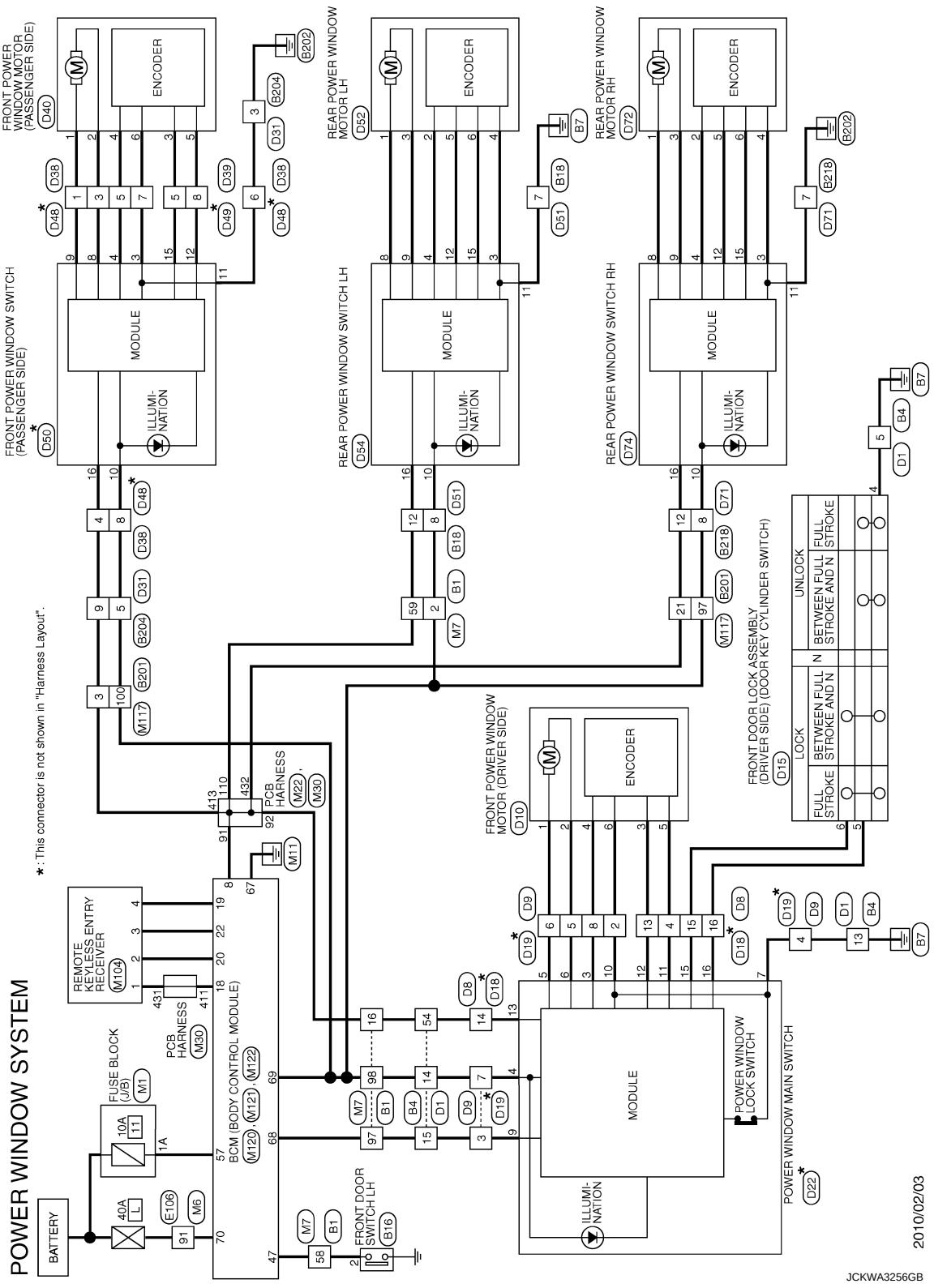
WIRING DIAGRAM

POWER WINDOW SYSTEM

Wiring Diagram

INFOID:0000000008140448

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-13, "Connector Information".



BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000008140449

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 TERMINAL

Description

INFOID:0000000008140450

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:0000000008140451

1.SYSTEM INITIALIZATION

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

>> GO TO 2.

2.CHECK ANTI-PINCH FUNCTION

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

>> END

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH

Description

INFOID:0000000008140452

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:0000000008140453

1.SYSTEM INITIALIZATION

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

>> GO TO 2.

2.CHECK ANTI-PINCH FUNCTION

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

>> END

SYSTEM INITIALIZATION

Description

INFOID:0000000008140454

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:0000000008140455

1.STEP 1

1. Turn ignition switch ON.
2. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)

>> GO TO 2.

2.STEP 2

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.

>> GO TO 3.

3.STEP 3

Check that auto-up function operates normally.

>> GO TO 4.

4.STEP 4

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

>> END

CHECK ANTI-PINCH FUNCTION

Description

INFOID:0000000008140456

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:0000000008140457

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 PWC-23, "Work Procedure".**

>> END

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000008140458

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	Battery power supply	11 (10A)
70		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.

(+)		(–)	Voltage (Approx.)
BCM			
Connector	Terminal		
M122	57	Ground	Battery voltage
	70		

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M122	67		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

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000008140459

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.
2. Disconnect power window main switch connectors.

3. Turn ignition switch ON.
4. Check voltage between power window main switch harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D22	4	Ground	12
	9		

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 power window main switch harness connector and ground.

Power window main switch		Ground	Continuity
Connector	Terminal		
D22	7		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 power window main switch harness connector.

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M122	68	D22	9	Existed
	69		4	

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M122	68		Not existed
	69		

Is the inspection result normal?

YES >> Replace BCM. Refer toBCS-80, "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:0000000008140460

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

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

(+)		(–)	Voltage (V) (Approx.)
Front power window switch (passenger side)			
Connector	Terminal		
D50	10	Ground	12

Is the inspection result normal?

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

2.CHECK GROUND CIRCUIT

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D50	11		Existed

Is the inspection result normal?

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

3.CHECK POWER SUPPLY CIRCUIT 2

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

BCM		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M122	69	D50	10	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M122	69		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> INSPECTION END

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000008140461

1.CHECK POWER SUPPLY CIRCUIT 1

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

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

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			Ground	Continuity
Connector		Terminal		
LH	D54	11		Existed
RH	D74			

Is the inspection result normal?

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

3.CHECK POWER SUPPLY CIRCUIT 2

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

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

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M122	69		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW MOTOR
DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000008140462

1.CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Front power window motor (driver side) is OK.
NO >> Refer to PWC-29, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000008140463

1.CHECK FRONT POWER WINDOW MOTOR INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Front power window motor (driver side)					
Connector	Terminal				
D10	2	Ground	Power window main switch	UP	12
				DOWN	0
	1			UP	0
				DOWN	12

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to GW-20, "Removal and Installation".
NO >> GO TO 2.

2.CHECK POWER WINDOW MOTOR CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D22	5	D10	1	Existed
	6		2	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D22	5	Ground	Not existed
	6		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Component Function Check

INFOID:0000000008140464

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:0000000008140465

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.

(+)		(–)	Condition		Voltage (V) (Approx.)
Front power window motor (passenger side)					
Connector	Terminal				
D40	2	Ground	Front power window switch (passenger side)	UP	12
				DOWN	0
	1			UP	0
				DOWN	12

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-20, "Removal and Installation".
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 motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D50	8	D40	2	Existed
	9		1	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D50	8		Not existed
	9		

Is the inspection result normal?

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

REAR LH

REAR LH : Component Function Check

INFOID:0000000008140466

1.CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Rear power window motor LH is OK.
NO >> Refer to PWC-31, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

INFOID:0000000008140467

1.CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Rear power window motor LH					
Connector	Terminal				
D52	1	Ground	Rear power window switch LH	UP	12
				DOWN	0
	3			UP	0
				DOWN	12

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to GW-23, "Removal and Installation".
NO >> GO TO 2.

2.CHECK POWER WINDOW MOTOR CIRCUIT

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

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D54	8	D52	1	Existed
	9		3	

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D54	8		Not existed
	9		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-64, "Removal and Installation".
NO >> Repair or replace harness.

REAR RH

REAR RH : Component Function Check

INFOID:0000000008140468

1. CHECK POWER WINDOW MOTOR CIRCUIT

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 PWC-32, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000008140469

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.

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

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to GW-23, "Removal and Installation".
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 window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D74	8	D72	1	Existed
	9		3	

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D74	8		Not existed
	9		

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-64, "Removal and Installation".
NO >> Repair or replace harness.

ENCODER
DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000008140470

1.CHECK ENCODER

Check that driver side door glass performs AUTO open/close operation normally by power window main switch.

Is the inspection result normal?

YES >> Encoder is OK.
NO >> Refer to PWC-33, "DRIVER SIDE : Diagnosis Procedure".

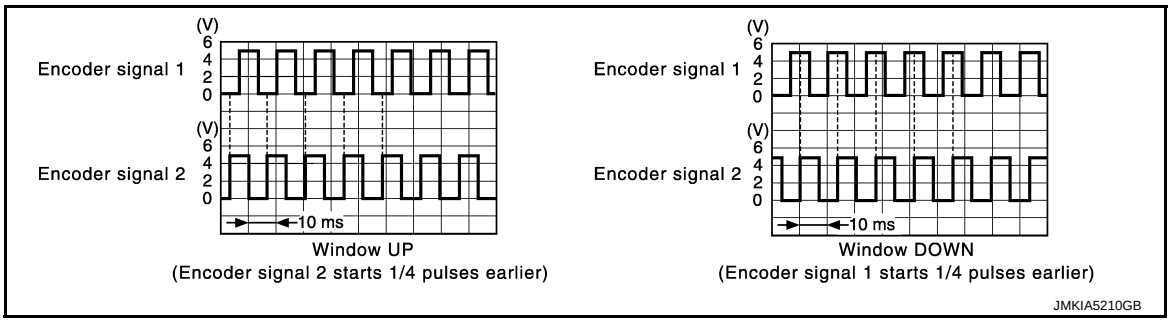
DRIVER SIDE : Diagnosis Procedure

INFOID:0000000008140471

1.CHECK ENCODER SIGNAL

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

(+)		(–)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D22	11	Ground	Refer to following signal
	12		



Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D22	11	D10	5	Existed
	12		3	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D22	11		Not existed
	12		

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 window 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 motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D22	3	D10	4	Existed

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

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

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

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

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

Is the inspection result normal?

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

6. CHECK GROUND CIRCUIT 2

1. Disconnect power window main switch connector.

2. 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 motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D22	10	D10	6	Existed

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D22	10		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Component Function Check

INFOID:0000000008140472

1.CHECK ENCODER

Check that passenger side door glass performs AUTO open/close operation normally by power window main switch or front power window switch (passenger side).

Is the inspection result normal?

YES >> Encoder is OK.
NO >> Refer to PWC-35, "PASSENGER SIDE : Diagnosis Procedure".

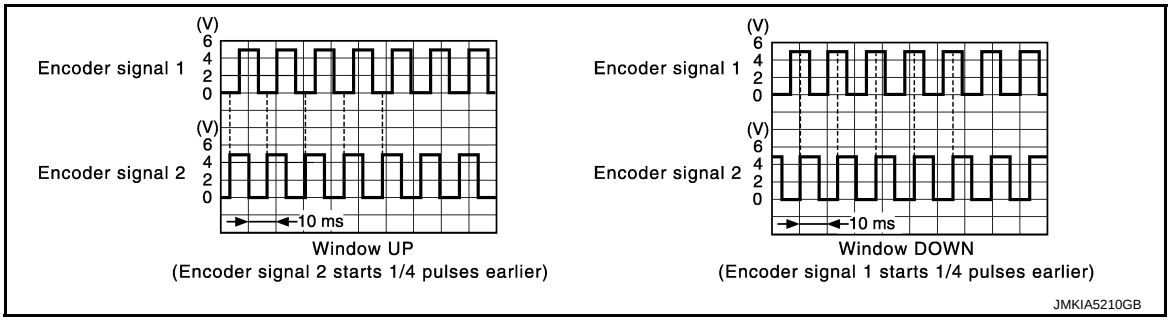
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000008140473

1.CHECK ENCODER SIGNAL

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

(+)		(–)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D50	12	Ground	Refer to following signal
	15		



Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-63, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.
3. Check continuity between front power window switch (passenger side) 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	
D50	12	D40	5	Existed
	15		3	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D50	12		Not existed
	15		

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.

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

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4.CHECK GROUND CIRCUIT 1

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

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

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-20, "Removal and Installation".
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.
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	
D50	4	D40	4	Existed

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D50	4		Not existed

Is the inspection result normal?

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

NO >> Repair or replace harness.

6.CHECK GROUND CIRCUIT 2

1. Disconnect front power window switch (passenger side) connector.
2. 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	
D50	3	D40	6	Existed

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D50	3		Not existed

Is the inspection result normal?

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

NO >> Repair or replace harness.

REAR LH

REAR LH : Component Function Check

INFOID:0000000008140474

1.CHECK ENCODER OPERATION

Check that rear door LH glass performs AUTO open/close operation normally by power window main switch or rear power window switch LH.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-37, "REAR LH : Diagnosis Procedure".

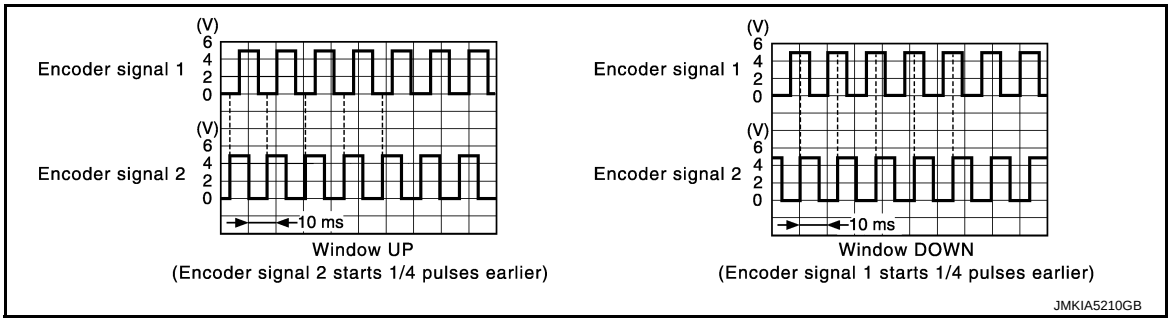
REAR LH : Diagnosis Procedure

INFOID:0000000008140475

1.CHECK ENCODER SIGNAL

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

(+)		(–)	Signal (Reference value)
Rear power window switch LH			
Connector	Terminal		
D54	12	Ground	Refer to following signal
	15		



Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-64, "Removal and Installation".
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 window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D54	12	D52	5	Existed
	15		6	

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

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

Is the inspection result normal?

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

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.

(+)		(–)	Voltage (V) (Approx.)
Rear power window motor LH			
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 window motor LH		Ground	Continuity
Connector	Terminal		
D52	4		Existed

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to GW-23, "Removal and Installation".
NO >> GO TO 6.

5. CHECK ENCORDER POWER SUPPLY CIRCUIT2

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

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D54	4	D52	2	Existed

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D54	4		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-64, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK GROUND CIRCUIT 2

1. Disconnect rear power window switch LH harness connector.
2. Check continuity between rear power window switch LH harness connector and rear power window motor LH harness connector.

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D54	3	D52	4	Existed

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D54	3		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-64, "Removal and Installation".
NO >> Repair or replace harness.

REAR RH

REAR RH : Component Function Check

INFOID:0000000008140476

1. CHECK ENCODER OPERATION

Check that rear door RH glass performs AUTO open/close operation normally by power window main switch or rear power window switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.
NO >> Refer to PWC-39, "REAR RH : Diagnosis Procedure".

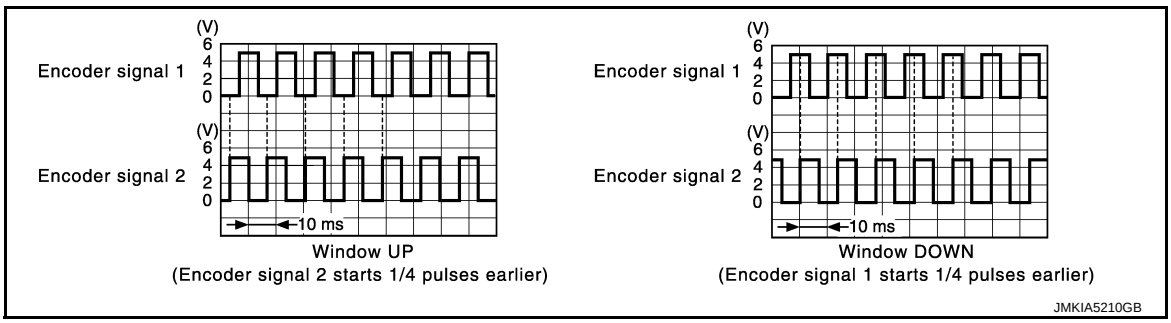
REAR RH : Diagnosis Procedure

INFOID:0000000008140477

1. CHECK ENCODER SIGNAL

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

(+)		(–)	Signal (Reference value)
Rear power window switch RH			
Connector	Terminal		
D74	12	Ground	Refer to following signal
	15		



Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-64, "Removal and Installation".
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 window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D74	12	D72	5	Existed
	15		6	

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

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

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.

(+)		(–)	Voltage (V) (Approx.)
Rear power window motor RH			
Connector	Terminal		
D72	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 RH harness connector and ground.

Rear power window motor RH		Ground	Continuity
Connector	Terminal		
D72	4		Existed

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to GW-23, "Removal and Installation".
NO >> GO TO 6.

5. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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 window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D74	4	D72	2	Existed

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D74	4		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.

6. CHECK GROUND CIRCUIT 2

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

Rear power window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D74	3	D72	4	Existed

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D74	3		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.

DOOR KEY CYLINDER SWITCH

Component Function Check

INFOID:0000000008140478

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 SYSTEM” with CONSULT. Refer to DLK-33, "INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)".

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

Is the inspection result normal?

YES >> Door key cylinder switch is OK.
NO >> Refer to PWC-42, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008140479

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.

(+)		(–)	Voltage (V) (Approx.)
Front door lock assembly (driver side) (door key cylinder switch)			
Connector	Terminal		
D15	5	Ground	5
	6		

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 side) (door key cylinder switch)		Continuity
Connector	Terminal	Connector	Terminal	
D22	15	D15	6	Existed
	16		5	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D22	15		Not existed
	16		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-63, "Removal and Installation".
NO >> Repair or replace harness.

3.CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly (driver side) (door key cylinder switch) harness connector and ground.

Front door lock assembly (driver side) (door key cylinder switch)		Ground	Continuity
Connector	Terminal		
D15	4		Existed

Is the inspection result normal?

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

4.CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (door key cylinder switch).
Refer to PWC-43, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace front door lock assembly (driver side) (door key cylinder switch). Refer to DLK-167, "DOOR LOCK : Removal and Installation".

5.CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000008140480

COMPONENT INSPECTION

1.CHECK DOOR KEY CYLINDER SWITCH

1. Turn ignition switch OFF.
2. Disconnect front door lock assembly (driver side) (key cylinder switch) connector.
3. Check front door lock assembly (driver side) (key cylinder switch).

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front door lock assembly (driver side) (key cylinder switch). Refer to DLK-168, "OUTSIDE HANDLE : Removal and Installation".

POWER WINDOW SERIAL LINK
POWER WINDOW MAIN SWITCH
POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000008140481

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer to DLK-31, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

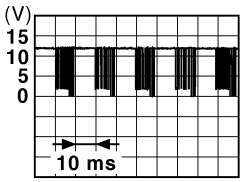
YES >> Power window serial link is OK.
NO >> Refer to PWC-44, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000008140482

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.

(+)		(–)	Signal (Reference value)
power window main switch			
Connector	Terminal		
D22	13	Ground	

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Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 2.

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.

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

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

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M120	8	D22	13	Existed

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M120	8		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "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) : Component Function Check

INFOID:0000000008140483

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer to DLK-31, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

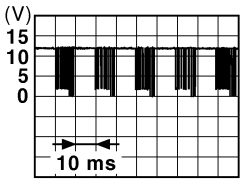
YES >> Power window serial link is OK.
NO >> Refer to PWC-45, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000008140484

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.

(+)		(–)	Signal (Reference value)
Front power window switch (passenger side)			
Connector	Terminal		
D50	16	Ground	

JPMIA0013GB

Is the inspection result normal?

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

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.

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

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
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

REAR POWER WINDOW SWITCH LH : Component Function Check

INFOID:0000000008140485

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer to DLK-31, "DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

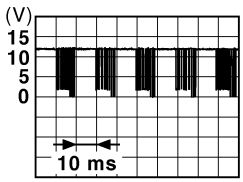
YES >> Power window serial link is OK.
NO >> Refer to PWC-47, "REAR POWER WINDOW SWITCH LH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH LH : Diagnosis Procedure

INFOID:0000000008140486

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.

(+)		(–)	Signal (Reference value)
Rear power window switch LH			
Connector	Terminal		
D54	16	Ground	

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Is the inspection result normal?

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

(+)		(–)	Voltage (V) (Approx.)
Rear power window switch LH			
Connector	Terminal		
D54	16	Ground	12

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.

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

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

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

Power window main switch		Ground	Continuity
Connector	Terminal		
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:0000000008140487

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check (“CDL LOCK SW ”, “CDL UNLOCK SW”) in “DATA MONITOR” mode for “POWER DOOR LOCK SYSTEM” with CONSULT. Refer to PWC-48, "REAR POWER WINDOW SWITCH RH : Diagnosis Procedure".

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

Is the inspection result normal?

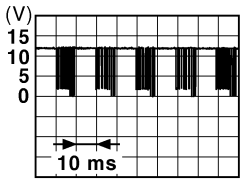
YES >> Power window serial link is OK.
NO >> Refer to PWC-48, "REAR POWER WINDOW SWITCH RH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH RH : Diagnosis Procedure

INFOID:0000000008140488

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.

(+)		(–)	Signal (Reference value)
Rear power window switch RH			
Connector	Terminal		
D74	16	Ground	

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Is the inspection result normal?

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

2.CHECK POWER WINDOW SERIAL LINK SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Rear power window switch RH			
Connector	Terminal		
D74	16	Ground	12

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

Power window main switch		Rear power window switch RH		Continuity
Connector	Terminal	Connector	Terminal	
D22	13	D74	16	Existed

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

Power window main switch		Ground	Continuity
Connector	Terminal		
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

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000008140489

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

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

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident" .
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008140490

1.CHECK DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor.
Refer to PWC-29, "DRIVER SIDE : Component Function Check".

Is the measurement value within the specification?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

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

INFOID:0000000008140491

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

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

INFOID:0000000008140492

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).
Refer to GI-49, "Intermittent Incident"

>> INSPECTION END

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000008140493

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

Check front power window switch (passenger side) serial link circuit.
Refer to PWC-45, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

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

INFOID:0000000008140494

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

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.
Refer to PWC-31, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure

INFOID:0000000008140495

1.REPLACE REAR POWER WINDOW SWITCH LH

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

>> INSPECTION END

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000008140496

1.CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT

Check rear power window switch LH serial link circuit.
Refer to PWC-47, "REAR POWER WINDOW SWITCH LH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

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

INFOID:0000000008140497

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

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

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 GI-49, "Intermittent Incident".
NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure

INFOID:0000000008140498

1.REPLACE REAR POWER WINDOW SWITCH RH

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

>> INSPECTION END

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000008140499

1.CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000008140500

1. PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2. CHECK ENCODER (DRIVER SIDE) CIRCUIT

Check encoder (driver side) circuit.
Refer to PWC-33, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000008140501

1. PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2. CHECK ENCODER (PASSENGER SIDE) CIRCUIT

Check encoder (passenger side) circuit.
Refer to PWC-35, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

REAR LH

REAR LH : Diagnosis Procedure

INFOID:0000000008140502

1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed.

Refer to PWC-21, "Work Procedure"

Is the inspection result normal?

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

2.CHECK ENCODER (REAR LH) CIRCUIT

Check encoder (rear LH) circuit.
Refer to PWC-37, "REAR LH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

REAR RH

REAR RH : Diagnosis Procedure

INFOID:0000000008140503

1.PERFORM INITIALIZATION PROCEDURE

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

Is the inspection result normal?

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

2.CHECK ENCODER (REAR RH) CIRCUIT

Check encoder (rear RH) circuit.
Refer to PWC-39, "REAR RH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008140504

1.CHECK POWER WINDOW AUTO OPERATION

Check AUTO operation of the door when anti-pinch function does not operate.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to PWC-55, "DRIVER SIDE : Diagnosis Procedure" (driver side), PWC-55, "PASSENGER SIDE : Diagnosis Procedure" (passenjer side), PWC-55, "REAR LH : Diagnosis Procedure" (rear LH), PWC-56, "REAR RH : Diagnosis Procedure" (rear RH).

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000008140505

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 PWC-44, "POWER WINDOW MAIN SWITCH : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

Diagnosis Procedure

INFOID:0000000008140506

1.PERFORM INITIALIZATION PROCEDURE

Perform Initialization procedure and check that inspection result is normal.
Refer to PWC-21, "Work Procedure"

Is the inspection result normal?

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

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

Check driver side door lock assembly (door key cylinder switch).
Refer to PWC-42, "Component Function Check"

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident"
NO >> GO TO 1.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

INFOID:0000000008140507

NOTE:
Before performing the diagnosis in the following procedure, check " Work Flow". Refer to DLK-44, "Work Flow".

Diagnosis Procedure

INFOID:0000000008140508

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 DLK-18, "REMOTE KEYLESS ENTRY FUNCTION : System Description".

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 PWC-25, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

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 PWC-44, "POWER WINDOW MAIN SWITCH : Component Function Check".

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 GI-49, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000008140509

1.REPLACE POWER WINDOW MAIN SWITCH

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

>> INSPECTION END

POWER WINDOW SWITCH DOES NOT ILLUMINATE

DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000008140510

1.REPLACE POWER WINDOW MAIN SWITCH

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

>> INSPECTION END

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000008140511

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

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

>> INSPECTION END

REAR LH

REAR LH : Diagnosis Procedure

INFOID:0000000008140512

1.REPLACE REAR POWER WINDOW SWITCH LH

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

>> INSPECTION END

REAR RH

REAR RH : Diagnosis Procedure

INFOID:0000000008140513

1.REPLACE REAR POWER WINDOW SWITCH RH

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

>> INSPECTION END

REMOVAL AND INSTALLATION

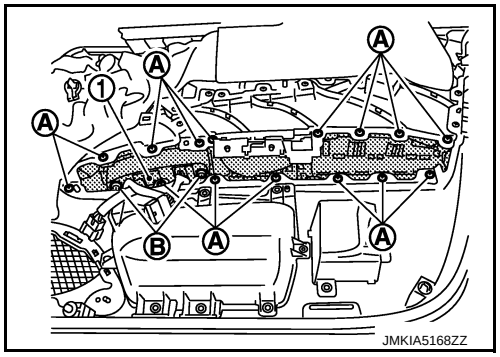
FRONT POWER WINDOW SWITCH

Removal and Installation

INFOID:0000000008140514

REMOVAL

1. Remove the front door finisher.
   Refer to INT-26, "FRONT DOOR FINISHER : Removal and Installation".
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.



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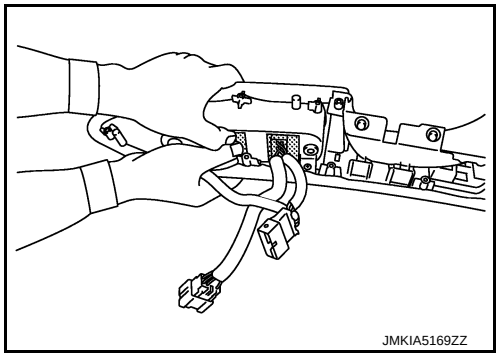
4. Push out and remove power window main switch (1) from lower side, as shown in the figure.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INSTALLATION

Install in the reverse order of removal.

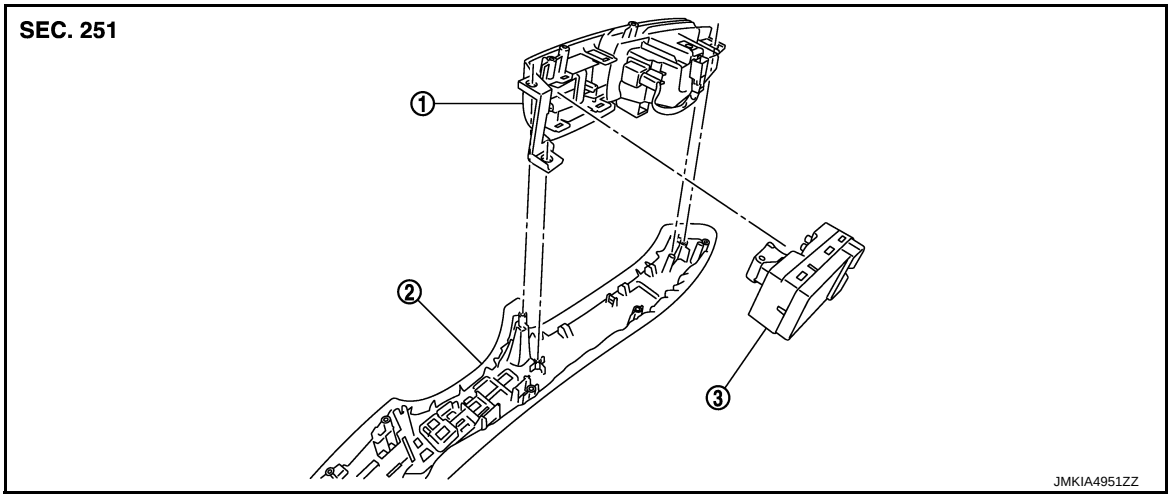
NOTE:

- 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).

REAR POWER WINDOW SWITCH

Exploded View

INFOID:0000000008140515



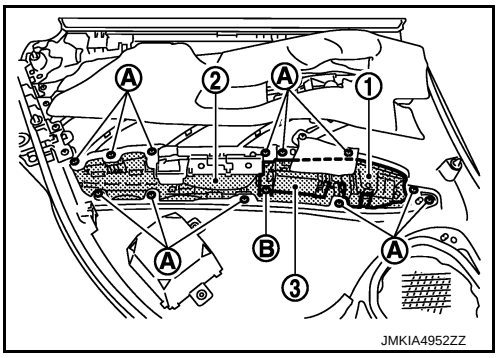
1. Power window switch finisher
2. Rear armrest
3. Rear power window switch

Removal and Installation

INFOID:0000000008140516

REMOVAL

1. Remove the rear door finisher.
   Refer to INT-28, "REAR DOOR FINISHER : Removal and Installation".
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.
4. 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.