

SECTION **PWC**
POWER WINDOW CONTROL SYSTEM

CONTENTS

PRECAUTION	4	DIAGNOSIS AND REPAIR WORK FLOW	28
PRECAUTIONS	4	Work Flow	28
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	4	ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL	31
Precautions for Removing Battery Terminal	4	Description	31
PREPARATION	6	Work Procedure	31
PREPARATION	6	ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH	32
Commercial Service Tools	6	Description	32
SYSTEM DESCRIPTION	7	Work Procedure	32
COMPONENT PARTS	7	SYSTEM INITIALIZATION	33
Component Parts Location	7	Description	33
Power Window Main Switch	10	Work Procedure	33
Front Power Window Switch (Passenger side)	10	ANTI-PINCH INSPECTION	34
Rear Power Window Switch	11	Description	34
Power Window Motor	11	Work Procedure	34
SYSTEM	12	DTC/CIRCUIT DIAGNOSIS	35
System Description	12	POWER SUPPLY AND GROUND CIRCUIT	35
Circuit Diagram	13	POWER WINDOW MAIN SWITCH	35
Fail Safe	14	POWER WINDOW MAIN SWITCH : Diagnosis Procedure	35
ECU DIAGNOSIS INFORMATION	15	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	39
BCM (BODY CONTROL MODULE)	15	FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure	39
List of ECU Reference	15	REAR POWER WINDOW SWITCH	40
POWER WINDOW MAIN SWITCH	16	REAR POWER WINDOW SWITCH : Diagnosis Procedure	40
Reference Value	16	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	43
Fail Safe	18	Component Function Check	43
WIRING DIAGRAM	20	Diagnosis Procedure	43
POWER WINDOW SYSTEM	20	Component Inspection	45
Wiring Diagram	20		
BASIC INSPECTION	28		

REAR POWER WINDOW SWITCH	46	REAR LH SIDE POWER WINDOW DOES NOT OPERATE	67
Component Function Check	46	WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED	67
Diagnosis Procedure	46	WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED : Diagnosis Procedure	67
Component Inspection	48	WHEN REAR POWER WINDOW SWITCH LH IS OPERATED	67
POWER WINDOW MOTOR	49	WHEN REAR POWER WINDOW SWITCH LH IS OPERATED : Diagnosis Procedure	67
DRIVER SIDE	49	WHEN POWER WINDOW MAIN SWITCH IS OPERATED	67
DRIVER SIDE : Component Function Check	49	WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	68
DRIVER SIDE : Diagnosis Procedure	49	REAR RH SIDE POWER WINDOW DOES NOT OPERATE	69
PASSENGER SIDE	50	WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED	69
PASSENGER SIDE : Component Function Check	50	WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED : Diagnosis Procedure	69
PASSENGER SIDE : Diagnosis Procedure	50	WHEN REAR POWER WINDOW SWITCH RH IS OPERATED	69
REAR LH	52	WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure	69
REAR LH : Component Function Check	52	WHEN POWER WINDOW MAIN SWITCH IS OPERATED	69
REAR LH : Diagnosis Procedure	52	WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	70
REAR RH	54	AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMALLY (DRIVER SIDE)	71
REAR RH : Component Function Check	54	Diagnosis Procedure	71
REAR RH : Diagnosis Procedure	54	ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE)	72
ENCODER CIRCUIT	57	Diagnosis Procedure	72
Component Function Check	57	POWER WINDOW LOCK SWITCH DOES NOT FUNCTION	73
Diagnosis Procedure	57	Diagnosis Procedure	73
POWER WINDOW RELAY	62	REMOVAL AND INSTALLATION	74
Component Function Check	62	FRONT POWER WINDOW SWITCH	74
Diagnosis Procedure	62	POWER WINDOW MAIN SWITCH	74
SYMPTOM DIAGNOSIS	63	POWER WINDOW MAIN SWITCH : Removal and Installation	74
POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES	63		
Diagnosis Procedure	63		
DRIVER SIDE POWER WINDOW DOES NOT OPERATE	64		
Diagnosis Procedure	64		
FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE	65		
WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED	65		
WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED : Diagnosis Procedure	65		
WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED	65		
WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED : Diagnosis Procedure	65		
WHEN POWER WINDOW MAIN SWITCH IS OPERATED	65		
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	66		

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	74
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Removal and Installation	74
REAR POWER WINDOW SWITCH	75
Removal and Installation	75

A

B

C

D

E

F

G

H

I

J

L

M

N

O

P

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:0000000010735199

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. 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:0000000010735274

- With the adoption of Auto ACC function, ACC power is automatically supplied by operating the intelligent key or remote keyless entry or by opening/closing the driver side door. In addition, ACC power is supplied even after the ignition switch is turned to the OFF position, i.e. ACC power is supplied for a certain fixed time.
- When disconnecting the 12V battery terminal, turn off the ACC power before disconnecting the 12V battery terminal, observing "How to disconnect 12V battery terminal" described below.

NOTE:

Some ECUs operate for a certain fixed time even after ignition switch is turned OFF and ignition power supply is stopped. If the battery terminal is disconnected before ECU stops, accidental DTC detection or ECU data damage 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:

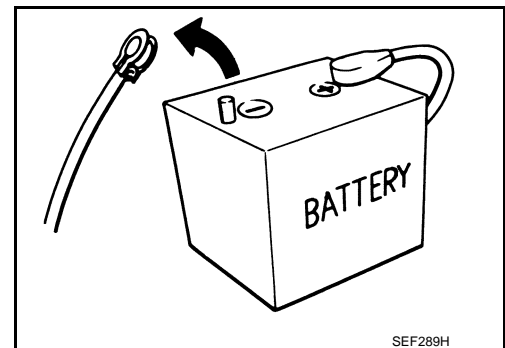
The removal of 12V battery may cause a DTC detection error.

HOW TO DISCONNECT 12V BATTERY TERMINAL

Disconnect 12V battery terminal according to Instruction 1 or Instruction 2 described below.
For vehicles parked by ignition switch OFF, refer to Instruction 2.

INSTRUCTION 1

1. Open the hood.



SEF289H

PRECAUTIONS

< PRECAUTION >

2. Turn key switch to the OFF position with the driver side door opened.
3. Get out of the vehicle and close the driver side door.
4. Wait at least 3 minutes. For vehicle with the engine listed below, remove the battery terminal after a lapse of the specified time.

D4D engine	: 20 minutes
HRA2DDT	: 12 minutes
K9K engine	: 4 minutes
M9R engine	: 4 minutes
R9M engine	: 4 minutes
V9X engine	: 4 minutes

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

5. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

INSTRUCTION 2 (FOR VEHICLES PARKED BY IGNITION SWITCH OFF)

1. Unlock the door with intelligent key or remote keyless entry.

NOTE:

At this moment, ACC power is supplied.

2. Open the driver side door.
3. Open the hood.
4. Close the driver side door.
5. Wait at least 3 minutes.

CAUTION:

While waiting, never operate the vehicle such as locking, opening, and closing doors. Violation of this caution results in the activation of ACC power supply according to the Auto ACC function.

6. Remove 12V battery terminal.

CAUTION:

After installing 12V battery, always check self-diagnosis results of all ECUs and erase DTC.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

PREPARATION

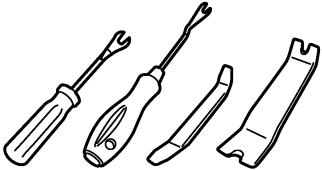
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000010735201

Tool name	Description
<div>Remover tool</div> <div> JMKIA3050ZZ</div>	<div>Removes the clips, pawls and metal clips</div>

COMPONENT PARTS

< SYSTEM DESCRIPTION >

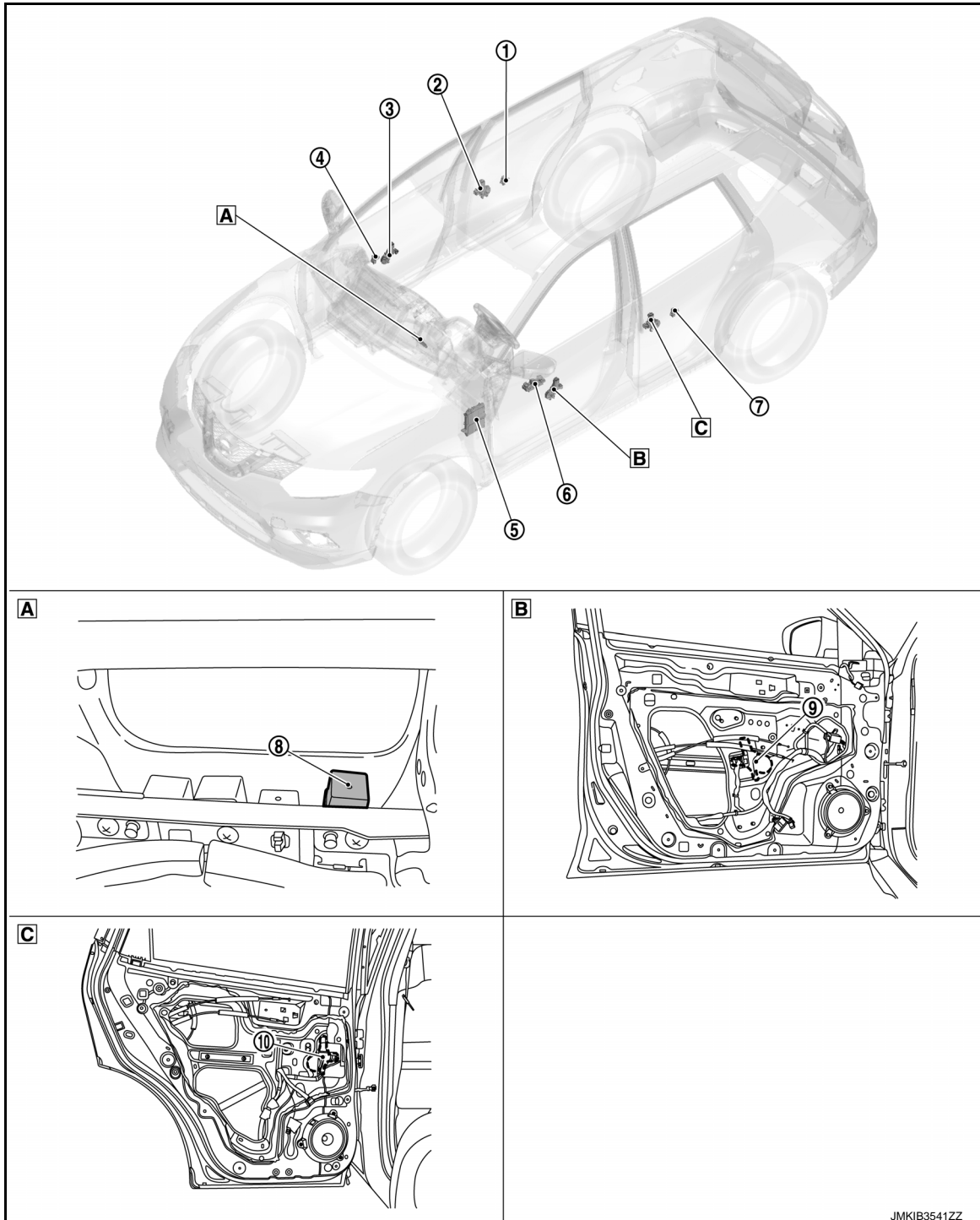
SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

LHD MODELS

INFOID:0000000010735202



A Behind A/C control

B View with front door finisher (driver side) removed

C View with rear door finisher LH removed

A
B
C
D
E
F
G
H
I
J
PWC
L
M
N
O
P

COMPONENT PARTS

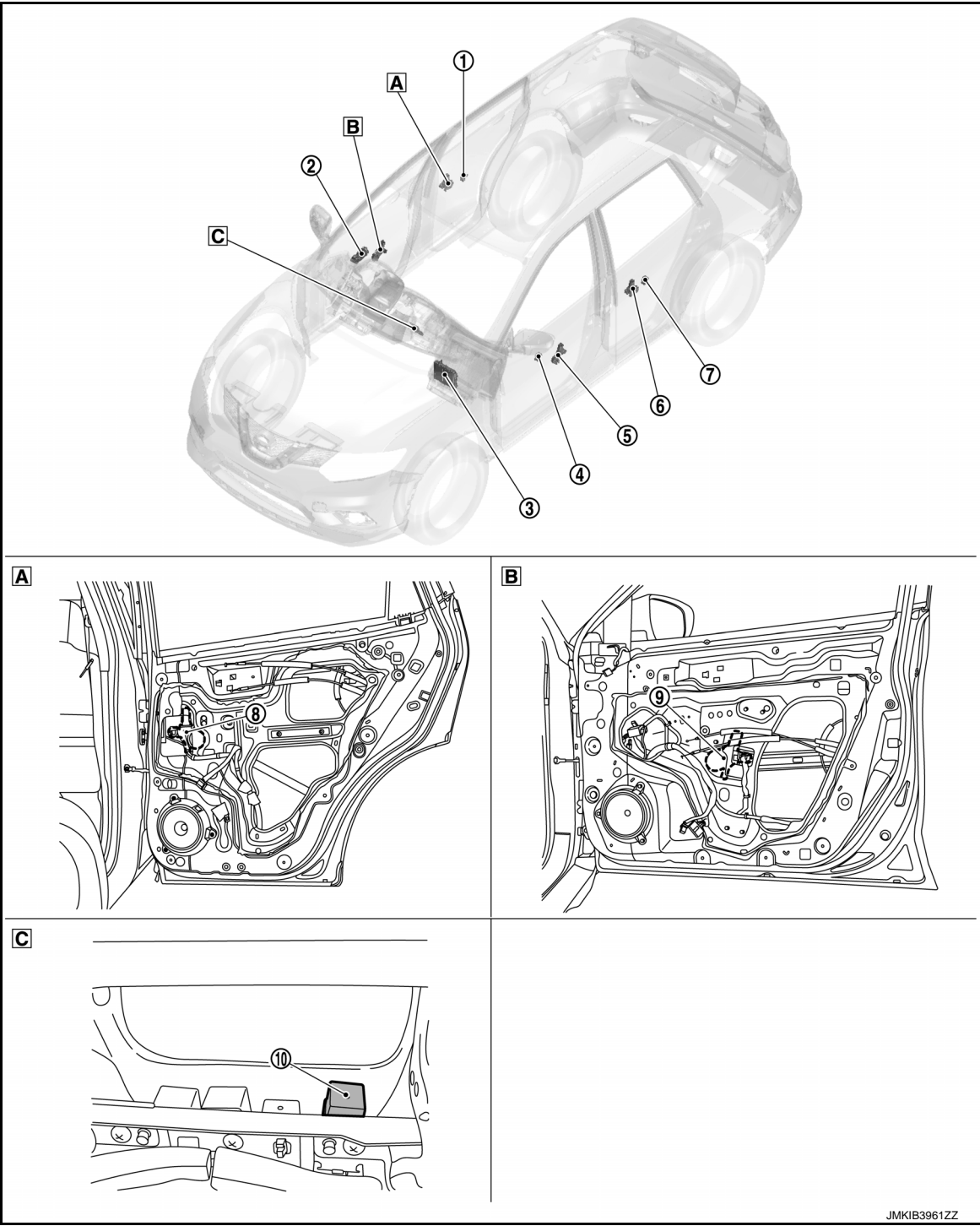
< SYSTEM DESCRIPTION >

No.	Component	Function
①	Rear power window switch RH	Refer to PWC-11, "Rear Power Window Switch"
②	Rear power window motor RH	Refer to PWC-11, "Power Window Motor"
③	Front power window motor (passenger side)	Refer to PWC-11, "Power Window Motor"
④	Front power window switch (passenger side)	Refer to PWC-10, "Front Power Window Switch (Passenger side)"
⑤	BCM	<ul style="list-style-type: none">Controls power window relayRefer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location
⑥	Power window main switch	Refer to PWC-10, "Power Window Main Switch"
⑦	Rear power window switch LH	Refer to PWC-11, "Rear Power Window Switch"
⑧	Power window relay	Supplies power supply to each power window switch
⑨	Front power window motor (driver side)	Refer to PWC-11, "Power Window Motor"
⑩	Rear power window motor LH	Refer to PWC-11, "Power Window Motor"

RHD MODELS

COMPONENT PARTS

< SYSTEM DESCRIPTION >



A View with rear door finisher RH removed **B** View with front door finisher (driver side) removed **C** Behind A/C control

No.	Component	Function
①	Rear power window switch RH	Refer to PWC-11, "Rear Power Window Switch"
②	Power window main switch	Refer to PWC-10, "Power Window Main Switch"
③	BCM	<ul style="list-style-type: none">Controls power window relayRefer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location

COMPONENT PARTS

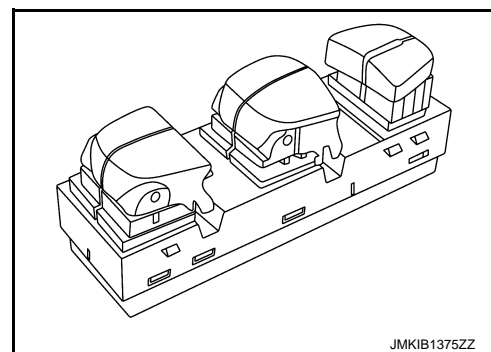
< SYSTEM DESCRIPTION >

No.	Component	Function
④	Front power window switch (passenger side)	Refer to PWC-10, "Front Power Window Switch (Passenger side)"
⑤	Front power window motor (passenger side)	Refer to PWC-11, "Power Window Motor"
⑥	Rear power window motor LH	Refer to PWC-11, "Power Window Motor"
⑦	Rear power window switch LH	Refer to PWC-11, "Rear Power Window Switch"
⑧	Rear power window motor RH	Refer to PWC-11, "Power Window Motor"
⑨	Front power window motor (driver side)	Refer to PWC-11, "Power Window Motor"
⑩	Power window relay	Supplies power supply to each power window switch

Power Window Main Switch

INFOID:000000010735203

- Power window main switch controls all power windows.
- Power window main switch integrates UP/DOWN switch, power window lock switch, and door lock/unlock switch.
- Power window main switch controls power window lock function, AUTO UP/DOWN function, and anti-pinch function.

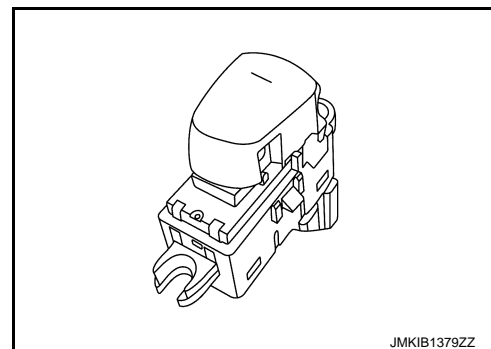


Front Power Window Switch (Passenger side)

INFOID:000000010735363

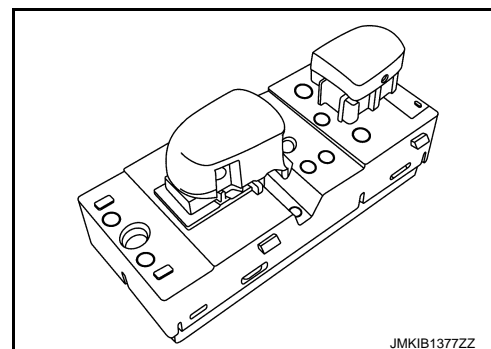
LHD MODELS

- Front power window switch (passenger side) transmits UP/DOWN signal to front power window motor (passenger side).
- Front power window switch (passenger side) transmits UP/DOWN signal from power window main switch to front power window motor (passenger side).



RHD MODELS

- Front power window switch (passenger side) transmits UP/DOWN signal to front power window motor (passenger side).
- Front power window switch (passenger side) transmits UP/DOWN signal from power window main switch to front power window motor (passenger side).
- Front power window switch (passenger side) integrates UP/DOWN switch and door lock/unlock switch.



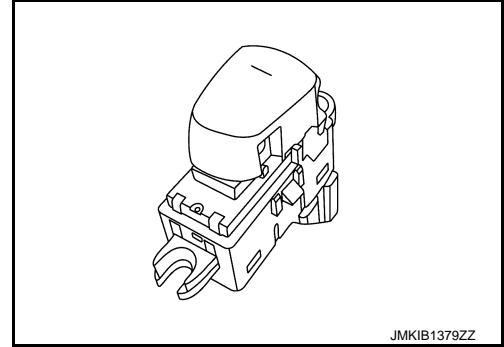
COMPONENT PARTS

< SYSTEM DESCRIPTION >

Rear Power Window Switch

INFOID:0000000010735204

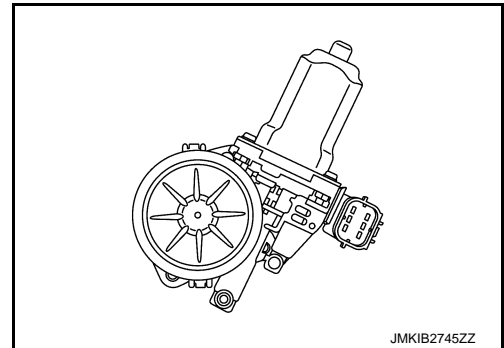
- Each rear power window switch transmits UP/DOWN signal to each rear power window motor.
- Each rear power window switch transmits UP/DOWN signal from power window main switch to each rear power window motor.



Power Window Motor

INFOID:0000000010735205

- Integrates the encoder and power window motor (front driver side).
- Starts operation according to signals from power window main switch (front driver side).
- Transmits front power window motor (driver side) rotation as a pulse signal to power window main switch.
- Excepting power window motor for driver door, starts operation according to signals from power window main switch or each power window switches.



A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

SYSTEM

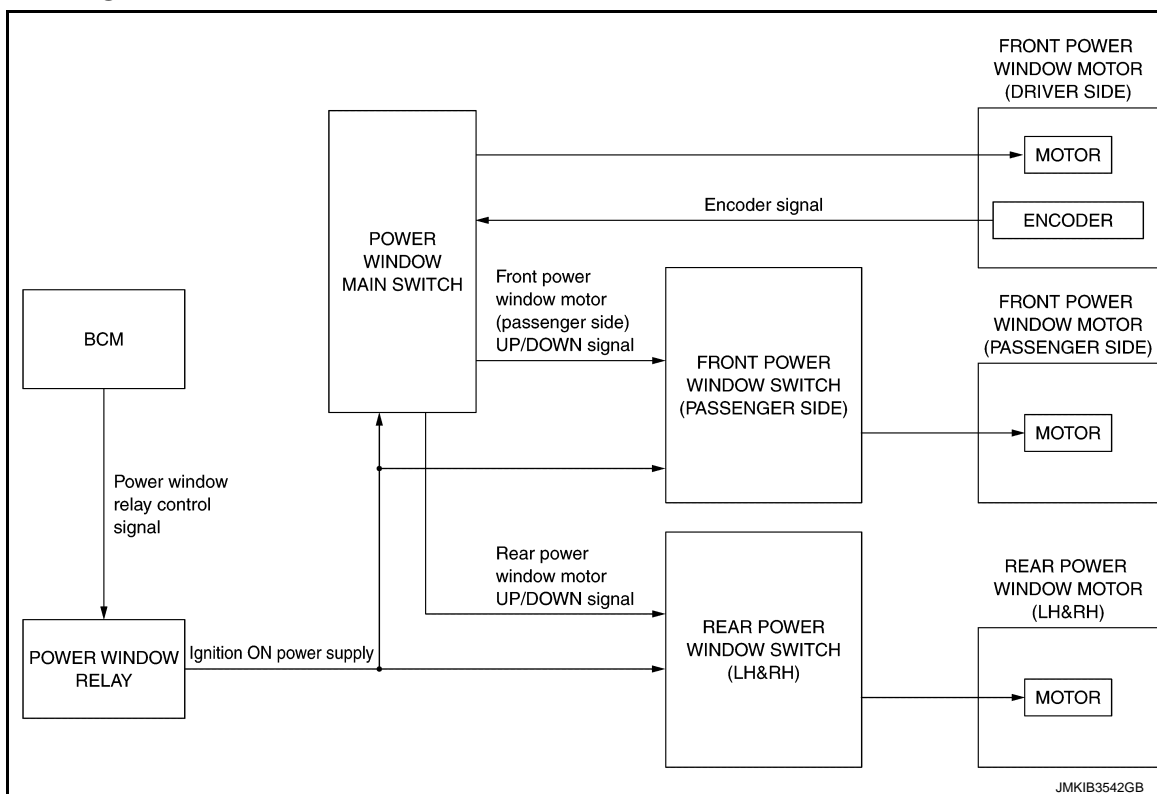
< SYSTEM DESCRIPTION >

SYSTEM

System Description

INFOID:000000010735206

SYSTEM DIAGRAM



POWER WINDOW OPERATION

- BCM controls the power window relay, and controls the ignition ON power source supplied to each power window switch.
- Power window system is activated by power window switch when ignition switch turns ON.
- 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 main switch as the encoder signal while power window motor is operating.
- Power window main 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 LOCK

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 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.

SYSTEM

< SYSTEM DESCRIPTION >

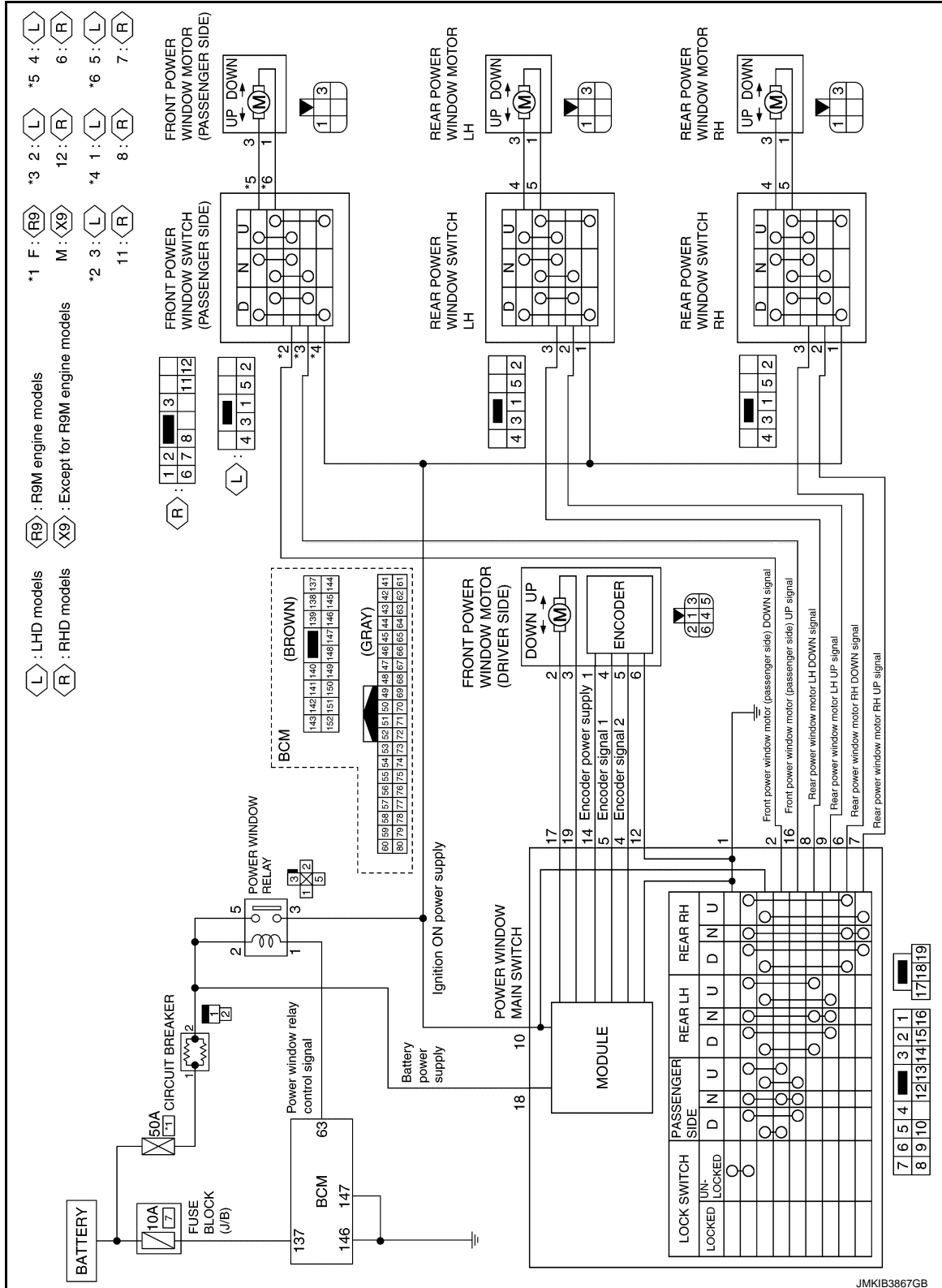
- Power window main switch controls to lower the window glass for 150 mm (5.9 in) after it detects encoder signal frequency change.
- When front door glass (driver side) AUTO-UP operation is performed (anti-pinch function does not operate just before the door glass closes and is fully closed)

NOTE:

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

Circuit Diagram

INFOID:0000000010735207



SYSTEM

< SYSTEM DESCRIPTION >

Fail Safe

INFOID:0000000010735208

FAIL-SAFE CONTROL

Power window main switch switches power window operation to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Power window main switch switches power window operation 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 detected for more than the specified time during glass open/close operation
Both pulse sensors malfunction	When both pulse signals are not detected for more than the specified time during glass open/close operation.
Pulse direction malfunction	When the pulse signal detected during glass open/close operation continues in the condition that the drive direction of power window motor is operating in the opposite direction for the specified time or longer
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window main 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 power window main switch switched power window operation to fail-safe control.

- Auto-up operation
- Anti-pinch function

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

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000010735209

ECU	Reference
BCM	BCS-53, "Reference Value"
	BCS-76, "Fail-safe"
	BCS-77, "DTC Inspection Priority Chart"
	BCS-78, "DTC Index"

POWER WINDOW MAIN SWITCH

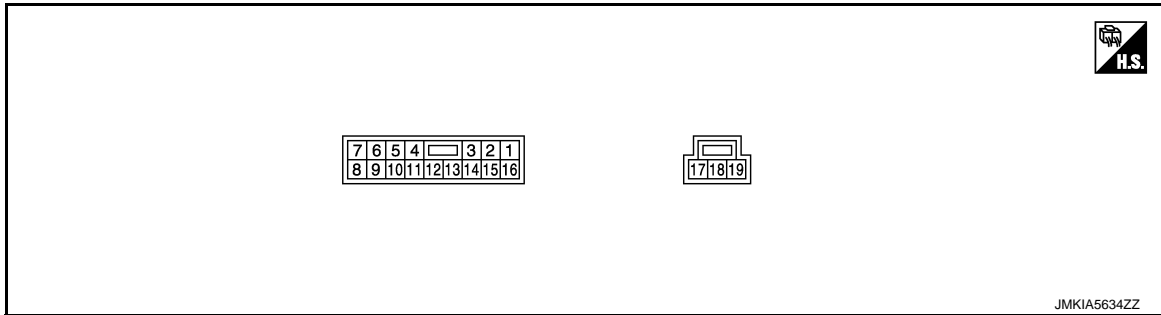
< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:0000000010735210

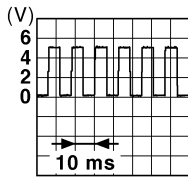
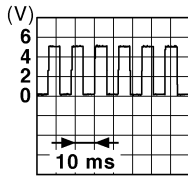
TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

LHD models

Terminal No. (Wire color)		Description		Condition	Voltage
+	—	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 – 1 V
2 (LA/GR)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is DOWN at operated.	9 – 16 V
4 (R)	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 (P)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	9 – 16 V
7 (LG)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	9 – 16 V
8 (LA/Y)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	9 – 16 V
9 (LA/W)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	9 – 16 V

POWER WINDOW MAIN SWITCH

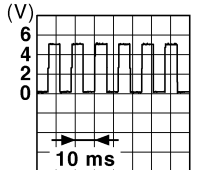
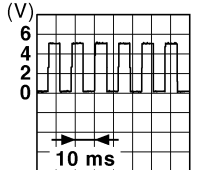
< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage
+	-	Signal name	Input/ Output		
10 (SB)	Ground	Ignition ON power supply	Input	Ignition switch ON	9 – 16 V
				Other than above	0 – 1 V
12 (Y)	Ground	Encoder ground	—	—	0 – 1 V
14 (G)	Ground	Encoder power supply	Output	Ignition switch ON	9 – 16 V
16 (LA/SB)	Ground	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is UP at operated.	9 – 16 V
17 (LA/L)	Ground	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is UP at operated.	9 – 16 V
18 (LA/R)	Ground	Battery power supply	Input	—	9 – 16 V
19 (LA/BR)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	9 – 16 V

PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

RHD models

Terminal No. (Wire color)		Description		Condition	Voltage
+	-	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0 – 1 V
2 (LA/GR)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	9 – 16 V
4 (P)	Ground	Encoder signal 2	Input	When front power window motor (driver side) operates.	 JMK1A0070GB
5 (W)	Ground	Encoder signal 1	Input	When front power window motor (driver side) operates.	 JMK1A0070GB
6 (LA/L)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	9 – 16 V
7 (LA/G)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	9 – 16 V

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage
+	-	Signal name	Input/ Output		
8 (Y)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	9 – 16 V
9 (G)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	9 – 16 V
10 (SB)	Ground	Ignition ON power supply	Input	Ignition switch ON	9 – 16 V
				Other than above	0 – 1 V
12 (LG)	Ground	Encoder ground	—	—	0 – 1 V
14 (G)	Ground	Encoder power supply	Output	Ignition switch ON	9 – 16 V
16 (LA/V)	Ground	Front power window motor (passenger side) UP signal	Output	When front LH switch in power window main switch is UP at operated.	9 – 16 V
17 (LA/R)	Ground	Front power window motor (driver side) UP signal	Output	When front RH switch in power window main switch is UP at operated.	9 – 16 V
18 (LA/R)	Ground	Battery power supply	Input	—	9 – 16 V
19 (LA/BR)	Ground	Front power window motor (driver side) DOWN signal	Output	When front RH switch in power window main switch is DOWN at operated.	9 – 16 V

Fail Safe

INFOID:0000000010735365

FAIL-SAFE CONTROL

Power window main switch switches power window operation to fail-safe control when malfunction is detected in encoder signal that detects up/down speed and direction of door glass. Power window main switch switches power window operation 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 detected for more than the specified time during glass open/close operation
Both pulse sensors malfunction	When both pulse signals are not detected for more than the specified time during glass open/close operation.
Pulse direction malfunction	When the pulse signal detected during glass open/close operation continues in the condition that the drive direction of power window motor is operating in the opposite direction for the specified time or longer
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window main 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 power window main switch switched power window operation to fail-safe control.

- Auto-up operation
- Anti-pinch function

POWER WINDOW MAIN SWITCH

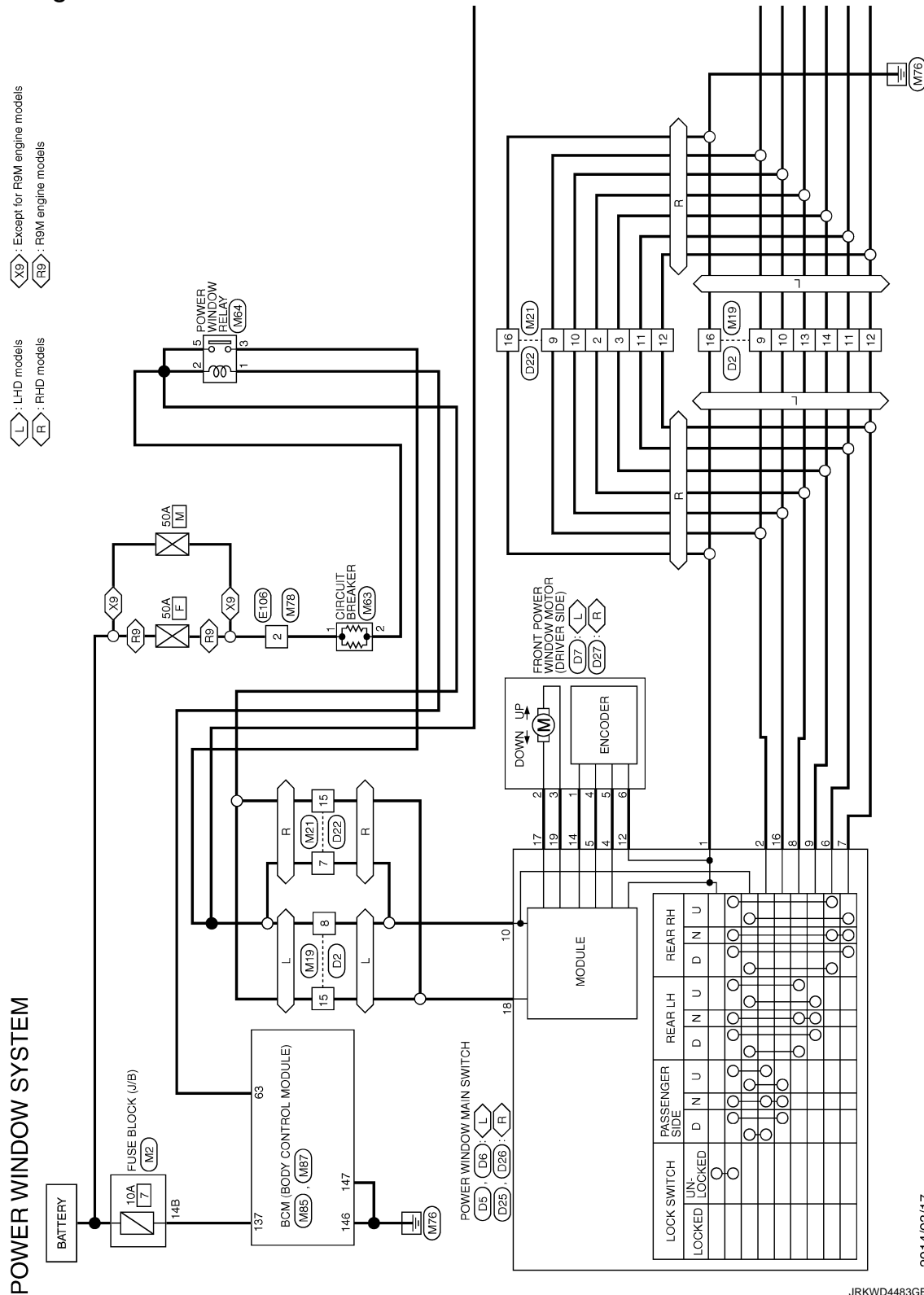
< ECU DIAGNOSIS INFORMATION >

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

A
B
C
D
E
F
G
H
I
J
PWC
L
M
N
O
P

Wiring Diagram

INFOID:0000000010735212



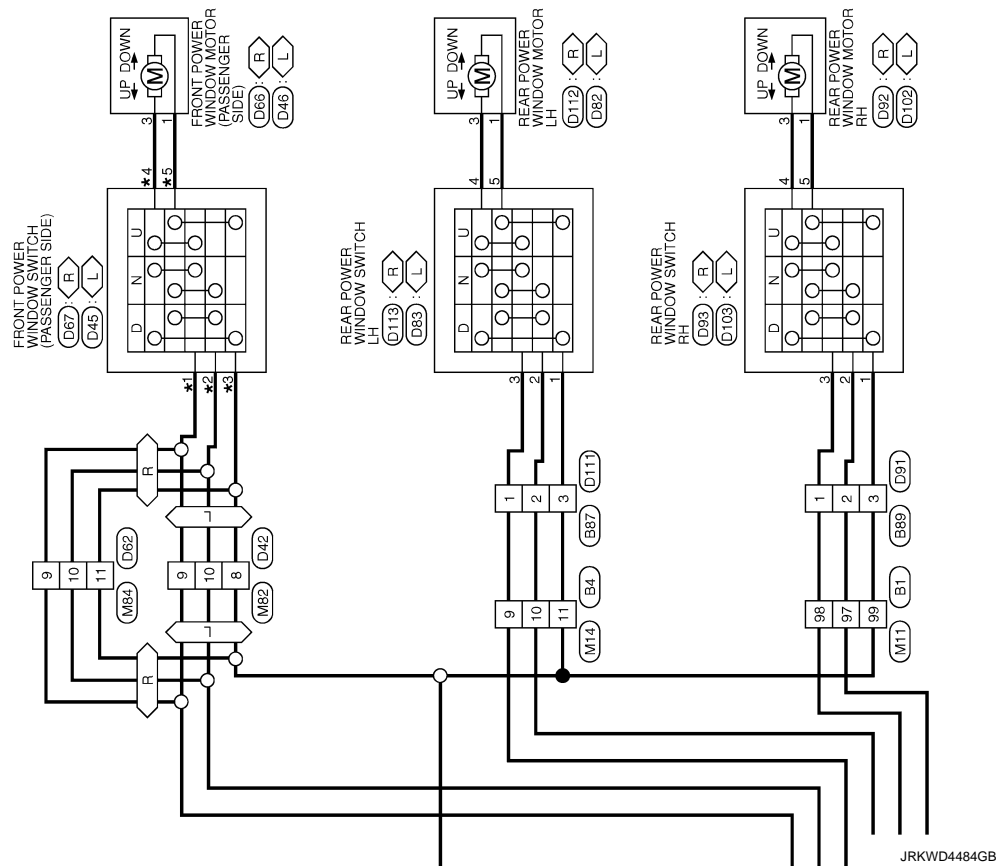
2014/03/17

JRKWD4483GB

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

- *1 3: L 11: R 12: R
- *2 2: L 4: L 6: R
- *3 1: L 8: R
- *4 4: L 6: R
- *5 5: L 7: R



JRKWD4484GB

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

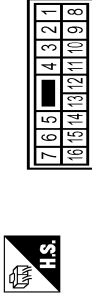
POWER WINDOW SYSTEM

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	LAY	-
6	V	-
7	LAV	-
20	L	- [With diesel engine]
20	LAL	- [With gasoline engine]
21	B	- [With diesel engine]
21	LAB	- [With gasoline engine]
24	G	-
25	BR	-
73	LAY	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LAR	-
93	LAL	-
95	LABR	-
97	L	-
98	Y	-
99	LAP	-
100	GR	- [With diesel engine]
100	LA/GR	- [With gasoline engine]

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
4	LAG	-
5	W	-
6	G	-
7	R	-
8	LAG	-
9	P	-
10	R	-
11	LAV	-
12	LAL	-
13	LAR	-
14	LABG	-
15	LABR	-
16	R	-

Connector No.	B37
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	R	-
3	LAV	-
6	W	-
7	L	-
8	LAR	-

9	LAL
12	G

Connector No.	B39
Connector Name	WIRE TO WIRE
Connector Type	NS12MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	L	-
3	LAP	-
4	LAV	-
5	LAY	-
6	LAGR	-
7	LALG	-
8	LAR	-

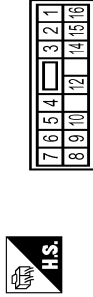
Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Type	NS16TW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAV	-
2	R	-
3	LAG	-
4	B	-
5	B	-
6	LAL	-
7	LABR	-

8	SB
9	LA/GR
10	LA/SE
11	P
12	LG
13	LAY
14	LAW
15	LAR
16	B

Connector No.	D5
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16TW-CS



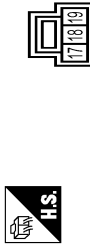
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	LA/GR	FRONT POWER WINDOW MOTOR (PASSENGER SIDE) DOWN SIGNAL
3	L	-
4	R	ENCODER SIGNAL 2
5	W	ENCODER SIGNAL 1
6	P	REAR POWER WINDOW MOTOR RH DOWN SIGNAL
7	LG	REAR POWER WINDOW MOTOR LH UP SIGNAL
8	LAY	REAR POWER WINDOW MOTOR LH DOWN SIGNAL
9	LAW	REAR POWER WINDOW MOTOR LH UP SIGNAL
10	SB	IGN ON POWER SUPPLY
12	Y	ENCODER GROUND
14	G	ENCODER POWER SUPPLY
15	BG	-
16	LA/SE	FRONT POWER WINDOW MOTOR (PASSENGER SIDE) UP SIGNAL

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

POWER WINDOW SYSTEM

Connector No.	D6
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS09FW-CS



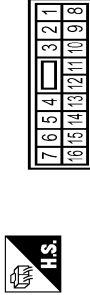
Terminal No.	Color Of Wire	Signal Name [Specification]
17	LAL	FRONT POWER WINDOW MOTOR (DRIVER SIDE) UP SIGNAL
18	LAR	BATTERY POWER SUPPLY
19	LAVR	FRONT POWER WINDOW MOTOR (DRIVER SIDE) DOWN SIGNAL

Connector No.	D7
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	RS06FG



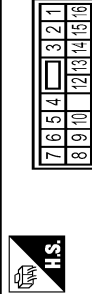
Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LAL	-
3	LAVR	-
4	W	-
5	R	-
6	Y	-

Connector No.	D22
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAL	-
2	Y	-
3	G	-
4	V	-
5	LG	-
6	G	-
7	SB	-
8	LAVR	-
9	LAVR	-
10	LAV	-
11	LAL	-
12	LGR	-
13	LAR	-
14	LAV	-
15	LAR	-
16	B	-

Connector No.	D25
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	GROUND
2	LAVR	FRONT POWER WINDOW MOTOR (DRIVER SIDE) DOWN SIGNAL
3	L	-
4	P	ENCODER SIGNAL 2

5	W	ENCODER SIGNAL 1
6	LAL	REAR POWER WINDOW MOTOR (RH) DOWN SIGNAL
7	LAV	REAR POWER WINDOW MOTOR (RH) UP SIGNAL
8	Y	REAR POWER WINDOW MOTOR (LH) DOWN SIGNAL
9	G	REAR POWER WINDOW MOTOR (LH) UP SIGNAL
10	SB	IGN ON POWER SUPPLY
12	LG	ENCODER GROUND
13	GR	-
14	G	ENCODER POWER SUPPLY
15	BG	-
16	LAV	FRONT POWER WINDOW MOTOR (PASSENGER SIDE) UP SIGNAL

Connector No.	D26
Connector Name	POWER WINDOW MAIN SWITCH
Connector Type	NS09FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
17	LAR	FRONT POWER WINDOW MOTOR (DRIVER SIDE) UP SIGNAL
18	LAV	BATTERY POWER SUPPLY
19	LAVR	FRONT POWER WINDOW MOTOR (DRIVER SIDE) DOWN SIGNAL

Connector No.	D27
Connector Name	FRONT POWER WINDOW MOTOR (DRIVER SIDE)
Connector Type	RS06FG



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	LAV	-
3	LAVR	-
4	W	-

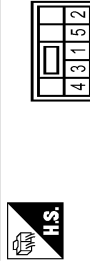
5	P	-
6	LG	-

Connector No.	D42
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAV	-
2	B	-
8	LAVR	-
9	LAV	-
10	LAVR	-
11	LAV	-
12	LAV	-
13	LAV	-
14	LAV	-

Connector No.	D45
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAVR	LOCK
2	LAVR	UNLOCK
3	LAV	GROUND
4	LAV	-
5	LAVR	-

JRKWD4486GB

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

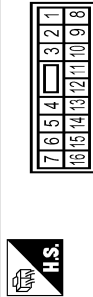
POWER WINDOW SYSTEM

Connector No.	D46
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	RS08FG



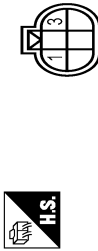
Terminal No.	Wire	Signal Name [Specification]
1	LAV	-
3	LAL	M

Connector No.	D92
Connector Name	WIRE TO WIRE
Connector Type	NS16FW-CS



Terminal No.	Wire	Signal Name [Specification]
1	L	-
2	V	-
3	R	-
4	B	-
5	B	-
6	LAL	-
7	LAVR	-
9	LAY	-
10	LAVR	-
11	LAL	-

Connector No.	D66
Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)
Connector Type	RS08FG



Terminal No.	Wire	Signal Name [Specification]
1	LAV	-
3	LAY	-

Connector No.	D67
Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)
Connector Type	NS12FW-CS



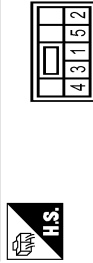
Terminal No.	Wire	Signal Name [Specification]
1	LG	-
2	BR	-
3	B	-
6	LAV	-
7	LAVR	-
8	LAL	-
11	LAY	-
12	LAVR	-

Connector No.	D92
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS08FG



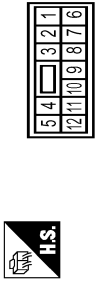
Terminal No.	Wire	Signal Name [Specification]
1	R	-
3	G	-

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Wire	Signal Name [Specification]
1	LAVR	-
2	LAVR	-
3	LAV	-
4	G	-
5	R	-

Connector No.	D91
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAY	-
2	LAVR	-
3	LAVR	-
4	LAV	-
6	LAY	-
6	LAV	- [For LHD models]
6	W	- [For RHD models]
7	LAL	- [For LHD models]
7	SB	- [For RHD models]
8	P	-

Connector No.	D92
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	RS08FG



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

JRKWD4487GB

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

POWER WINDOW SYSTEM

Connector No.	D93
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/GR	-
2	LA/BR	-
3	LAY	-
4	G	-
5	R	-

Connector No.	D102
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Type	RS06FG



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

Connector No.	D103
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/GR	-
2	LA/BR	-
3	LAY	-
4	G	-
5	R	-

Connector No.	D111
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LAY	-
2	LA/BR	-
3	LA/GR	-
6	LAV	- [For LHD models]
6	V	- [For RHD models]
7	LAG	- [For LHD models]
7	LG	- [For RHD models]
8	LAV	-
9	LAL	-
12	W	-

Connector No.	D112
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Type	RS06FG



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

Connector No.	D113
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Type	NS08FW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	LA/GR	-
2	LA/BR	-
3	LAY	-
4	G	-
5	R	-

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	L02FB-MC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	R	-
2	W	-

Connector No.	M2
Connector Name	FUSE BLOCK (J/B)
Connector Type	NS16FBR-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
10B	GR	- [With MR20 engine or R0M engine]
10B	LA/GR	- [With QR25 Engine]
12B	BR	-
14B	W	-
15B	W	-
16B	GR	-
1B	G	-
2B	R	-
3B	V	-
6B	LAV	-
7B	LAV	-

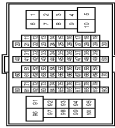
JRKWD4488GB

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

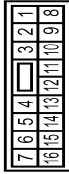
POWER WINDOW SYSTEM

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Type	TH80FW-CS16-TM4



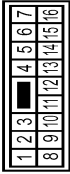
Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	Y	-
6	GR	-
7	LG	-
20	LAVL	-
21	LAVB	-
24	G	-
25	BR	-
73	Y	-
74	R	-
75	R	-
84	L	-
85	L	-
92	LAW	-
93	LAY	-
95	SB	-
97	BG	-
98	Y	-
99	W	-
100	LAVR	-

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
4	Y	-
5	W	-
6	LAVG	-
7	R	-
8	BR	-
9	G	-
10	R	-
11	LG	-
12	GR	-
13	BR	-
14	LAVL	-
15	LAVBR	-
16	GR	-

Connector No.	M19
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	Color Of Wire	Signal Name [Specification]
1	V	-
2	R	-
3	G	-
4	B	-
5	B	-
6	Y	-
7	R	-

8	L	-
9	BR	-
10	GR	-
11	Y	-
12	BG	-
13	G	-
14	R	-
15	P	-
16	B	-

Connector No.	M21
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



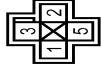
Terminal No.	Color Of Wire	Signal Name [Specification]
1	B	-
2	G	-
3	R	-
4	V	-
5	W	-
6	G	-
7	L	-
8	B	-
9	BR	-
10	GR	-
11	Y	-
12	BG	-
13	GR	-
14	W	-
15	P	-
16	B	-

Connector No.	M63
Connector Name	CIRCUIT BREAKER
Connector Type	M02FW-PLC



Terminal No.	Color Of Wire	Signal Name [Specification]
1	W	-
2	P	-

Connector No.	M64
Connector Name	POWER WINDOW RELAY
Connector Type	24347-9F900



Terminal No.	Color Of Wire	Signal Name [Specification]
1	G	-
2	W	-
3	L	-
5	P	-

POWER WINDOW SYSTEM

< WIRING DIAGRAM >

POWER WINDOW SYSTEM

Connector No.	M78
Connector Name	WIRE TO WIRE
Connector Type	L02MB-MC



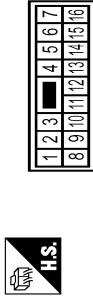
Terminal No.	1	2
Color Of Wire	R	W
Signal Name [Specification]	-	-

Connector No.	M82
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	1	2	8	9	10	11	12	13	14
Color Of Wire	B	GR	SB	BR	GR	L	Y	GR	W
Signal Name [Specification]	-	-	-	-	-	-	-	-	-

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Type	NS16MW-CS



Terminal No.	1	2	3	4	5	6	7	9	10	11
Color Of Wire	L	Y	W	B	B	Y	R	BR	GR	SB
Signal Name [Specification]	-	-	-	-	-	-	-	-	-	-

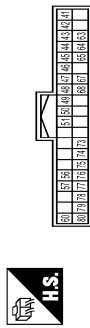
Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	NS16BRC-CS



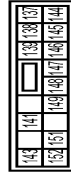
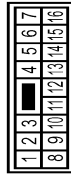
Terminal No.	137	138	139	141	143	144	145	146	147	148
Color Of Wire	W	SB	L	V	LAV	RG	GR	B	B	G
Signal Name [Specification]	BAT POWER SUPPLY (FUSE)	INT ROOM LAMP CONT	PASSENGER DOOR UNLOCK OUTPUT	FRONT DOOR LOCK OUTPUT	POWER SUPPLY (FR DOOR LK ACT)	POWER SUPPLY (TURN SIGNAL)	POWER SUPPLY (STOP LAMP)	GROUND	GROUND	DRIVER DOOR UNLOCK OUTPUT

Terminal No.	149	151	152
Color Of Wire	W	R	LG
Signal Name [Specification]	FRONT DOOR SUPERLOCK OUTPUT	POWER SUPPLY (REAR DOOR LK ACT)	POWER SUPPLY (REAR WIPER)

Connector No.	M87
Connector Name	BCM (BODY CONTROL MODULE)
Connector Type	TH40FGY-NH



Terminal No.	41	42	43	44	45	46	47	48	49	50	51	56	57	60	63	64	65	67	68	73	74	75	76	77	78	79	80
Color Of Wire	V	LAG	LAY	P	R	L	G	L	R	BG	Y	P	L	R	G	LAV	BR	Y	LAV	LG	Y	BG	G	GR	V	W	SB
Signal Name [Specification]	STEERING LOCK UNIT POWER SUPPLY	TURN SIG LHT(SIDE)	TURN SIG RHT(SIDE)	INTERIOR ROOM LAMP RELAY CONT	CANL	CANH	LIGHT & RAIN SENSOR	CANH	CANH	DOOR LOCK SW	HAZARD SW	DONBLE	CVT SHIFT SELECT (DETENT SW) PWR	HEADLAMP WASHER SW	POWER WINDOW RELAY CONT	REAR WINDOW DEFROSTER RELAY CONT	ACC RELAY CONT	IGN RELAY (FIB) CONT OUTPUT	BLOWER RELAY CONT	COMBI SW INPUT 5	COMBI SW INPUT 5	SECURITY IND LAMP CONT	COMBI SW INPUT 3	COMBI SW INPUT 4	COMBI SW INPUT 1	COMBI SW INPUT 2	DOOR UNLOCK SW



JRKWD4490GB

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

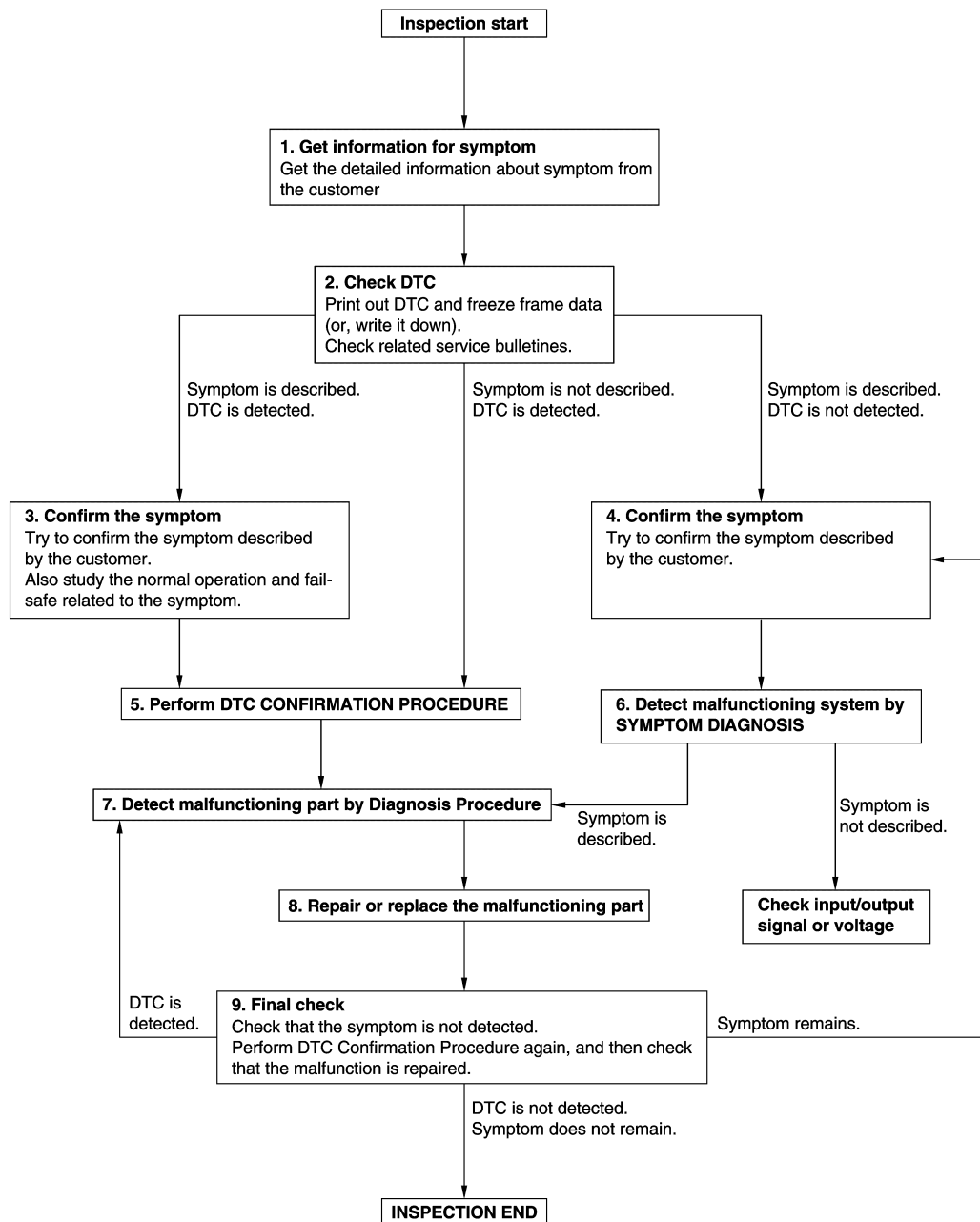
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000010735213

OVERALL SEQUENCE



JMKIA8652GB

DETAILED FLOW

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

1.GET INFORMATION FOR SYMPTOM

1. Get detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurs).
2. Check operation condition of the function that is malfunctioning.

>> GO TO 2.

2.CHECK DTC

1. Check DTC.
2. Perform the following procedure if DTC is detected.
 - Record DTC and freeze frame data (Print them out using CONSULT.)
 - Erase DTC.
 - Study the relationship between the cause detected by DTC and the symptom described by the customer.
3. Check related service bulletins for information.

Are any symptoms described and any DTC detected?

Symptom is described, DTC is detected>>GO TO 3.

Symptom is described, DTC is not detected>>GO TO 4.

Symptom is not described, DTC is detected>>GO TO 5.

3.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

Also study the normal operation and fail-safe related to the symptom.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 5.

4.CONFIRM THE SYMPTOM

Try to confirm the symptom described by the customer.

Verify relation between the symptom and the condition when the symptom is detected.

>> GO TO 6.

5.PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC CONFIRMATION PROCEDURE for the detected DTC, and then check that DTC is detected again. At this time, always connect CONSULT to the vehicle, and check self diagnostic results in real time. If two or more DTCs are detected, refer to DTC INSPECTION PRIORITY CHART, and determine trouble diagnosis order.

NOTE:

- Freeze frame data is useful if the DTC is not detected.
- Perform Component Function Check if DTC CONFIRMATION PROCEDURE is not included on Service Manual. This simplified check procedure is an effective alternative though DTC cannot be detected during this check.
If the result of Component Function Check is NG, it is the same as the detection of DTC by DTC CONFIRMATION PROCEDURE.

Is DTC detected?

YES >> GO TO 7.

NO >> Check according to [GI-44. "Intermittent Incident"](#).

6.DETECT MALFUNCTIONING SYSTEM BY SYMPTOM DIAGNOSIS

Detect malfunctioning system according to SYMPTOM DIAGNOSIS based on the confirmed symptom in step 4, and determine the trouble diagnosis order based on possible causes and symptom.

Is the symptom described?

YES >> GO TO 7.

NO >> Monitor input data from related sensors or check voltage of related module terminals using CONSULT.

7.DETECT MALFUNCTIONING PART BY DIAGNOSIS PROCEDURE

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Inspect according to Diagnosis Procedure of the system.

Is malfunctioning part detected?

YES >> GO TO 8.

NO >> Check according to [GI-44, "Intermittent Incident"](#).

8. REPAIR OR REPLACE THE MALFUNCTIONING PART

1. Repair or replace the malfunctioning part.
2. Reconnect parts or connectors disconnected during Diagnosis Procedure again after repair and replacement.
3. Check DTC. If DTC is detected, erase it.

>> GO TO 9.

9. FINAL CHECK

When DTC is detected in step 2, perform DTC CONFIRMATION PROCEDURE again, and then check that the malfunction is repaired securely.

When symptom is described by the customer, refer to confirmed symptom in step 3 or 4, and check that the symptom is not detected.

Is DTC detected and does symptom remain?

YES-1 >> DTC is detected: GO TO 7.

YES-2 >> Symptom remains: GO TO 4.

NO >> Before returning the vehicle to the customer, always erase DTC.

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

Description

INFOID:0000000010735214

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

CAUTION:

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

- Auto-up operation
- Anti-pinch function

Work Procedure

INFOID:0000000010735215

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to [PWC-33. "Work Procedure"](#).

>> GO TO 2.

2.CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to [PWC-34. "Work Procedure"](#).

>> END

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MAIN SWITCH

Description

INFOID:0000000010735216

When the control unit replaced, the initialization is necessary for normal operation of power window system.

CAUTION:

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

- Auto-up operation
- Anti-pinch function

Work Procedure

INFOID:0000000010735217

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to [PWC-33. "Work Procedure"](#).

>> GO TO 2.

2.CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to [PWC-34. "Work Procedure"](#).

>> END

SYSTEM INITIALIZATION

< BASIC INSPECTION >

SYSTEM INITIALIZATION

Description

INFOID:0000000010735218

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

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

CAUTION:

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

- Auto-up operation
- Anti-pinch function

Work Procedure

INFOID:0000000010735219

1.STEP 1

1. Turn ignition switch ON.
2. Operate power window main switch to fully open the front door glass (driver side).
 - This operation is unnecessary if the front door glass (driver side) is already fully open.
3. Continue pulling the power window main switch UP (AUTO-UP operation). Even after front door glass (driver side) 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-34. "Work Procedure"](#).

>> END

A

B

C

D

E

F

G

H

I

J

PWC

L

M

N

O

P

ANTI-PINCH INSPECTION

< BASIC INSPECTION >

ANTI-PINCH INSPECTION

Description

INFOID:0000000010735220

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

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

Work Procedure

INFOID:0000000010735221

1. CHECK ANTI-PINCH FUNCTION

1. Fully open the front door glass (driver side).
2. Place a piece of wood near fully closed position.
3. Close front door glass (driver side) completely with AUTO-UP.
4. Check the following conditions.
 - Check that front door glass (driver side) lowers for 150 mm (5.9 in) without pinching piece of wood and stops.
 - Check that front door glass (driver side) does not rise 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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000010735222

LHD MODELS

1.CHECK FUSE AND FUSIBLE LINK

1. Turn ignition switch OFF.
2. Check that any of the following fuse and fusible link is not fusing.

R9M engine models

Signal name	Fuse and fusible link No.
Battery power supply	7 (10A)
	F (50A)

Except for R9M engine models

Signal name	Fuse and fusible link No.
Battery power supply	7 (10A)
	M (50A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the applicable circuit. And then replace the fuse or fusible link.

2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY 1

1. Disconnect power window main switch connector.
2. Check voltage between power window main switch harness connector and ground.

(+) Power window main switch		(-)	Voltage
Connector	Terminal		
D6	18	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

3.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY 2

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

(+) Power window main switch		(-)	Voltage
Connector	Terminal		
D5	10	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 10.

NO >> GO TO 6.

4.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 1

1. Disconnect circuit breaker connector.
2. Check voltage between circuit breaker harness connector and ground.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage
Circuit breaker			
Connector	Terminal		
M63	1	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 2

Check continuity between circuit breaker harness connector and power window main switch harness connector.

Circuit breaker		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M63	2	D6	18	Existed

Is the inspection result normal?

YES >> Replace circuit breaker.

NO >> Repair or replace harness.

6.CHECK POWER WINDOW RELAY POWER SUPPLY

1. Turn ignition switch to OFF, and then wait for 3 minutes with driver door open.

NOTE:

- Even after ignition switch is OFF, power is supplied to accessories for a certain amount of time by the AUTO ACC function.
 - When vehicle is operated while on standby, power may be supplied to accessories.
2. Disconnect power window relay connector.
 3. Check voltage between power window relay harness connector and ground.

(+)		(-)	Voltage
Power window relay			
Connector	Terminal		
M64	2	Ground	9 – 16 V
	5		

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

7.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 3

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

Power window relay		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	D5	10	Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8.CHECK POWER WINDOW RELAY GROUND CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between power window relay harness connector and BCM harness connector.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Power window relay		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M64	1	M87	63	Existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

9.CHECK POWER WINDOW RELAY

Check power window relay. Refer to [PWC-62. "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> Replace power window relay.

10.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		
D5	1		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

RHD MODELS

1.CHECK FUSE AND FUSIBLE LINK

1. Turn ignition switch OFF.
2. Check that any of the following fuse and fusible link is not fusing.

R9M engine models

Signal name	Fuse and fusible link No.
Battery power supply	7 (10A)
	F (50A)

Except for R9M engine models

Signal name	Fuse and fusible link No.
Battery power supply	7 (10A)
	M (50A)

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair the applicable circuit. And then replace the fuse or fusible link.

2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY 1

1. Disconnect power window main switch connector.
2. Check voltage between power window main switch harness connector and ground.

(+)		(-)	Voltage
Power window main switch			
Connector	Terminal		
D26	18	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 4.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY 2

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

(+) Power window main switch		(-)	Voltage
Connector	Terminal		
D25	10	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 10.

NO >> GO TO 6.

4.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 1

1. Disconnect circuit breaker connector.
2. Check voltage between circuit breaker harness connector and ground.

(+) Circuit breaker		(-)	Voltage
Connector	Terminal		
M63	1	Ground	9 – 16 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 2

Check continuity between circuit breaker harness connector and power window main switch harness connector.

Circuit breaker		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M63	2	D26	18	Existed

Is the inspection result normal?

YES >> Replace circuit breaker.

NO >> Repair or replace harness.

6.CHECK POWER WINDOW RELAY POWER SUPPLY

1. Turn ignition switch to OFF, and then wait for 3 minutes with driver door open.

NOTE:

- Even after ignition switch is OFF, power is supplied to accessories for a certain amount of time by the AUTO ACC function.
- When vehicle is operated while on standby, power may be supplied to accessories.

2. Disconnect power window relay connector.
3. Check voltage between power window relay harness connector and ground.

(+) Power window relay		(-)	Voltage
Connector	Terminal		
M64	2	Ground	9 – 16 V
	5		

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair or replace harness.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

7.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT 3

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

Power window relay		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	D25	10	Existed

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8.CHECK POWER WINDOW RELAY GROUND CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between power window relay harness connector and BCM harness connector.

Power window relay		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M64	1	M87	63	Existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

9.CHECK POWER WINDOW RELAY

Check power window relay. Refer to [PWC-62, "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> Replace power window relay.

10.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		
D25	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:000000010735223

LHD MODELS

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.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage
Front power window switch (passenger side)			
Connector	Terminal		
D45	1	Ground	9 – 16 V

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

Power window relay		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	D45	1	Existed

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> Repair or replace harness.

RHD MODELS

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
Front power window switch (passenger side)			
Connector	Terminal		
D67	8	Ground	9 – 16 V

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

Power window relay		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	D67	8	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:000000010735224

LHD MODELS

1.CHECK REAR POWER WINDOW SWITCH POWER SUPPLY

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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.

(+)		Terminal	(-)	Voltage
Rear power window switch				
Connector				
LH	D83	1	Ground	9 – 16 V
RH	D103			

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. Check continuity between power window relay harness connector and rear power window switch harness connector.

Power window relay		Rear power window switch		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	LH	D83	Existed
		RH	D103	

Is the inspection result normal?

YES >> Intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> Repair or replace harness.

RHD MODELS

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
Rear power window switch				
Connector		Terminal		
LH	D113	1	Ground	9 – 16 V
RH	D93			

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. Check continuity between power window relay harness connector and rear power window switch harness connector.

Power window relay		Rear power window switch		Continuity
Connector	Terminal	Connector	Terminal	
M64	3	LH	D113	Existed
		RH	D93	

Is the inspection result normal?

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

YES >> Intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).
NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Component Function Check

INFOID:0000000010735225

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-43. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010735226

LHD MODELS

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
Front power window switch (passenger side)					
Connector	Terminal				
D45	2	Ground	Power window main switch (passenger side switch)	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK FRONT WINDOW SWITCH (PASSENGER SIDE) CIRCUIT

PWC

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 switch (passenger side) harness connector.

Power window main switch		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	2	D45	3	Existed
	16		2	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	2		Not existed
	16		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to [PWC-45, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front power window switch (passenger side). Refer to [PWC-74, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> INSPECTION END

RHD MODELS

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
Front power window switch (passenger side)					
Connector	Terminal				
D67	11	Ground	Power window main switch (passenger side switch)	UP	0 – 1 V
				DOWN	9 – 16 V
	12			UP	9 – 16 V
				DOWN	0 – 1 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK FRONT WINDOW SWITCH (PASSENGER SIDE) 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 switch (passenger side) harness connector.

Power window main switch		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D25	2	D67	11	Existed
	16		12	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D25	2		Not existed
	16		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to [PWC-45, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front power window switch (passenger side). Refer to [PWC-74, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:0000000010735227

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.

LHD models

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

RHD models

Front power window switch (passenger side)		Condition	Continuity
Terminal			
8	7	UP	Existed
11	6		
11	6	NEUTRAL	
12	7		
8	6	DOWN	
12	7		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front power window switch (passenger side). Refer to [PWC-74, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Removal and Installation"](#).

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

REAR POWER WINDOW SWITCH

Component Function Check

INFOID:0000000010735228

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to [PWC-46. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010735229

LHD MODELS

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.

(+) Rear power window switch			(-)	Condition		Voltage
Connector		Terminal				
LH	D83	2	Ground	Power window main switch (rear LH switch)	UP	9 - 16 V
					DOWN	0 - 1 V
		3			UP	0 - 1 V
					DOWN	9 - 16 V
RH	D103	2		Power window main switch (rear RH switch)	UP	9 - 16 V
					DOWN	0 - 1 V
		3			UP	0 - 1 V
					DOWN	9 - 16 V

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 power window main switch harness connector and rear power window switch harness connector.

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D5	8	LH	D83	3	Existed
	9			2	
	6	RH	D103	3	
	7			2	

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

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	8	Ground	Not existed
	9		
	6		
	7		

Is the inspection result normal?

- YES >> Replace power window main switch. Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).
 NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-48, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.
 NO >> Replace rear power window switch. Refer to [PWC-75, "Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> INSPECTION END

RHD MODELS

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.

(+) Rear power window switch			(-)	Condition		Voltage
Connector		Terminal				
LH	D113	2	Ground	Power window main switch (rear LH switch)	UP	9 - 16 V
					DOWN	0 - 1 V
		3			UP	0 - 1 V
					DOWN	9 - 16 V
RH	D93	2		Power window main switch (rear RH switch)	UP	9 - 16 V
					DOWN	0 - 1 V
		3			UP	0 - 1 V
					DOWN	9 - 16 V

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 power window main switch harness connector and rear power window switch harness connector.

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D25	8	LH	D113	3	Existed
	9			2	
	6	RH	D93	3	
	7			2	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D25	8		Not existed
	9		
	6		
	7		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-48, "Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window switch. Refer to [PWC-75, "Removal and Installation"](#).

4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> INSPECTION END

Component Inspection

INFOID:0000000010735230

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		
3	4	NEUTRAL	
2	5		
1	4	DOWN	
2	5		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace rear power window switch. Refer to [PWC-75, "Removal and Installation"](#).

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Component Function Check

INFOID:0000000010735231

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-49. "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000010735232

LHD MODELS

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

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

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

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to [GW-47. "Removal and Installation"](#).

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 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	
D6	17	D7	2	Existed
	19		3	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D6	17		Not existed
	19		

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

NO >> Repair or replace harness.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

RHD MODELS

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

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

(+) Front power window motor (driver side)		(-)	Condition		Voltage
Connector	Terminal				
D27	2	Ground	Power window main switch	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

- YES >> Replace front power window motor (driver side). Refer to [GW-47, "Removal and Installation"](#).
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 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	
D26	17	D27	2	Existed
	19		3	

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D26	17		Not existed
	19		

Is the inspection result normal?

- YES >> Replace power window main switch. Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).
NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Component Function Check

INFOID:000000010735233

1. CHECK FUNCTION

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

Is the inspection result normal?

- YES >> INSPECTION END
NO >> Refer to [PWC-50, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000010735234

LHD MODELS

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

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
Front power window motor (passenger side)					
Connector	Terminal				
D46	1	Ground	Front power window switch (passenger side)	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

- YES >> Replace front power window motor (passenger side). Refer to [GW-47, "Removal and Installation"](#).
 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 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	
D45	4	D46	3	Existed
	5		1	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D45	4		Not existed
	5		

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side). Refer to [PWC-74, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Removal and Installation"](#).
 NO >> Repair or replace harness.

RHD MODELS

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.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

(+) Front power window motor (passenger side)		(-)	Condition		Voltage
Connector	Terminal				
D66	1	Ground	Front power window switch (passenger side)	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

- YES >> Replace front power window motor (passenger side). Refer to [GW-47, "Removal and Installation"](#).
 NO >> GO TO 2.

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

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

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
D67	6	D66	3	Existed
	7		1	

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

Front power window switch (passenger side)		Ground	Continuity
Connector	Terminal		
D67	6		Not existed
	7		

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side). Refer to [PWC-74, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Removal and Installation"](#).
 NO >> Repair or replace harness.

REAR LH

REAR LH : Component Function Check

INFOID:0000000010735235

1.CHECK FUNCTION

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

Is the inspection result normal?

- YES >> INSPECTION END
 NO >> Refer to [PWC-52, "REAR LH : Diagnosis Procedure"](#).

REAR LH : Diagnosis Procedure

INFOID:0000000010735236

LHD MODELS

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Condition		Voltage
Rear power window motor LH					
Connector	Terminal				
D82	1	Ground	Rear power win- dow switch LH	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to [GW-57, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

- Turn ignition switch OFF.
- Disconnect rear power window switch LH connector.
- 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	
D83	4	D82	3	Existed
	5		1	

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D83	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to [PWC-75, "Removal and Installation"](#).

NO >> Repair or replace harness.

RHD MODELS

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+)		(-)	Condition		Voltage
Rear power window motor LH					
Connector	Terminal				
D112	1	Ground	Rear power win- dow switch LH	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to [GW-57, "Removal and Installation"](#).

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

- Turn ignition switch OFF.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

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	
D113	4	D112	3	Existed
	5		1	

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

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D113	4		Not existed
	5		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to [PWC-75. "Removal and Installation"](#).

NO >> Repair or replace harness.

REAR RH

REAR RH : Component Function Check

INFOID:0000000010735237

1. CHECK FUNCTION

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to [PWC-54. "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

INFOID:0000000010735238

LHD MODELS

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
Rear power window motor RH					
Connector	Terminal				
D102	1	Ground	Rear power window switch RH	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to [GW-57. "Removal and Installation"](#).

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.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

- 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	
D103	4	D102	3	Existed
	5		1	

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D103	4		Not existed
	5		

Is the inspection result normal?

- YES >> Replace rear power window switch RH. Refer to [PWC-75, "Removal and Installation"](#).
 NO >> Repair or replace harness.

RHD MODELS

1.CHECK REAR POWER WINDOW MOTOR RH INPUT SIGNAL

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

(+)		(-)	Condition		Voltage
Rear power window motor RH					
Connector	Terminal				
D92	1	Ground	Rear power window switch RH	UP	9 – 16 V
				DOWN	0 – 1 V
	3			UP	0 – 1 V
				DOWN	9 – 16 V

Is the inspection result normal?

- YES >> Replace rear power window motor RH. Refer to [GW-57, "Removal and Installation"](#).
 NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

- Turn ignition switch OFF.
- Disconnect rear power window switch RH connector.
- 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	
D93	4	D92	3	Existed
	5		1	

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D93	4		Not existed
	5		

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

- YES >> Replace rear power window switch RH. Refer to [PWC-75, "Removal and Installation"](#).
- NO >> Repair or replace harness.

ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

ENCODER CIRCUIT

Component Function Check

INFOID:0000000010735239

1.CHECK FUNCTION

Check that front door glass (driver side) 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-57, "Diagnosis Procedure"](#).

Diagnosis Procedure

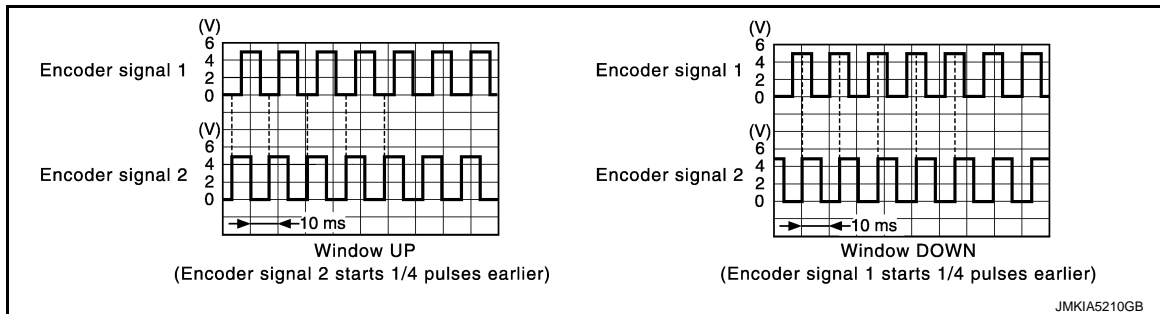
INFOID:0000000010735240

LHD MODELS

1.CHECK ENCODER SIGNAL

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

(+)		(-)	Signal (Reference value)
Power window main switch			
Connector	Terminal		
D5	4	Ground	Refer to following signal
	5		



Is the inspection result normal?

- YES >> Replace power window main switch. Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).
NO >> GO TO 2.

2.CHECK ENCODER SIGNAL CIRCUIT

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

Power window main switch		Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D5	4	D7	5	Existed
	5		4	

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

ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Ground	Continuity
Connector	Terminal		
D5	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.

(+) Front power window motor (driver side)		(-)	Voltage
Connector	Terminal		
D7	1	Ground	9 – 16 V

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	
D5	14	D7	1	Existed

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

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

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : 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	
D5	12	D7	6	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

6.CHECK ENCODER GROUND CIRCUIT 2

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

Power window main switch		Ground	Continuity
Connector	Terminal		Existed
D5	12		

Is the inspection result normal?

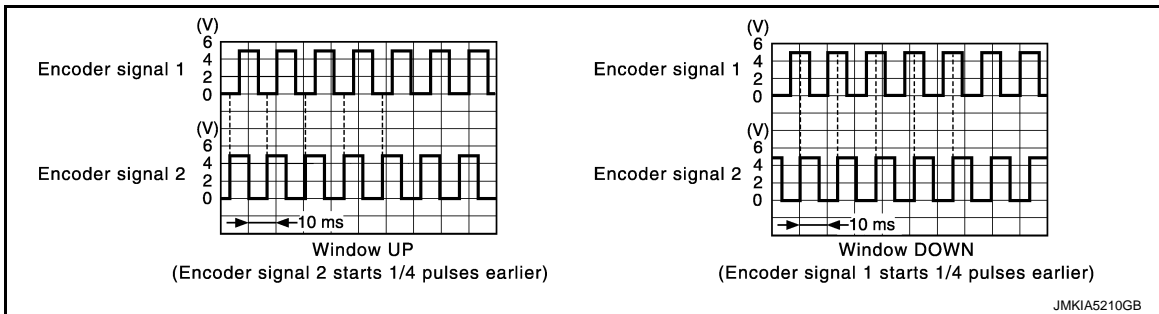
- YES >> Replace front power window motor (driver side). Refer to [GW-47. "Removal and Installation"](#).
NO >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

RHD MODELS

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		
D25	4	Ground	Refer to following signal
	5		



Is the inspection result normal?

- YES >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : 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	
D25	4	D27	5	Existed
	5		4	

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

ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Power window main switch		Ground	Continuity
Connector	Terminal		
D25	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.

(+) Front power window motor (driver side)		(-) Ground	Voltage 9 – 16 V
Connector	Terminal		
D27	1		

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	
D25	14	D27	1	Existed

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D25	14		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : 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	
D25	12	D27	6	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

6. CHECK ENCODER GROUND CIRCUIT 2

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D25	12		Existed

Is the inspection result normal?

- YES >> Replace front power window motor (driver side). Refer to [GW-47. "Removal and Installation"](#).
NO >> Replace power window main switch. Refer to [PWC-74. "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

POWER WINDOW RELAY

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW RELAY

Component Function Check

INFOID:0000000010735241

1.CHECK FUNCTION

Operate the power window switch to check whether the power window system operate or not.

Is the inspection result normal?

YES >> INSPECTION END

NO >> Refer to [PWC-62. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:0000000010735242

1.CHECK POWER WINDOW RELAY

1. Turn ignition switch OFF.
2. Remove power window relay.
3. Check the continuity between power window relay terminals.

Terminals		Condition	Continuity
3	5	12V direct current between terminals 1 and 2	Existed
		No current supply	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power window relay.

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:0000000010735243

1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to [BCS-114, "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-35, "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 inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000010735244

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check front power window motor (driver side).

Refer to [PWC-49, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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

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

INFOID:0000000010735245

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).
Refer to [PWC-43, "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-50, "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 inspection 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:0000000010735246

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-39, "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-43, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000010735247

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side).

Refer to [PWC-46. "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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:0000000010735248

1.CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to [PWC-46, "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-52, "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 inspection 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:0000000010735249

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-40, "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-46, "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 inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000010735250

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to [PWC-46. "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

REAR RH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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:0000000010735251

1.CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-46, "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-54, "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 inspection 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:0000000010735252

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-40, "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-46, "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 inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

WHEN POWER WINDOW MAIN SWITCH IS OPERATED

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

REAR RH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000010735253

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-46. "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000010735254

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to [PWC-33, "Work Procedure"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-57, "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 inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

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

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000010735255

1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to [PWC-33, "Work Procedure"](#).

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-57, "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 inspection normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000010735256

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to [PWC-74, "POWER WINDOW MAIN SWITCH : Removal and Installation"](#).

>> INSPECTION END

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC

FRONT POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

FRONT POWER WINDOW SWITCH

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Removal and Installation

INFOID:0000000010735257

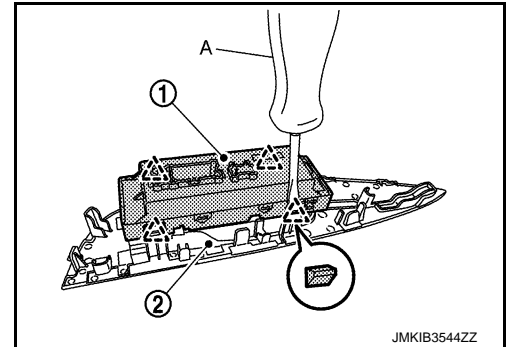
CAUTION:

Never bend the pawl of power window main switch finisher.

REMOVAL

1. Disconnect the battery negative terminal. Refer to [PG-142, "EXCEPT FOR R9M : Removal and Installation"](#).
2. Remove power window main switch finisher. Refer to [INT-14, "Removal and Installation"](#).
3. Remove power window main switch ① from power window main switch finisher ② using remover tool (A).

△ : Pawl



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-33, "Work Procedure"](#).

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Removal and Installation

INFOID:0000000010735258

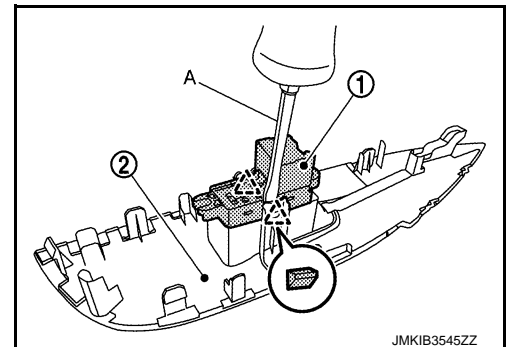
CAUTION:

Never bend the pawl of front power window switch (passenger side) finisher.

REMOVAL

1. Remove front power window switch (passenger side) finisher. Refer to [INT-14, "Removal and Installation"](#).
2. Remove front power window switch (passenger side) ① from front power window switch (passenger side) finisher ② using remover tool (A).

△ : Pawl



INSTALLATION

Install in the reverse order of removal.

REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

REAR POWER WINDOW SWITCH

Removal and Installation


INFOID:0000000010735259

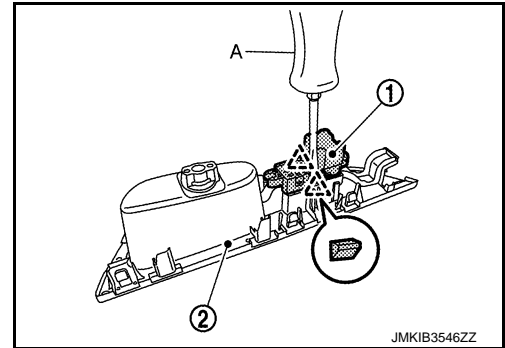
CAUTION:

Never bend the pawl of rear power window switch finisher.

REMOVAL

1. Remove rear power window switch finisher. Refer to [INT-19, "Removal and Installation"](#).
2. Remove rear power window switch ① from rear power window switch finisher ② using remover tool (A).

 : Pawl



INSTALLATION

Install in the reverse order of removal.

A
B
C
D
E
F
G
H
I
J
L
M
N
O
P

PWC