SECTION PWC

POWER WINDOW CONTROL SYSTEM

CONTENTS

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000009159900

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much malfunction information (conditions and environment when the malfunction occurred) as possible when the customer brings the vehicle in.

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH “SYMPTOM DIAGNOSIS”

Use “Symptom diagnosis” from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4.IDENTIFY THE MALFUNCTIONING PARTS WITH “COMPONENT DIAGNOSIS”

Perform the diagnosis with “Component diagnosis” of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

Check that the malfunction is not reproduced, referring to the symptom inspection result in step 2.

Are the malfunctions corrected?

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

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:0000000009159901

When the battery negative terminal is disconnected, initialization is necessary.
If any of the following operations are performed, the initialization is necessary as well as when the battery negative terminal is disconnected.

1. Initial connection or reconnection of battery terminal.
2. Removal and installation of power window regulator.
3. Removal and installation of power window motor.
4. When the power supply to power window switches and motor shuts off for any reason while power widow is being operated.
5. Fuse blowout and replacement of fuse for the power window power supply.
6. Removal and installation of door glass or adjustment of door glass.

CAUTION:
The following specified operations are not performed under the non-initialized condition.
- **AUTO UP operation**
- **Anti-pinch function**
- **Automatic window adjusting function**
- **Retained power operation**

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:0000000009159902

INITIALIZATION PROCEDURE

CAUTION:
If the initialization is not complete, UP does not operate while door is open.

1. Disconnect the battery negative terminal or power window motor connector, and then reconnect.
2. Door close (door switch OFF).
3. Turn ignition switch ON.
4. Operate power window switch to open the glass halfway or more. (This operation is not necessary if the glass is already open halfway or more)
5. Continue pulling power window switch UP (AUTO UP operation). Even after the glass stops at the fully open position, continue pulling the switch for 3 seconds or more.
6. Check anti-pinch function.

NOTE:
The work procedures for driver seat and passenger seat are the same.

CHECK ANTI-PINCH FUNCTION

1. Fully open the door window.
2. Place a piece of wood near the fully closed position.
3. Close door glass completely using AUTO UP.

- Check that glass starts to lower without pinching the piece of wood, lowers approximately 150 mm, and then stops. When the piece of wood is 60 mm thick or more, glass may lower approximately 100 mm and then stop.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **Check that AUTO UP operation before inspection during system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-32, "Fail-Safe"**
- **Perform initial setting when AUTO UP operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, the next operation cannot be done.**

1. **AUTO UP operation**
2. **Anti-pinch function**
3. **Automatic window adjusting function**
4. **Retained power operation**

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MOTOR

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MOTOR : Description

INFOID:0000000009159903

When the control unit is replace, initialization is necessary.
If any of the following operations are performed, the initialization is necessary as well as when the control unit is disconnected.

1. Initial connection or reconnection of battery terminal.
2. Removal and installation of power window regulator.
3. Removal and installation of power window motor.
4. When the power supply to power window switches and motor shuts off for any reason while power widow is being operated.
5. Fuse blowout and replacement of fuse for the power window power supply.
6. Removal and installation of door glass or adjustment of door glass.

CAUTION:
The following specified operations are not performed under the non-initialized condition.
- **AUTO UP operation**
- **Anti-pinch function**
- **Automatic window adjusting function**
- **Retained power operation**

ADDITIONAL SERVICE WHEN REPLACING POWER WINDOW MOTOR : Special Repair Requirement

INFOID:0000000009159904

INITIALIZATION PROCEDURE

CAUTION:
If the initialization is not complete, UP does not operate while door is open.

1. Disconnect the battery negative terminal or power window motor connector, and then reconnect.
2. Door close (door switch OFF).
3. Turn ignition switch ON.
4. Operate power window switch to open the glass halfway or more. (This operation is not necessary if the glass is already open halfway or more)
5. Continue pulling power window switch UP (AUTO UP operation). Even after the glass stops at the fully open position, continue pulling the switch for 3 seconds or more.
6. Check anti-pinch function.

NOTE:
The work procedures for driver seat and passenger seat are the same.

CHECK ANTI-PINCH FUNCTION

1. Fully open the door window.
2. Place a piece of wood near the fully closed position.
3. Close door glass completely using AUTO UP.

- Check that glass starts to lower without pinching the piece of wood, lowers approximately 150 mm, and then stops. When the piece of wood is 60 mm thick or more, glass may lower approximately 100 mm and then stop.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:
- **Never check with hands or other body parts because they may be pinched. Never get pinched.**
- **Check that AUTO UP operation before inspection during system initialization is performed.**
- **It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-32, "Fail-Safe"**

- **Perform initial setting when AUTO UP operation or anti-pinch function does not operate normally.**
- **Finish initial setting. Otherwise, the next operation cannot be done.**

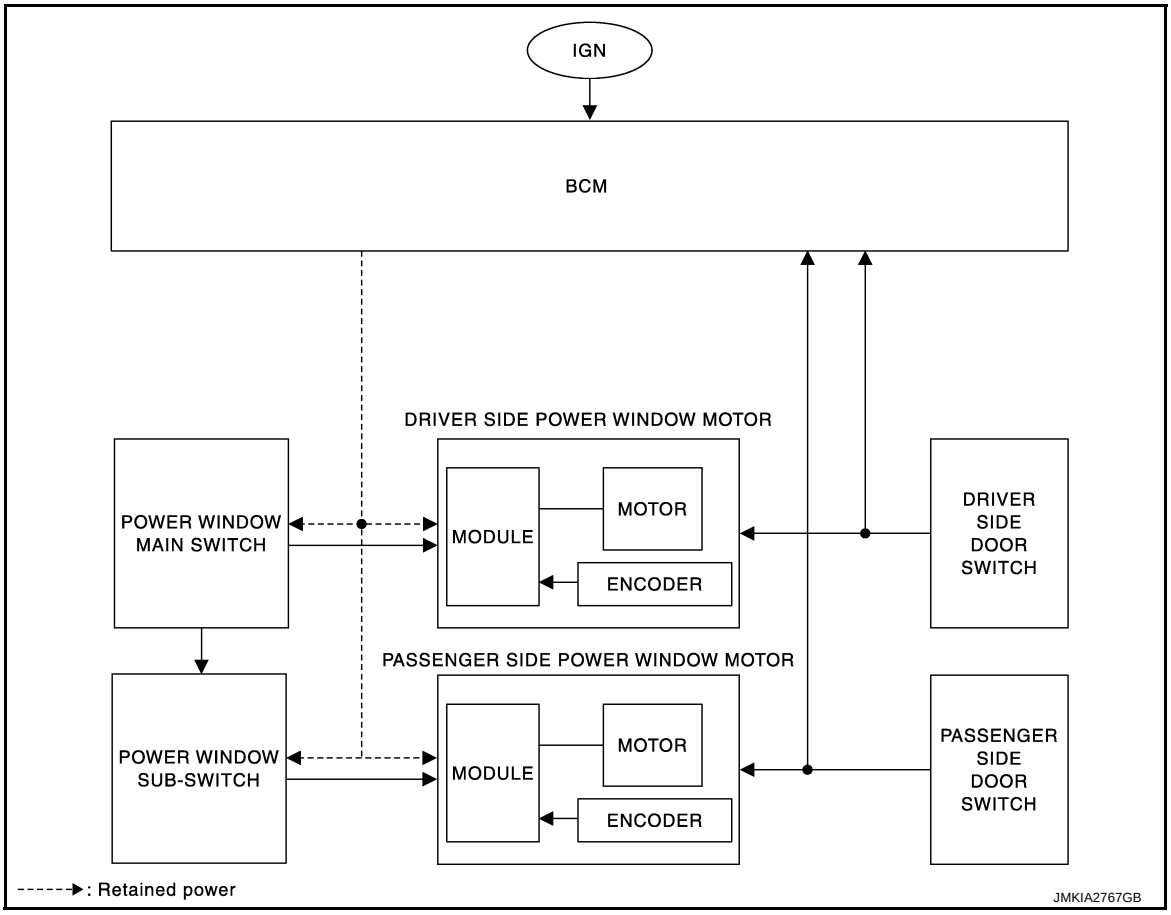
1. **AUTO UP operation**
2. **Anti-pinch function**
3. **Automatic window adjusting function**
4. **Retained power operation**

SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram

INFOID:0000000009159905



System Description

INFOID:0000000009159906

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON to OFF.
- Power window main switch can open/close all windows.
- Power window sub-switch can open/close the passenger side windows.

POWER WINDOW AUTO-OPERATION

- When each switch of power window main switch or assistant seat power window switch is operated to the Auto position, power window motor is activated in the AUTO UP or DOWN operation.
- When the glass is in the fully open or close position, module in power window motor detects the encoder signal change and deactivates the AUTO UP or DOWN operation.
- Even if the encoder is malfunctioning, power window motor can be activated. (Except in AUTO operation.)

RETAINED POWER OPERATION

BCM controls power window for approximately 45 seconds after ignition switch turns OFF. (In a position other than ON)

Retained power function cancel conditions

When BCM detects the following signal it cancels.

1. When any door is open.
2. When ignition switch turns ON again.
3. When timer time passes. (Approximately 45 seconds)

NOTE:
If the system initialization is not complete, the retained power operation does not operate.

POWER WINDOW LOCK FUNCTION

When power window lock switch turns ON, assistant seat power window switch circuit in power window main switch shuts OFF and assistant seat power window switch is deactivated.

ANTI-PINCH FUNCTION

Module in driver seat and assistant seat power window motor detects and controls front door glass operation via encoder signal 1 and encoder signal 2. While door glass is moving upward in AUTO UP or retained power operation, when front door glass receives a load of the specified value or more, the module detects the encoder signal change, stops power window motor AUTO UP operation, sends DOWN signal, and lowers the front door glass for the specified value (approximately 150 mm).

OPERATION CONDITION

- When front door glass is between fully the open position and the position just before fully closed. When front door glass is not fully closed.
- When front door glass is moving upward in the AUTO UP operation.
- When front door glass is moving upward in ignition switch position except ON (timer operation).

NOTE:
Anti-pitch function may be activated when a load or impact similar to pinching is applied on front door glass by surrounding conditions or driving conditions.

AUTOMATIC WINDOW ADJUSTING FUNCTION

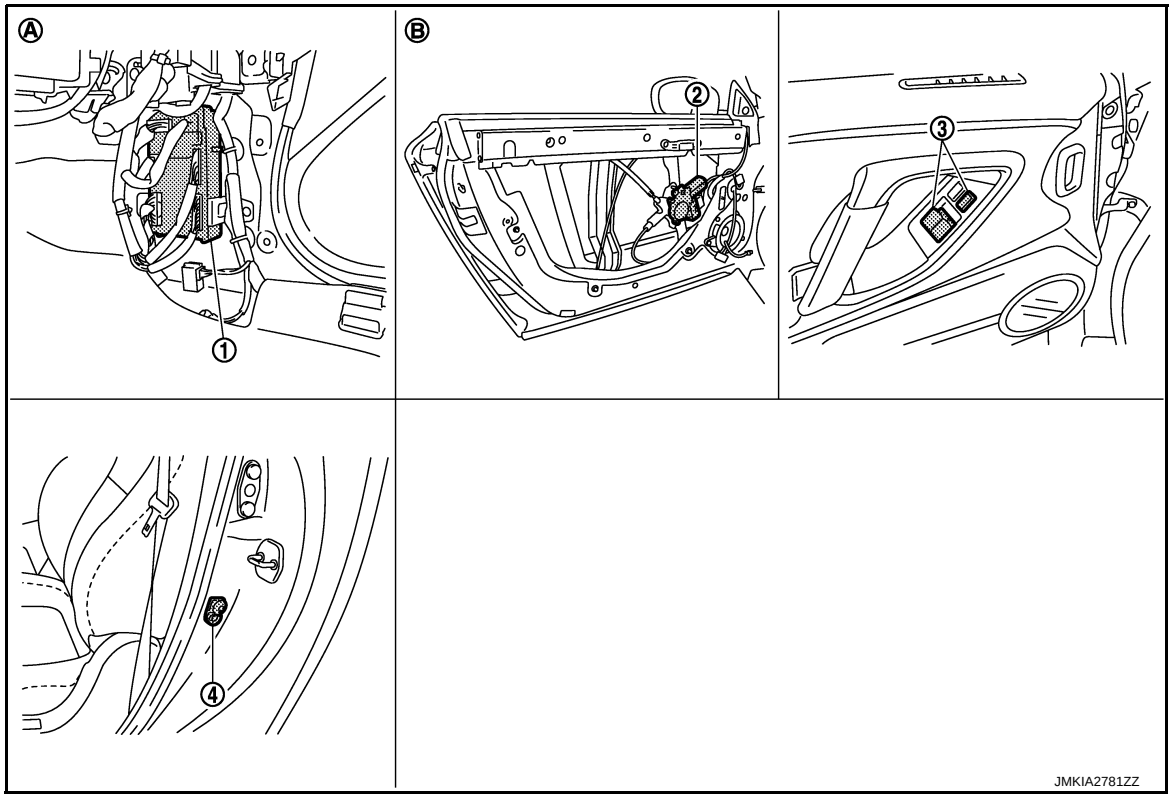
- When driver seat door or assistant seat door is open, the door glass of opened door lowers approximately 15 mm from the fully closed position. After the door is closed, it raises the door glass to the fully closed position. This improves the operability for door open or close, and the sealing ability of door glass.
- Even if power window is in the lock position, the automatic window adjusting function operates.
- The open or closed door position is judged by the door switch position that is ON or OFF.

No operating conditions

- When the automatic window adjusting function starts to lower the door glass, the door glass is already open the specified value (approximately 15 mm) or more from the fully closed position.
- When the automatic window adjusting function is lowering the door glass, the door is closed.

Component Parts Location

INFOID:0000000009159907



1. BCM M118, M119, M123
2. Driver side power window motor D10
3. Power window main switch D8
4. Driver side door switch B21

A. Dash side lower (passenger side)
B. View with door finisher removed

Component Description

INFOID:0000000009159908

Component	Function
BCM	• Supplies the power to power window main switch and power window sub-switch • Supplies power to driver side and passenger side power window motor • Controls retained power
Power window main switch	• Outputs the UP or DOWN signal to driver side and passenger side power window motor • Power window lock switch is equipped, and when the button is pressed (LOCK), de-activates the assistant seat power window operation
Power window sub-switch	Outputs the UP or DOWN signal to passenger side power window motor
Driver side power window motor	• Operates by UP or DOWN signal from power window main switch • Encoder: Detects power window motor speed by 2 pulse signals • Module: Controls the anti-pitch, Auto operation, and automatic window adjusting functions by the pulse signal from encoder
Passenger side power window motor	• Operates by UP or DOWN signal from power window main switch or assistant seat power window switch • Encoder: Detects power window motor speed by 2 pulse signals • Module: Controls the anti-pitch and automatic window adjusting functions by the pulse signal from encoder
Door switch	Detects the driver side and passenger side doors open or closed condition

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000009159911

1.CHECK FUSE AND FUSIBLE LINK

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

Signal name	Fuse and fusible link No.
Battery power supply	I
	10

Is the fuse fusing?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit if a fuse or fusible link is blown.
NO >> GO TO 2.

2.CHECK POWER SUPPLY CIRCUIT

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

Terminals			Voltage (Approx.)
(+)		(–)	
BCM		Ground	
Connector	Terminal		
M118	1		Battery voltage
M119	11		

Is the measurement value normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M119	13		Existed

Does continuity exist?

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

POWER WINDOW MOTOR

POWER WINDOW MOTOR : Diagnosis Procedure

INFOID:0000000009159912

1.CHECK POWER WINDOW MOTOR POWER SUPPLY

Check voltage between power window motor harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window motor					
Connector	Terminal				
D10/D40*	7	Ground	Ignition switch	OFF	Battery voltage
				ON	
	2			Other than the ON (Timer is activated)	
				Timer is not activated	0

*: Passenger side

Is the inspection result normal?

YES >> Power window motor power supply is OK.
NO >> GO TO 2.

2.CHECK POWER WINDOW MOTOR POWER SUPPLY CIRCUIT

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

BCM		Power window motor		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	D10/40*	7	Existed
	3		2	

*: Passenger side

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	2	Ground	Not existed
	3		

*: Passenger side

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-20, "Removal and Installation".
NO >> Repair or replace harness.

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009159913

1.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY

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

(+)		(–)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D8	2	Ground	Battery voltage

Is the inspection result normal?

YES >> Power window main switch power supply is OK.
NO >> GO TO 2.

2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY CIRCUIT

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

BCM		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
M118	3	D8	2	Existed

4. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M118	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-20, "Removal and Installation".
NO >> Repair or replace harness.

POWER WINDOW MAIN SWITCH
DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000009159914

Outputs UP or DOWN signal to driver side power motor.

DRIVER SIDE : Component Function Check

INFOID:0000000009159915

1. CHECK FUNCTION

Check that driver side power window operates when power window main switch for driver side is operated to the UP or DOWN position.

Is the inspection result normal?

YES >> Power window main switch (driver side) function is OK.
NO >> Refer to PWC-13, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000009159916

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window main switch					
Connector	Terminal				
D8	10	Ground	Driver side switch	UP	Battery voltage
				Other than above	0
	11			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Power window main switch (driver side) function is OK.
NO >> GO TO 2.

2. CHECK POWER WINDOW MAIN SWITCH (DRIVER SIDE)

Check power window main switch (driver side). Refer to PWC-13, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

3. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

DRIVER SIDE : Component Inspection

INFOID:0000000009159917

1. CHECK POWER WINDOW MAIN SWITCH (DRIVER SIDE)

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

(+)		(–)	Condition		Continuity
Power window main switch					
Connector	Terminal				
D8	3	2	Driver side switch	AUTO	Existed
				Other than above	Not existed
	10			UP	Existed
				Other than above	Not existed
	11			DOWN	Existed
				Other than above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000009159918

- Sends UP or DOWN signal to passenger side power window motor.
- Power window lock switch is equipped, and when the button is operated (LOCK), it deactivates the passenger side power window operation.

PASSENGER SIDE : Component Function Check

INFOID:0000000009159919

1.CHECK FUNCTION

Check that passenger side power window operates when power window main switch for passenger side (power window lock switch is UNLOCK) is operated to the UP or DOWN position.

Is the inspection result normal?

YES >> Power window main switch (passenger side) function is OK.
NO >> Refer to PWC-14, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000009159920

1.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window main switch					
Connector	Terminal				
D8	7	Ground	Passenger side switch	UP	Battery voltage
				Other than above	0
	15			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 5.

2.CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window sub-switch					
Connector	Terminal				
D38	15	Ground	Power window main switch (passenger side)	UP	Battery voltage
				Other than above	0
	16			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Power window main switch (passenger side) function is OK.
NO >> GO TO 3.

3.CHECK POWER WINDOW SUB-SWITCH INPUT SIGNAL

Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window sub-switch					
Connector	Terminal				
D38	6	Ground	Power window main switch (passenger side)	UP	Battery voltage
				Other than above	0
	7			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 6.

4.CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch. Refer to PWC-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".

5.CHECK POWER WINDOW MAIN SWITCH (PASSENGER SIDE)

Check power window main switch (passenger side). Refer to PWC-16, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

6.CHECK PASSENGER SIDE POWER WINDOW CIRCUIT

1. Disconnect power window main switch connector and power window sub-switch connector.
2. Check continuity between power window main switch harness connector and power window sub-switch harness connector.

Power window sub-switch		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
D38	6	D8	7	Existed
	7		15	

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

Power window sub-switch		Ground	Continuity
Connector	Terminal		
D38	6		Not existed
	7		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

PASSENGER SIDE : Component Inspection

INFOID:0000000009159921

1. CHECK POWER WINDOW MAIN SWITCH (PASSENGER SIDE)

1. Turn ignition switch OFF.
2. Power window lock switch UNLOCK.
3. Disconnect power window main switch connector.
4. Check continuity between power window main switch terminals.

Power window main switch			Condition		Continuity
Connector	Terminal				
D8	6	2	Passenger side switch	AUTO	Existed
				Other than above	Not existed
	7			UP	Existed
				Other than above	Not existed
	15			DOWN	Existed
				Other than above	Not existed

Is the inspection result normal?

YES >> INSPECTION END
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

POWER WINDOW SUB-SWITCH

Description

INFOID:0000000009159922

Sends UP or DOWN signal to passenger side power window motor.

Component Function Check

INFOID:0000000009159923

1. CHECK FUNCTION

Check that passenger side power window operates when passenger side power window switch (power window lock switch is UNLOCK) is operated to the UP or DOWN position.

Is the inspection result normal?

YES >> Power window sub-switch function is OK.
NO >> Refer to PWC-17, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009159924

1. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.
2. Power window lock switch OFF.
3. Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window sub-switch					
Connector	Terminal				
D38	15	Ground	Power window sub-switch	UP	Battery voltage
				Other than above	0
	16			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Power window sub-switch function is OK.
NO >> GO TO 2.

2. CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY

Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Power window sub-switch			
Connector	Terminal		
D38	3	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 4.

3. CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch. Refer to PWC-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 6.
NO >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".

4. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Power window main switch			
Connector	Terminal		
D8	16	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

5.CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

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

Power window sub-switch		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
D38	3	D8	16	Existed

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

Power window sub-switch		Ground	Continuity
Connector	Terminal		
D38	3		Not existed

Is the inspection result normal?

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

6.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

Component Inspection

INFOID:0000000009159925

1.CHECK POWER WINDOW SUB-SWITCH

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch connector.
3. Check continuity between power window sub-switch terminals.

Power window sub-switch			Condition	Continuity
Connector	Terminal			
D38	14	3	AUTO	Existed
		5		Not existed
		3	Other than above	Not existed
		5		Existed
	15	3	UP	Existed
		6		Not existed
		3	Other than above	Not existed
		6		Existed
	16	3	DOWN	Existed
		7		Not existed
		3	Other than above	Not existed
		7		Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".

POWER WINDOW MOTOR

Description

INFOID:0000000009159926

- Operates via UP or DOWN signal from power window main switch or power window sub-switch.
- Encoder and module are built-in and controls anti-pitch function, AUTO operation, and automatic window adjusting function.

Component Function Check

INFOID:0000000009159927

1. CHECK FUNCTION

Check that corresponding power window operates when power window switch (power window lock switch is UNLOCK) is operated to the UP or DOWN position.

Is the inspection result normal?

YES >> Power window motor function is OK.
NO >> Refer to PWC-20, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009159928

1. CHECK POWER WINDOW MOTOR INPUT SIGNAL

1. Turn ignition switch ON.
2. Power window lock switch OFF.
3. Check voltage between malfunctioning power window motor harness connector and ground.

(+)		(–)	Condition	Voltage (V) (Approx.)
Power window motor				
Connector	Terminal			
D10/D40*	3	Ground	When operating the corresponding power window switch upwards	Battery voltage
			Other than above	0
	4		When operating the corresponding power window switch downwards	Battery voltage
			Other than above	0

*: Passenger side

Is the inspection result normal?

YES >> Replace malfunctioning power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".
NO >> GO TO 2.

2. CHECK POWER WINDOW MOTOR CIRCUIT

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

Power window motor		Power window switch		Continuity
Connector	Terminal	Connector	Terminal	
D10/D40*	3	D8/D38*	10/15*	Existed
	4		11/16*	

*: Passenger side

4. Check continuity between the corresponding power window motor harness connector and ground.

Power window motor		Ground	Continuity
Connector	Terminal		
D10/D40*	3		Not existed
	4		

*: Passenger side

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between the corresponding power window motor harness connector and ground.

Power window motor		Ground	Continuity
Connector	Terminal		
D10/D40*	8		Existed

*: Passenger side

Is the inspection result normal?

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

4.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW AUTO CIRCUIT
POWER WINDOW MAIN SWITCH
POWER WINDOW MAIN SWITCH : Description

INFOID:0000000009159929

Sends AUTO signal to driver side or passenger side power window motor.

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000009159930

1.CHECK FUNCTION

Check that corresponding power window operates when driver side or passenger side switch of power window main switch (power window lock is UNLOCK) is operated to the AUTO position.

Is the inspection result normal?

YES >> Power window main switch AUTO function is OK.
NO >> Refer to PWC-22, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009159931

1.CHECK POWER WINDOW AUTO FUNCTION

1. Turn ignition switch ON.
2. Power window lock switch UNLOCK.
3. Operate driver side and passenger side switch of power window main switch to the AUTO position.

Which side of power window AUTO operation does not operate?

Driver side>>GO TO 2.
Passenger side>>GO TO 5.

2.CHECK DRIVER SIDE POWER WINDOW MOTOR INPUT SIGNAL

Check voltage between driver side power window motor harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Driver side power window motor					
Connector	Terminal				
D10	1	Ground	Power window main switch (driver side switch)	AUTO	Battery voltage
				Other than above	0
	3			UP	Battery voltage
				Other than above	0
	4			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace driver side power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.CHECK POWER WINDOW AUTO SIGNAL CIRCUIT 1

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

Driver side power window motor		Power window main switch		Continuity
Connector	Terminal	Connector	Terminal	
D10	1	D8	3	Existed

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

Driver side power window motor		Ground	Continuity
Connector	Terminal		
D10	1		Not existed

Is the inspection result normal?

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

4. CHECK POWER WINDOW MAIN SWITCH (DRIVER SIDE)

Check power window main switch (driver side).
Refer to PWC-13, "DRIVER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 13.
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

5. CHECK PASSENGER SIDE POWER WINDOW MOTOR INPUT SIGNAL

Check voltage between passenger side power window motor harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Passenger side power window motor					
Connector	Terminal				
D40	1	Ground	Power window main switch (passenger side switch)	AUTO	Battery voltage
				Other than above	0
	3			UP	Battery voltage
				Other than above	0
	4			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace passenger side power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".
NO >> GO TO 6.

6. CHECK POWER WINDOW SUB-SWITCH OUTPUT SIGNAL

Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window sub-switch					
Connector	Terminal				
D38	14	Ground	Power window main switch (passenger side switch)	AUTO	Battery voltage
				Other than above	0
	15			UP	Battery voltage
				Other than above	0
	16			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 8.

7. CHECK POWER WINDOW AUTO SIGNAL CIRCUIT 2

1. Turn ignition switch OFF.
2. Disconnect passenger side power window motor connector and power window sub-switch connector.

3. Check continuity between passenger side power window motor harness connector and power window sub-switch harness connector.

Passenger side power window motor		Power window sub-switch		Continuity
Connector	Terminal	Connector	Terminal	
D40	1	D38	14	Existed

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

Passenger side power window motor		Ground	Continuity
Connector	Terminal		
D40	1		Not existed

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace harness.

8.CHECK POWER WINDOW SUB-SWITCH INPUT SIGNAL

Check voltage between power window sub-switch harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window sub-switch					
Connector	Terminal				
D38	5	Ground	Power window main switch (passenger side switch)	AUTO	Battery voltage
				Other than above	0
	6			UP	Battery voltage
				Other than above	0
	7			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 10.

9.CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch.
Refer to PWC-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 13.
NO >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".

10.CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

(+)		(–)	Condition		Voltage (V) (Approx.)
Power window main switch					
Connector	Terminal				
D8	6	Ground	Power window main switch (passenger side switch)	AUTO	Battery voltage
				Other than above	0
	7			UP	Battery voltage
				Other than above	0
	15			DOWN	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> GO TO 11.
NO >> GO TO 12.

11. CHECK POWER WINDOW AUTO SIGNAL CIRCUIT 3

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

Power window main switch		Power window sub-switch		Continuity
Connector	Terminal	Connector	Terminal	
D8	6	D38	5	Existed

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	6		Not existed

Is the inspection result normal?

YES >> GO TO 13.
NO >> Repair or replace harness.

12. CHECK POWER WINDOW MAIN SWITCH (PASSENGER SIDE)

Refer to PWC-16, "PASSENGER SIDE : Component Inspection".

Is the inspection result normal?

YES >> GO TO 13.
NO >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".

13. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW SUB-SWITCH

POWER WINDOW SUB-SWITCH : Description

INFOID:0000000009159932

Sends AUTO signal to passenger side power window motor.

POWER WINDOW SUB-SWITCH : Component Function Check

INFOID:0000000009159933

1. CHECK FUNCTION

Check that passenger side power window operates when power window sub-switch (power window lock switch is UNLOCK) is operated to the AUTO position.

Is the inspection result normal?

YES >> Power window sub-switch AUTO function is OK.
NO >> Refer to PWC-25, "POWER WINDOW SUB-SWITCH : Diagnosis Procedure".

POWER WINDOW SUB-SWITCH : Diagnosis Procedure

INFOID:0000000009159934

1. CHECK PASSENGER SIDE POWER WINDOW MOTOR INPUT SIGNAL

1. Turn ignition switch ON.
2. Power window lock switch UNLOCK.
3. Check voltage between passenger side power window motor harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Passenger side power window motor					
Connector	Terminal				
D40	1	Ground	Power window sub-switch	AUTO	Battery voltage
				Other than above	0

Is the inspection result normal?

YES >> Replace passenger side power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".

NO >> GO TO 2.

2.CHECK POWER WINDOW AUTO SIGNAL CIRCUIT

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

Passenger side power window motor		Power window sub-switch		Continuity
Connector	Terminal	Connector	Terminal	
D40	1	D38	14	Existed

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

Passenger side power window motor		Ground	Continuity
Connector	Terminal		
D40	1		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch.
Refer to PWC-18, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".

4.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

POWER WINDOW SWITCH ILLUMINATION CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:0000000009159935

When ignition switch turns ON, power window main switch illuminates.

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:0000000009159936

1.CHECK FUNCTION

Check that power window main switch illuminates when ignition switch turns ON.

Is the inspection result normal?

YES >> Power window main switch illumination circuit is OK.
NO >> Refer to PWC-27, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009159937

1.CHECK GROUND CIRCUIT

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

Power window main switch		Ground	Continuity
Connector	Terminal		
D8	8		Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-46, "Removal and Installation".
NO >> Repair or replace harness.

POWER WINDOW SUB-SWITCH

POWER WINDOW SUB-SWITCH : Description

INFOID:0000000009159938

When ignition switch turns ON, power window sub-switch illuminates.

POWER WINDOW SUB-SWITCH : Component Function Check

INFOID:0000000009159939

1.CHECK FUNCTION

Check that power window sub-switch illuminates when ignition switch turns ON.

Is the inspection result normal?

YES >> Power window sub-switch illumination circuit is OK.
NO >> Refer to PWC-27, "POWER WINDOW SUB-SWITCH : Diagnosis Procedure".

POWER WINDOW SUB-SWITCH : Diagnosis Procedure

INFOID:0000000009159940

1.CHECK POWER WINDOW SUB-SWITCH INPUT SIGNAL

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

(+)		(–)	Voltage (V) (Approx.)
Power window sub-switch			
Connector	Terminal		
D38	11	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK POWER WINDOW SUB-SWITCH POWER SUPPLY CIRCUIT

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

Power window sub-switch		Passenger side power window motor		Continuity
Connector	Terminal	Connector	Terminal	
D38	11	D40	2	Existed

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

Power window sub-switch		Ground	Continuity
Connector	Terminal		
D38	11		Not existed

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window sub-switch connector.
3. Check continuity between power window sub-switch harness connector and ground.

Power window sub-switch		Ground	Continuity
Connector	Terminal		
D38	8		Existed

Is the inspection result normal?

YES >> Replace power window sub-switch. Refer to PWC-46, "Removal and Installation".
NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

DOOR SWITCH CIRCUIT

Description

INFOID:0000000009159941

Detects driver side and passenger side doors open or closed condition.

Component Function Check

INFOID:0000000009159942

1.CHECK FUNCTION

Check that driver side and passenger side automatic window adjustment function operates.

Is the inspection result normal?

YES >> Door switch circuit function is OK.
NO >> Refer to PWC-29, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009159943

1.CHECK DOOR SWITCH

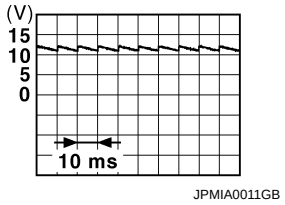
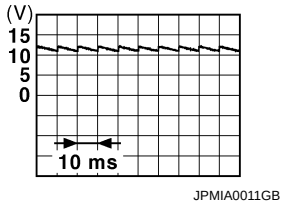
Check door switch.
Refer to DLK-44, "Component Function Check".

Is the inspection result normal?

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

2.CHECK DOOR SWITCH INPUT SIGNAL

1. Turn ignition switch OFF.
2. Check voltage signal between power window motor harness connector and ground with oscilloscope.

(+) Power window motor		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
D10	6	Ground	Door switch (driver side)	Pressed	 JPMIA0011GB
				Released	0
D40			Door switch (passenger side)	Pressed	 JPMIA0011GB
				Released	0

Is the inspection result normal?

YES >> Replace malfunctioning power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".
NO >> GO TO 3.

3.CHECK DOOR SWITCH CIRCUIT

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

Power window motor			BCM		Continuity
Connector		Terminal	Connector	Terminal	
Driver side	D10	6	M123	150	Existed
Passenger side	D40			124	

3. Check continuity between malfunctioning power window motor harness connector and ground.

Power window motor			Ground	Continuity
Connector		Terminal		
Driver side	D10	6		Not existed
Passenger side	D40			

Is the inspection result normal?

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

4. CHECK INTERMITTENT INCIDENT

Refer to GI-38, "Intermittent Incident".

>> INSPECTION END

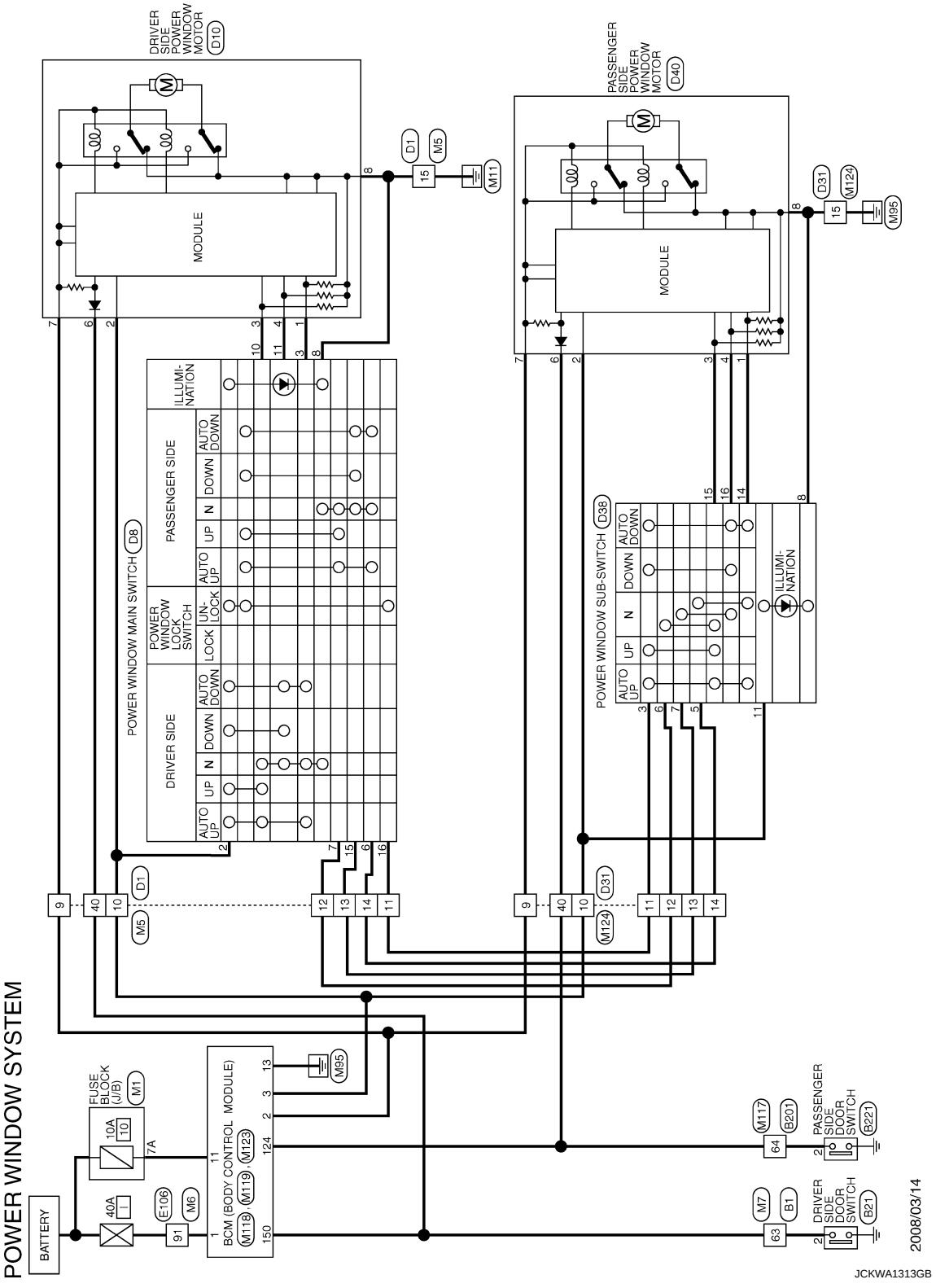
ECU DIAGNOSIS INFORMATION

POWER WINDOW MOTOR

Wiring Diagram - POWER WINDOW SYSTEM -

INFOID:0000000009159949

For connector terminal arrangements, harness layouts, and alphabets in a ⬡ (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



Fail-Safe

INFOID:0000000009159950

FAIL-SAFE CONTROL

Fail-safe control is activated when the actual glass position that is out of the specified value is detected compared to the fully closed position memorized in module in power window motor, or when a malfunction is detected in the encoder signal that indicates UP or DOWN speed and direction of door glass.

Malfunction	Malfunction condition
Pulse direction malfunction (opposite backlash pulse detection)	When a pulse signal indicates that the window is moving in the opposite direction against the power window motor is detected for the specified value or more, while door glass is being operated UP or DOWN.
Pulse sensor (Hall IC) malfunction (one side pulse shut-off detection)	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensor malfunction (both sides pulse shut-off detection)	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 1 (UP overrun)	When the actual door glass position that is out of the specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP. (Actual door glass fully closed position is detected to be higher than the memorized position in module for the specified value or more.)
Glass recognition position malfunction 2 (Out of memorized area)	When the actual door glass position that is out of the specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP. (Actual door glass fully closed position is detected to be lower than the memorized position in module for the specified value or more.)
Glass recognition position malfunction 3 (Full stroke malfunction)	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP.
Fully closed position update malfunction	When door glass is continuously operated UP and DOWN for the specified value or more without fully closing door glass.

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

- AUTO UP operation
- Anti-pinch function
- Timer function
- Automatic window adjusting function

When fail-safe control is activated, perform initializing operation to recover. If a malfunction is detected in power window motor, fail-safe control is activated again.

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000009159951

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to BCS-13, "Diagnosis Procedure".

Is the inspection result normal?

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

2. CHECK POWER WINDOW MOTOR POWER SUPPLY AND GROUND CIRCUIT

Check power window motor power supply and ground circuit.
Refer to PWC-10, "POWER WINDOW MOTOR : Diagnosis Procedure".

Is the inspection result normal?

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

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

Check power window main switch power supply and ground circuit.
Refer to PWC-11, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009159952

1.CHECK DRIVER SIDE POWER WINDOW MOTOR POWER SUPPLY AND GROUND CIRCUIT

Check driver side power window motor power supply and ground circuit.
Refer to PWC-10, "POWER WINDOW MOTOR : Diagnosis Procedure".

Is the inspection result normal?

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

2.CHECK POWER WINDOW MAIN SWITCH (DRIVER SIDE)

Check power window main switch (driver side).
Refer to PWC-13, "DRIVER SIDE : Component Function Check".

Is the inspection result normal?

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

3.CHECK DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor.
Refer to PWC-20, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

WITH POWER WINDOW MAIN SWITCH

WITH POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009159953

1. CHECK POWER WINDOW MAIN SWITCH (PASSENGER SIDE)

Check power window main switch (passenger side).
Refer to PWC-14, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

WITH POWER WINDOW SUB-SWITCH

WITH POWER WINDOW SUB-SWITCH : Diagnosis Procedure

INFOID:0000000009159954

1. CHECK POWER WINDOW SUB-SWITCH

Check power window sub-switch.
Refer to PWC-27, "POWER WINDOW SUB-SWITCH : Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

WITH BOTH POWER WINDOW MAIN SWITCH AND POWER WINDOW SUB-SWITCH

WITH BOTH POWER WINDOW MAIN SWITCH AND POWER WINDOW SUB-SWITCH : Diagnosis Procedure

INFOID:0000000009159955

1. CHECK PASSENGER SIDE POWER WINDOW MOTOR POWER SUPPLY AND GROUND CIRCUIT

Check passenger side power window motor power supply and ground circuit.
Refer to PWC-10, "POWER WINDOW MOTOR : Diagnosis Procedure".

Is the inspection result normal?

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

2. CHECK PASSENGER SIDE POWER WINDOW MOTOR

Check passenger side power window motor.
Refer to PWC-20, "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 result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY

Diagnosis Procedure

INFOID:0000000009159956

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization of power window that is malfunctioning, and check that anti-pinch function operates normally.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace corresponding power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".

AUTO OPERATION DOES NOT OPERATE NORMALLY

POWER WINDOW MAIN SWITCH IS OPERATED

POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000009159957

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization of power window that is malfunctioning, and check that auto operation operates normally.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

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

2.CHECK POWER WINDOW AUTO CIRCUIT (POWER WINDOW MAIN SWITCH)

Check power window auto circuit (power window main switch).
Refer to PWC-22, "POWER WINDOW MAIN SWITCH : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW SUB-SWITCH IS OPERATED

POWER WINDOW SUB-SWITCH IS OPERATED : Diagnosis Procedure

INFOID:0000000009159958

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization of power window that is malfunctioning, and check that auto operation operates normally.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

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

2.CHECK POWER WINDOW AUTO CIRCUIT (POWER WINDOW SUB-SWITCH)

Check power window auto circuit (power window sub-switch).
Refer to PWC-25, "POWER WINDOW SUB-SWITCH : Component Function Check".

Is the inspection result normal?

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

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009159959

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer to PWC-46, "Removal and Installation".

AUTOMATIC WINDOW ADJUSTING FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000009159960

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization of power window that is malfunctioning, and check that automatic window adjusting function operates normally.
Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

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

2.CHECK DOOR SWITCH CIRCUIT

Check door switch circuit.
Refer to PWC-29, "Component Function Check".

Is the inspection result normal?

YES >> Replace malfunctioning power window motor. Refer to GW-27, "Removal and Installation (GT-R certified NISSAN dealer)".
NO >> Repair or replace the malfunctioning parts.

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000009159961

1. CHECK POWER WINDOW ILLUMINATION CIRCUIT (POWER WINDOW MAIN SWITCH)

Check power window illumination circuit (power window main switch).
Refer to PWC-27, "POWER WINDOW MAIN SWITCH : Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW SUB-SWITCH

POWER WINDOW SUB-SWITCH : Diagnosis Procedure

INFOID:0000000009159962

1. CHECK POWER WINDOW ILLUMINATION CIRCUIT (POWER WINDOW SUB-SWITCH)

Check power window illumination circuit (power window sub-switch).
Refer to PWC-27, "POWER WINDOW SUB-SWITCH : Component Function Check".

Is the inspection result normal?

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

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000009159963

1.CHECK DOOR SWITCH CIRCUIT

Check door switch circuit. Refer to PWC-29, "Component Function Check".

Is the inspection result normal?

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

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-38, "Intermittent Incident".
NO >> GO TO 1.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009159964

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

Precaution for Battery Service

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Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

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CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- **Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.**
- **After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.**
- **Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.**

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.
If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:
Supply power using jumper cables if battery is discharged.

2. Turn the ignition switch to ACC position.
(At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT.

PREPARATION

PREPARATION

Commercial Service Tools

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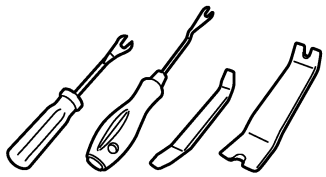
Tool name		Description
Remover tool	 JMKIA3050ZZ	Removes the clips, pawls, and metal clips

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Exploded View

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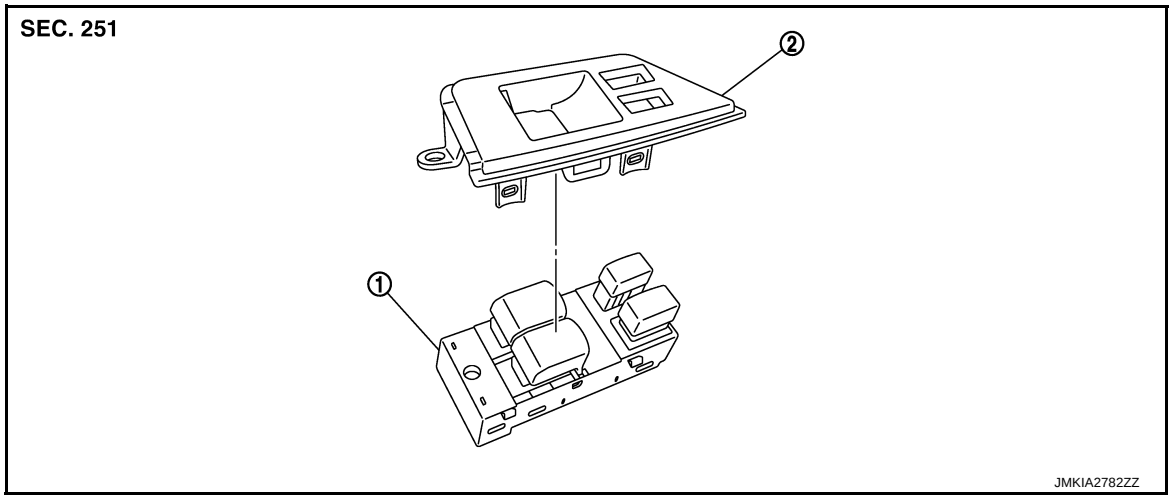

1. Power window main switch
2. Power window main switch finisher

Removal and Installation

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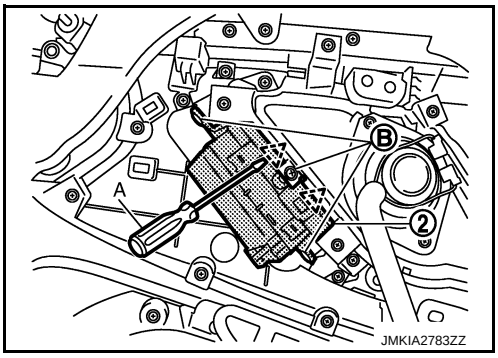
REMOVAL

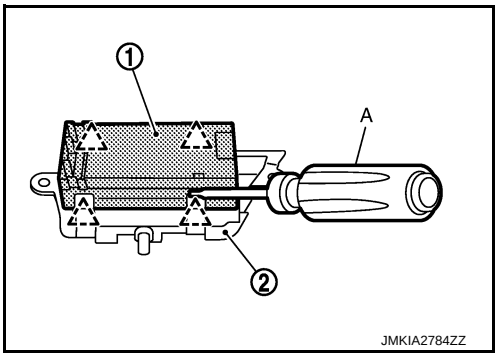
1. Remove the door finisher (driver side).
   Refer to INT-12, "Removal and Installation".
2. Remove the screws (B).
3. Remove power window main switch finisher (driver side) (2) from door finisher (driver side) using remover tool (A) etc.



: Pawl

CAUTION:
Never fold the pawl of door finisher.

4. Remove power window main switch (1) from power window main switch finisher (driver side) using remover tool (A) etc.



: Pawl

CAUTION:
Never fold the pawl of power window main switch finisher.

NOTE:
The same procedure is also performed for power window sub-switch.

INSTALLATION

Install in the reverse order of removal.