SECTION PWC

POWER WINDOW CONTROL SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011463399

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

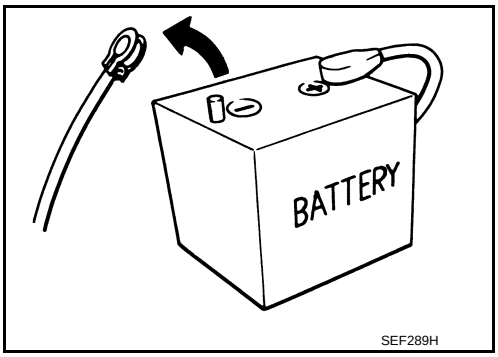
WARNING:
Always observe the following items for preventing accidental activation.
- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see “SRS AIR BAG”.**
- **Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.**

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

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

Precautions for Removing Battery Terminal

INFOID:0000000011463400



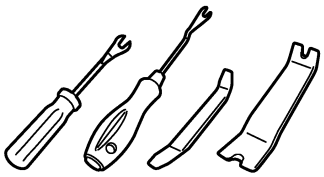
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
  NOTE:
  ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.
  NOTE:
  If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.
- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
  NOTE:
  The removal of 12V battery may cause a DTC detection error.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000011463401

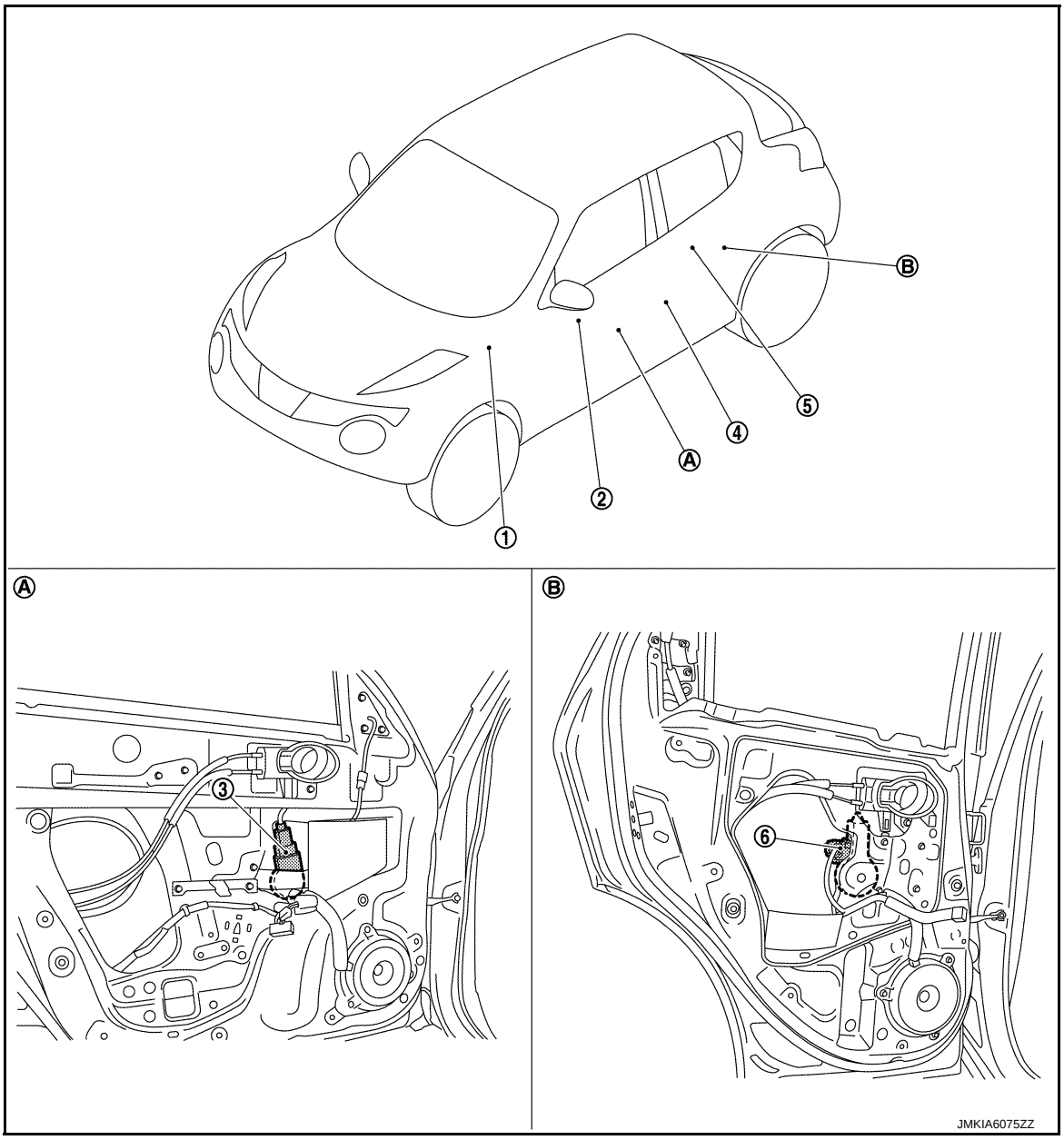
Tool name		Description
Remover tool	 JMKIA3050ZZ	Removes the clips, pawls and metal clips

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000011463402



1. BCM
   Refer to BCS-4, "BODY CONTROL SYSTEM : Component Parts Location"
2. Power window main switch
3. Front power window motor (driver side)
4. Front door switch (driver side)
5. Rear power window switch LH
6. Rear power window motor LH

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

Component Description

INFOID:0000000011463403

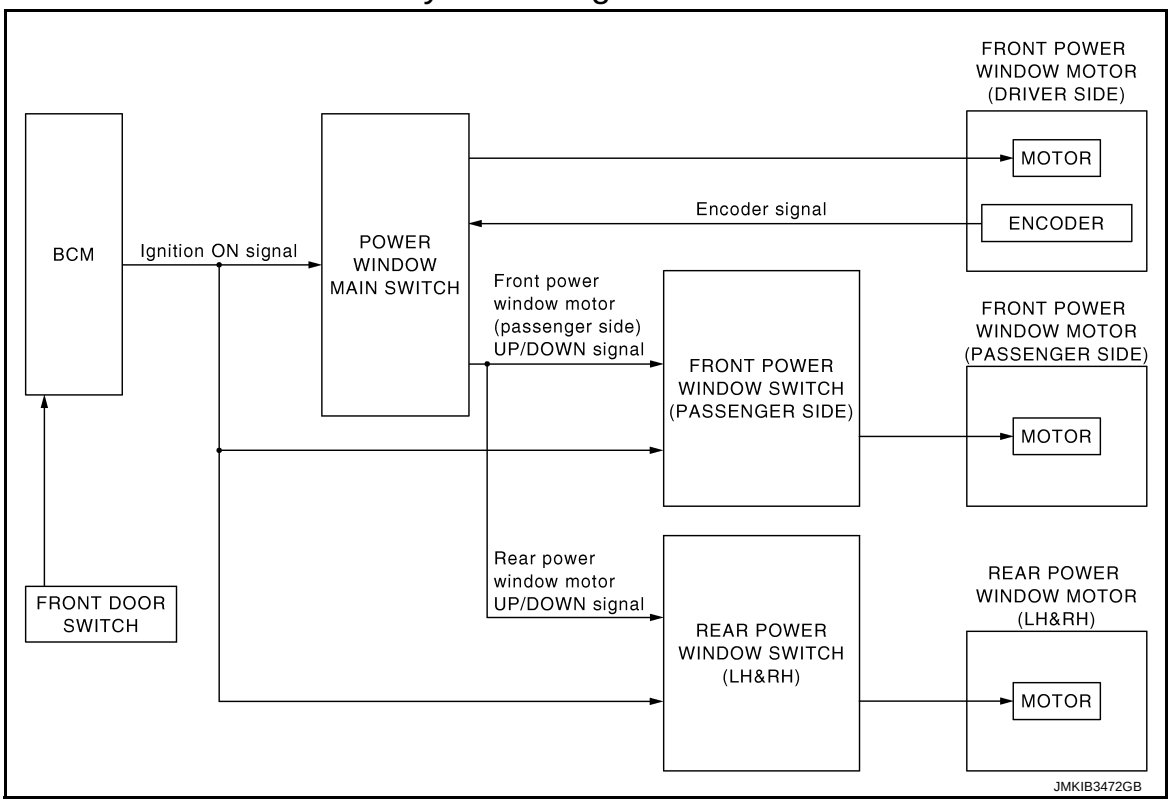
Component parts	Description
BCM	• Supplies power supply to power window switch. • Controls retained power.
Power window main switch	• Directly controls all power window motor of all doors. • Controls anti-pinch operation of power window.
Front power window switch (passenger side)	Controls power window motor of front passenger side door.
Rear power window switch (LH & RH)	Controls power window motor of rear door (LH & RH).
Front power window motor (driver side)	• Integrates the encoder and power window motor. • Operates with signals from power window main switch. • Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.
Front power window motor (passenger side)	Operates with signals from power window main switch and front power window switch (passenger side).
Rear power window motor (LH & RH)	Operates with signals from power window main switch and rear power window switch (LH & RH).
Encoder	Detects condition of the front power window motor (driver side) operation and transmits to power window main switch as pulse signal.
Front door switch	Detects door open/close condition and transmits to BCM.

SYSTEM

POWER WINDOW SYSTEM

POWER WINDOW SYSTEM : System Diagram

INFOID:0000000011463404



POWER WINDOW SYSTEM : System Description

INFOID:0000000011463405

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

POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE)

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

RETAINED POWER OPERATION

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

Retained Power Cancel Conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH SYSTEM (FRONT DRIVER SIDE)

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

Operation Condition

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

NOTE:

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

Fail-safe

INFOID:0000000011463406

FAIL-SAFE CONTROL

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

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors malfunction	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.

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

- Auto-up operation
- Anti-pinch function

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

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011732453

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 conditioning system	AIR CONDITONER		×	×*
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
RAP	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	×

NOTE:

*: For models with automatic A/C, this diagnosis mode 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 position is “LOCK”*.)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power position is “OFF”.)
	LOCK>ACC		While turning power position from “LOCK”* *to “ACC”
	ACC>ON		While turning power position from “ACC” to “IGN”
	RUN>ACC		While turning power position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power position from “ACC” to “OFF”
	OFF>LOCK		While turning power position from “OFF” to “LOCK”*
	OFF>ACC		While turning power position from “OFF” to “ACC”
	ON>CRANK		While turning power position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power position is “LOCK”*.) to low power consumption mode
	LOCK		Power position is “LOCK”*
	OFF		Power position is “OFF” (Ignition switch OFF)
	ACC		Power position is “ACC” (Ignition switch ACC)
	ON		Power position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 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:

*: Power position shifts to “LOCK” from “OFF”, when ignition switch is in the OFF position, selector lever is in the P position (A/T models and CVT models), and any of the following conditions are met.

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

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

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000011463408

DATA MONITOR

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

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:0000000011463411

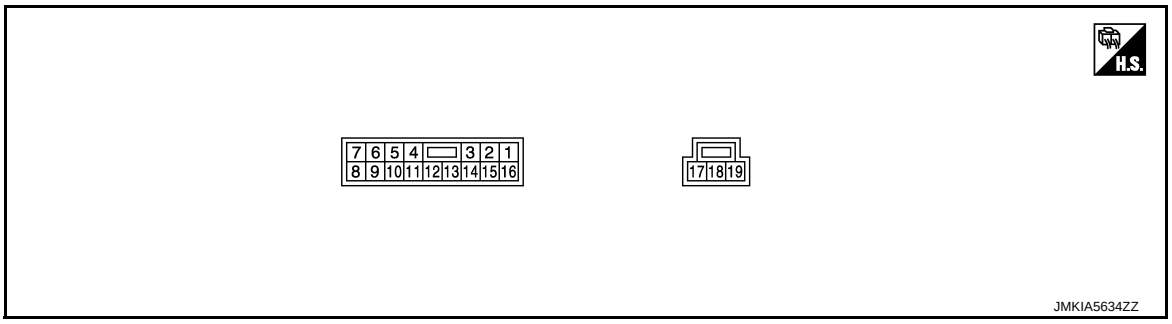
ECU	Reference
BCM	BCS-38, "Reference Value"
	BCS-60, "Fail-safe"
	BCS-61, "DTC Inspection Priority Chart"
	BCS-62, "DTC Index"

POWER WINDOW MAIN SWITCH

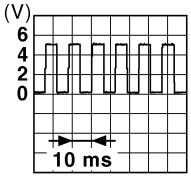
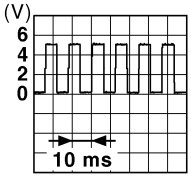
Reference Value

INFOID:0000000011463412

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 – 1
2 (SB)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is in DOWN operation.	9 – 16
4 (P)	Ground	Encoder signal 2	Input	When front power window motor (driver side) operates.	 JMKIA0070GB
5 (W)	Ground	Encoder signal 1	Input	When front power window motor (driver side) operates.	 JMKIA0070GB
6 (Y)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is in DOWN operation.	9 – 16
7 (LG)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is in UP operation.	9 – 16
8 (BG)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is in DOWN operation.	9 – 16
9 (G)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is in UP operation.	9 – 16
10 (L)	Ground	Ignition switch power supply	Input	Ignition switch ON	9 – 16
				Other than above	0 – 1

Terminal No. (Wire color)		Description		Condition	Voltage (V)
+	-	Signal name	Input/ Output		
12 (LG)	Ground	Encoder ground	—	—	0 – 1
14 (G)	Ground	Encoder power supply	Output	Ignition switch ON	9 – 16
16 (W)	Ground	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is in UP operation.	9 – 16
17 (R)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is in UP operation.	9 – 16
18 (P)	Ground	Battery power supply	Input	Ignition switch OFF	9 – 16
19 (GR)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is in DOWN operation.	9 – 16

Fail-safe

INFOID:0000000011732452

FAIL-SAFE CONTROL

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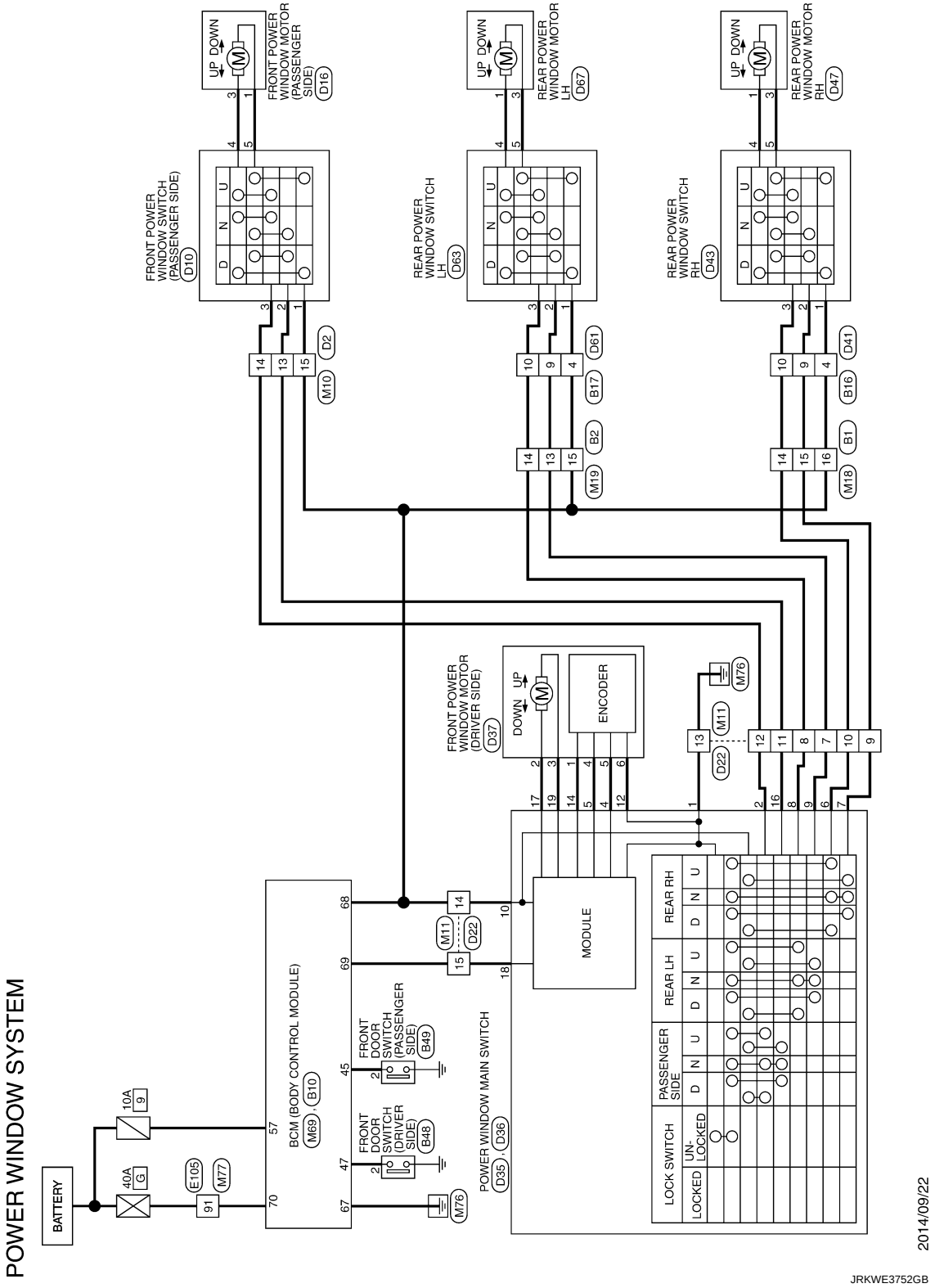
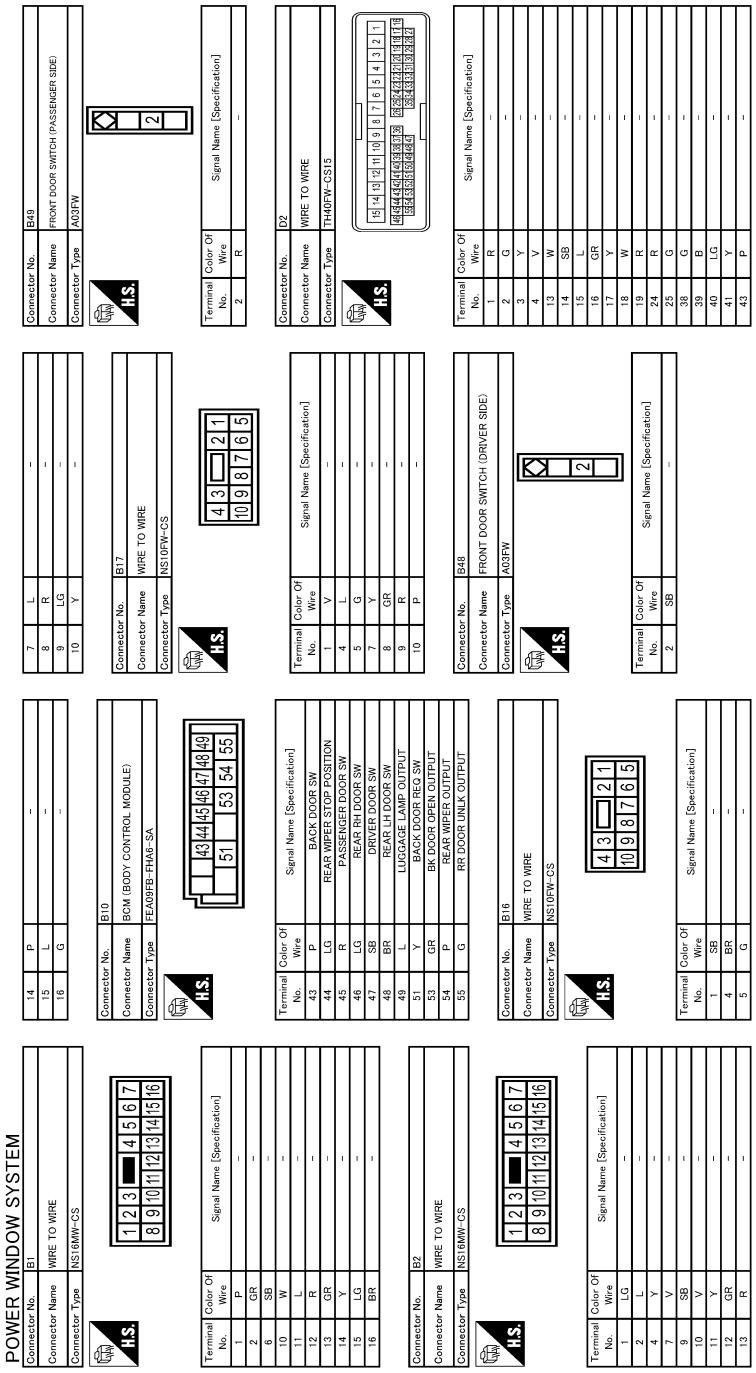
WIRING DIAGRAM

POWER WINDOW SYSTEM

Wiring Diagram

INFOID:0000000011463414





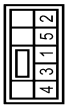
JRKWE3753GB

POWER WINDOW SYSTEM

44	V	–
45	W	–
46	BG	–
50	P	–

Connector No.	D10
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	W	–
3	SB	–
4	Y	–
5	R	–

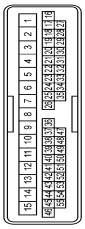
Connector No.	D16
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	RS06FG

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
3	Y	–

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	TH40FW-CS15

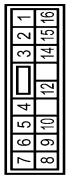
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	–
2	W	–
3	SB	–
4	V	–
7	G	–
8	BG	–
9	LG	–
10	Y	–
11	W	–
12	SB	–
13	B	–
14	L	–
15	P	–
16	LG	–
17	BR	–
18	P	–
19	V	–
24	G	–
25	R	–
38	G	–
39	B	–
40	V	–
41	P	–
42	R	–
43	GR	–
44	W	–
45	Y	–
46	BG	–
47	G	–
48	L	–
49	R	–
50	LG	–
52	BR	–

Connector No.	D35
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS

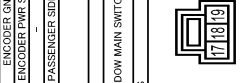
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GND
2	SB	PASSENGER SIDE DOWN
3	R	–
4	P	ENCODER SIG 2
5	W	ENCODER SIG 1
6	Y	REAR RH DOWN
7	LG	REAR RH UP
8	BG	REAR LH DOWN
9	G	REAR LH UP
10	L	IGN
12	LG	ENCODER GND
14	G	ENCODER PWR SPLY
15	BR	–
16	W	PASSENGER SIDE UP

Connector No.	D36
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS03FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
17	R	DRIVER SIDE UP
18	P	BAT
19	GR	DRIVER SIDE DOWN

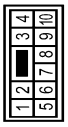
Connector No.	D37
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	RS06FG

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
2	R	–
3	GR	–
4	W	–
5	P	–
6	LG	–

Connector No.	D41
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

H.S.



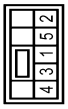
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
4	L	–
5	G	–
7	LG	–
8	GR	–
9	BR	–
10	Y	–

JRKWE3754GB

POWER WINDOW SYSTEM

Connector No.	D43
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	BR	–
3	Y	–
4	G	–
5	R	–

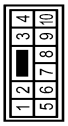
Connector No.	D47
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
3	R	–

Connector No.	D61
Connector Name	WIRE TO WIRE
Connector Type	NS10MW-CS

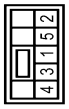
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	–
4	L	–
5	G	–
7	LG	–
8	GR	–
9	BR	–
10	Y	–

Connector No.	D63
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
2	BR	–
3	Y	–
4	G	–
5	R	–

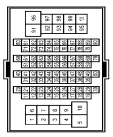
Connector No.	D67
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG

H.S.

Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	–
3	R	–

Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4

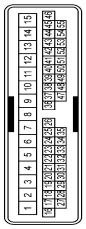
H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
4	Y	–
6	P	–
10	R	–
11	W	–
12	B	–
13	R	–
14	SHIELD	–
34	BE	–
35	R	–
36	B	–
37	P	–
52	R	–
53	BR	–
54	V	–
55	BE	–
58	G	–
59	Y	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15

H.S.



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	G	–
3	SB	–
4	V	–
13	GR	–
14	GR	–

Terminal No.	Color Of Wire	Signal Name [Specification]
62	Y	–
63	V	–
64	LG	–
65	L	–
66	R	–
67	W	–
68	SB	–
70	BR	–
71	LG	–
72	V	–
73	L	–
76	R	–
78	B	–
79	W	–
80	L	–
83	Y	–
84	LG	–
85	P	–
86	BE	–
90	SHIELD	–
91	G	–
92	R	–
95	BR	–
96	P	–
97	GR	–
98	W	–
99	V	–
100	O	–

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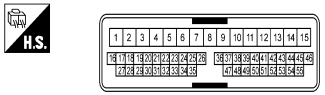
POWER WINDOW SYSTEM

POWER WINDOW SYSTEM

15	L	–
16	SHIELD	–
17	Y	–
18	G	–
19	L	–
24	R	–
25	G	–
38	Y	–
39	B	–
40	BR	–
41	G	–
43	V	–
44	V	–
45	LG	–
46	BR	–
50	P	–

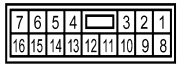
Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH40MW-CS15



Terminal No.	Color Of Wire	Signal Name [Specification]
1	GR	–
2	W	–
3	SB	–
4	V	–
7	R	–
8	G	–
9	LG	–
10	Y	–
11	GR	–
12	GR	–
13	B	–
14	L	–
15	P	–
16	SHIELD	–
17	R	–
18	B	–
19	W	–
24	BR	–

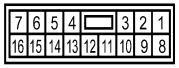
25	Y	–
38	W	–
39	B	–
40	V	–
41	P	–
42	GR	–
43	V	–
44	P	–
45	G	–
46	Y	–
47	GR	–
48	L	–
49	R	–
50	LG	–
52	BR	–

Connector No.	M18
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



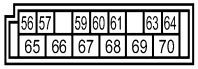
Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	–
2	L	–
6	V	–
10	W	–
11	BR	–
12	Y	–
13	V	–
14	Y	–
15	LG	–
16	L	–

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	–
2	Y	–
4	W	–
7	V	–
9	BR	–
10	V	–
11	LG	–
12	V	–
13	R	–
14	G	–
15	L	–
16	G	–

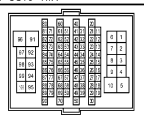
Connector No.	M69
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	FEA09FW-FHA6-SA



Terminal No.	Color Of Wire	Signal Name [Specification]
56	P	INT ROOM LAMP PWR SPLY
57	P	BATT(FUSE)
59	SB	PASS DOOR UNLK OUTPUT
60	V	TURN SIG LH OUTPUT
61	W	TURN SIG RH OUTPUT
63	BR	INT ROOM LAMP CONT
64	R	REVERSE SW
65	V	ALL DOOR LOCK OUTPUT

66	SB	DOOR UNLOCK DR
67	B	GND
68	L	PW PWR SPLY (IGN)
69	P	PW PWR SPLY (BAT)
70	Y	BAT (F/L)

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	–
4	V	–
6	P	–
10	R	–
11	R	–
12	LG	–
13	V	–
14	SHIELD	–
34	LG	–
35	SB	–
36	B	–
37	P	–
52	R	–
53	L	–
54	SB	–
55	P	–
58	LG	–
59	G	–
62	Y	–
63	W	–
64	G	–
65	GR	–
66	Y	–
67	V	–
68	R	–
70	V	–
71	R	–
72	GR	–
73	G	–

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POWER WINDOW SYSTEM

76	W	–
78	LG	–
79	V	–
80	LG	–
83	P	–
84	G	–
85	BR	–
86	LG	–
90	SHIELD	–
91	Y	–
92	BR	–
95	Y	–
96	L	–
97	GR	–
98	G	–
99	R	–
100	LG	–

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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

WorkFlow

INFOID:0000000011463415

DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much 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 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4. IDENTIFY THE MALFUNCTIONING PARTS WITH “DTC/CIRCUIT DIAGNOSIS”

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

>> GO TO 5.

5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6. FINAL CHECK

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

Are the malfunctions corrected?

YES >> INSPECTION END
NO >> GO TO 3.

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

Description

INFOID:0000000011463416

When the battery negative terminal is disconnected, the initialization is necessary for normal operation of power window system. Refer to PWC-23, "Work Procedure".

CAUTION:

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

- **Auto-up operation**
- **Anti-pinch function**

Work Procedure

INFOID:0000000011463417

1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-25, "Description".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-26, "Description".

>> END

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description

INFOID:0000000011463418

When the control unit replaced, the initialization in necessary for normal operation of power window system. Refer to PWC-24, "Work Procedure".

CAUTION:

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

- **Auto-up operation**
- **Anti-pinch function**

Work Procedure

INFOID:0000000011463419

1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-25, "Description".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-26, "Description".

>> END

SYSTEM INITIALIZATION

Description

INFOID:0000000011463420

If any of the following operations are performed, the initialization is necessary for normal operation of power window system. Refer to PWC-25, "Work Procedure".

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

CAUTION:

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

- **Auto-up operation**
- **Anti-pinch function**

Work Procedure

INFOID:0000000011463421

1. STEP 1

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

>> GO TO 2.

2. STEP 2

Check anti-pinch function. Refer to PWC-26, "Description".

>> END

CHECK ANTI-PINCH FUNCTION

Description

INFOID:0000000011463422

If any of the following operations are performed, the initialization is necessary for normal operation of anti-pinch function. Refer to PWC-26, "Work Procedure".

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

Work Procedure

INFOID:0000000011463423

1. CHECK ANTI-PINCH FUNCTION

1. Fully open the door window.
2. Place a piece of wood near fully closed position.
3. Close door glass completely with AUTO-UP.
4. Check the following conditions.

- Check that glass lowers for approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that glass does not rise not when operating the power window main switch while lowering.

CAUTION:

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

>> END

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000011463424

1. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY

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

(+)		(-)	Condition		Voltage (V)
Power window main switch					
Connector	Terminal				
D35	10	Ground	Ignition switch	ON	9 – 16
D36	18			OFF	

Is the inspection result normal?

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

2. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT

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

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M69	68	D35	10	Existed
	69	D36	18	

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	68		Not existed
	69		

Is the inspection result normal?

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

3. CHECK POWER WINDOW MAIN SWITCH 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		
D35	1		Existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000011463425

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

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

(+)		(-)	Voltage (V)
Front power window switch (passenger side)			
Connector	Terminal		
D10	1	Ground	9 – 16

Is the inspection result normal?

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

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

1. Turn ignition switch OFF.
2. Disconnect BCM connector.
3. 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	
M69	68	D10	1	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	68		Not existed

Is the inspection result normal?

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

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000011463426

1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY

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

(+)			(-)	Voltage (V)
Rear power window switch				
Connector		Terminal		
LH	D63	1	Ground	9 – 16
RH	D43			

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY CIRCUIT

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	
M69	68	LH	D63	1	Existed
		RH	D43		

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M69	68		Not existed

Is the inspection result normal?

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

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Component Function Check

INFOID:0000000011463427

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to PWC-30, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000011463428

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

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

(+)		(-)	Condition		Voltage (V)
Front power window switch (passenger side)					
Connector	Terminal				
D10	2	Ground	Power window main switch (passenger side switch)	NEUTRAL	0 – 1
				UP	9 – 16
	3			NEUTRAL	0 – 1
				DOWN	9 – 16

Is the inspection result normal?

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

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

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

Front power window switch (passenger side)		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
D10	2	D35	16	Existed
	3		2	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D10	2	Ground	Not existed
	3		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-31, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace front power window switch (passenger side). Refer to PWC-53, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000011463429

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

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

Front power window switch (passenger side) Terminal		Condition	Continuity
1	5	UP	Existed
3	4		
2	5	NEUTRAL	
3	4		
1	4	DOWN	
2	5		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace front power window switch (passenger side). Refer to PWC-53, "Removal and Installation".

REAR POWER WINDOW SWITCH

Component Function Check

INFOID:0000000011463430

1. CHECK FUNCTION

Check rear power window motor (LH/RH) operation with rear power window switch (LH/RH) and pawer window main switch (rear LH/RH switch).

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:0000000011463431

1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

(+)			(-)	Condition		Voltage (V)
Rear power window switch						
Connector		Terminal				
LH	D63	2	Ground	Power window main switch (rear LH switch)	NEUTRAL	0 – 1
					UP	9 – 16
		3			NEUTRAL	0 – 1
					DOWN	9 – 16
RH	D43	2		Power window main switch (rear RH switch)	NEUTRAL	0 – 1
					UP	9 – 16
		3			NEUTRAL	0 – 1
					DOWN	9 – 16

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW SWITCH CIRCUIT

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

Rear power window switch			Power window main switch		Continuity
Connector		Terminal	Connector	Terminal	
LH	D63	2	D35	9	Existed
		3		8	
RH	D43	2		7	
		3		6	

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

Rear power window switch			Ground	Continuity
Connector		Terminal		
LH	D63	2		Not existed
		3		
RH	D43	2		
		3		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.
Refer to PWC-33, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace rear power window switch. Refer to PWC-53, "Removal and Installation".

4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000011463432

1. CHECK REAR POWER WINDOW SWITCH

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

Rear power window switch		Condition	Continuity
Terminal			
1	5	UP	Existed
3	4		
2	5	NEUTRAL	
3	4		
1	4	DOWN	
2	5		

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace rear power window switch. Refer to PWC-53, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000011463433

1. CHECK FUNCTION

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

Is the inspection result normal?

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

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000011463434

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

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

(+)		(-)	Condition		Voltage (V)
Front power window motor (driver side)					
Connector	Terminal				
D37	2	Ground	Power window main switch (driver side switch)	NEUTRAL	0 – 1
				UP	9 – 16
	3			NEUTRAL	0 – 1
				DOWN	9 – 16

Is the inspection result normal?

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

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

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

Front power window motor (driver side)		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
D37	2	D35	17	Existed
	3		19	

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

Front power window motor (driver side)		Ground	Continuity
Connector	Terminal		
D37	2	Ground	Not existed
	3		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Component Function Check

INFOID:0000000011463435

1. CHECK FUNCTION

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

Is the inspection result normal?

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

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000011463436

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

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

(+)		(-)	Condition		Voltage (V)
Front power window motor (passenger side)					
Connector	Terminal				
D16	1	Ground	Front power window switch (passenger side)	NEUTRAL	0 – 1
				UP	9 – 16
	3			NEUTRAL	0 – 1
				DOWN	9 – 16

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-20, "Disassembly and Assembly".
NO >> GO TO 2.

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

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

Front power window motor (passenger side)		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D16	1	D10	5	Existed
	3		4	

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

Front power window motor (passenger side)		Ground	Continuity
Connector	Terminal		
D16	1	Ground	Not existed
	3		

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

REAR LH

REAR LH : Component Function Check

INFOID:0000000011463437

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to PWC-36, "REAR LH : Diagnosis Procedure".

REAR LH : Diagnosis Procedure

INFOID:0000000011463438

1. CHECK REAR POWER WINDOW MOTOR LH 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)
Rear power window motor LH					
Connector	Terminal				
D67	1	Ground	Rear power window switch LH	NEUTRAL	0 – 1
				DOWN	9 – 16
	3			NEUTRAL	0 – 1
				UP	9 – 16

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

Rear power window motor LH		Rear power window switch LH		Continuity
Connector	Terminal	Connector	Terminal	
D67	1	D63	4	Existed
	3		5	

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

Rear power window motor LH		Ground	Continuity
Connector	Terminal		
D67	1	Ground	Not existed
	3		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

REAR RH

REAR RH : Component Function Check

INFOID:0000000011463439

1. CHECK FUNCTION

Check rear power window motor RH operation with rear power window switch RH and pawer window main switch (rear RH switch).

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to PWC-37, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:0000000011463440

1. CHECK REAR POWER WINDOW MOTOR RH 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)
Rear power window motor RH					
Connector	Terminal				
D47	1	Ground	Rear power window switch RH	NEUTRAL	0 – 1
				DOWN	9 – 16
	3			NEUTRAL	0 – 1
				UP	9 – 16

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to GW-23, "Disassembly and Assembly".
NO >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

Rear power window motor RH		Rear power window switch RH		Continuity
Connector	Terminal	Connector	Terminal	
D47	1	D43	4	Existed
	3		5	

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

Rear power window motor RH		Ground	Continuity
Connector	Terminal		
D47	1	Ground	Not existed
	3		

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

ENCODER CIRCUIT

Component Function Check

INFOID:0000000011463441

1.CHECK FUNCTION

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

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to PWC-38, "Diagnosis Procedure".

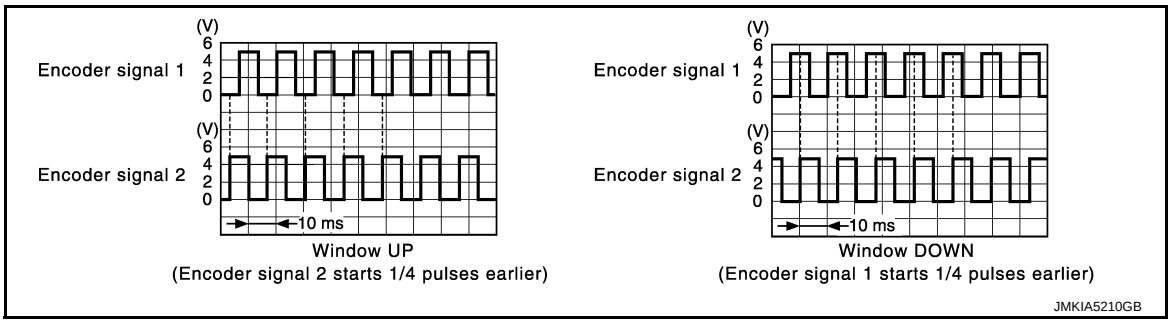
Diagnosis Procedure

INFOID:0000000011463442

1.CHECK ENCODER PULSE 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		
D35	4	Ground	Refer to the following signal
	5		



Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".
NO >> GO TO 2.

2.CHECK ENCODER SIGNAL CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D35	4	D37	5	Existed
	5		4	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D35	4		Not existed
	5		

Is the inspection result normal?

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

3. CHECK ENCODER POWER SUPPLY

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

(+)		(-)	Voltage (V)
Front power window motor (driver side)			
Connector	Terminal		
D37	1	Ground	9 – 16

Is the inspection result normal?

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

4. CHECK ENCODER POWER SUPPLY CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D35	14	D37	1	Existed

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D35	14		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK ENCODER GROUND CIRCUIT 1

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	
D35	12	D37	6	Existed

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace harness.

6. CHECK ENCODER GROUND CIRCUIT 2

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D35	12		Existed

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to GW-20, "Disassembly and Assembly".
NO >> Replace power window main switch. Refer to PWC-53, "Removal and Installation".

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000011463443

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to BCS-86, "Diagnosis Procedure".

Is the inspection result normal?

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

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

Check power window main switch power supply and ground circuit.
Refer to PWC-27, "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-44, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000011463444

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check front power window motor (driver side).
Refer to PWC-34, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

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:0000000011463445

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-30, "Component Function Check".

Is the inspection result normal?

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

2. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).
Refer to PWC-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-44, "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:0000000011463446

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-28, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

Is the inspection result normal?

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

2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-30, "Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000011463447

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to PWC-30, "Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

REAR LH SIDE POWER WINDOW 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:0000000011463448

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.
Refer to PWC-36, "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-44, "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:0000000011463449

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

Check rear power window switch LH power supply and ground circuit.
Refer to PWC-28, "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 SWITCH LH

Check rear power window switch LH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000011463450

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

REAR RH SIDE POWER WINDOW 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:0000000011463451

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

2. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
Refer to PWC-36, "REAR RH : Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure

INFOID:0000000011463452

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

Check rear power window switch RH power supply and ground circuit.
Refer to PWC-28, "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 SWITCH RH

Check rear power window switch RH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000011463453

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.
Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000011463454

1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.
Refer to PWC-25, "Description".

Is the inspection result normal?

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

2. CHECK ENCODER CIRCUIT

Check encoder circuit.
Refer to PWC-38, "Component Function Check".

Is the inspection result normal?

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

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

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

Diagnosis Procedure

INFOID:0000000011463455

1. CHECK POWER WINDOW AUTO OPERATION

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

Is the inspection result normal?

YES >> GO TO 2.
NO >> Refer to PWC-49, "Diagnosis Procedure".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000011463456

1. CHECK FRONT DOOR SWITCH

Check front door switch.
Refer to DLK-78, "Component Function Check"

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000011463457

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer to PWC-53, "Removal and Installation".

REMOVAL AND INSTALLATION

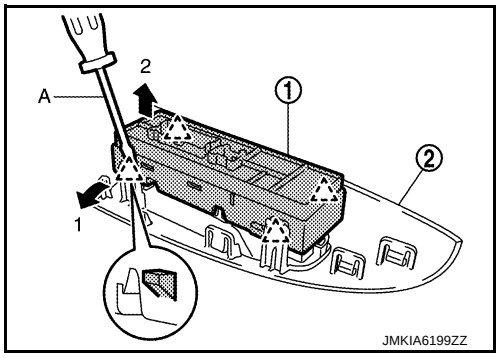
POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:0000000011463458

REMOVAL

1. Remove power window main switch finisher. Refer to INT-13, "Removal and Installation".
2. Remove power window main switch (1) from power window main switch finisher (2) using remover tool (A).



: Pawl

CAUTION:
Do not fold the pawl of power window main switch finisher.
NOTE:
The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).

INSTALLATION

Install in the reverse order of removal.
NOTE:
If power window main switch is replaced or is removed, it is necessary to perform the initialization procedure. Refer to PWC-25, "Description".