

SECTION **PWC**

POWER WINDOW CONTROL SYSTEM

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

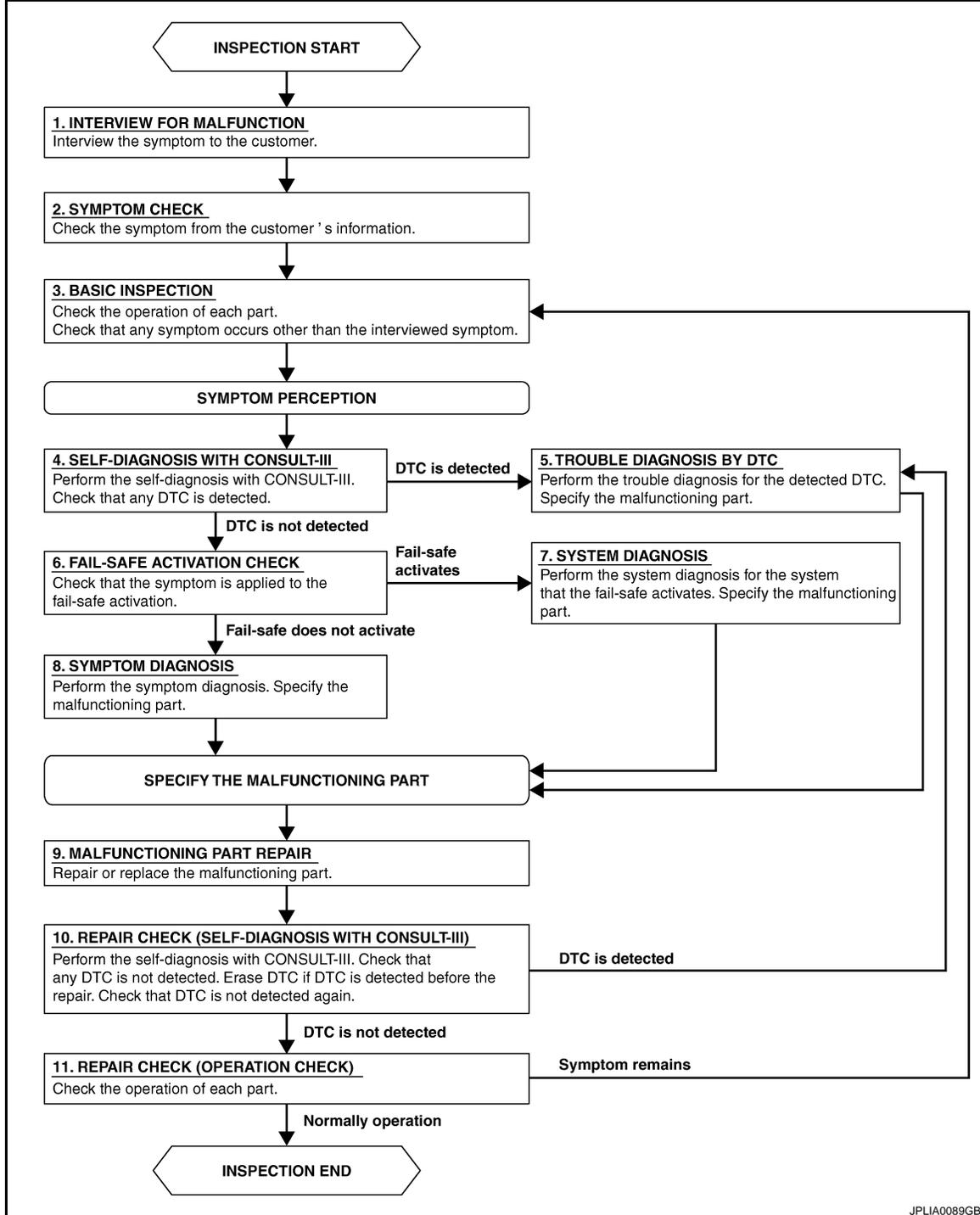
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000000993708

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2..

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3..

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4..

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5..

NO >> GO TO 6..

5. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9..

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7..

NO >> GO TO 8..

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9..

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9..

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10..

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5..

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

NO >> GO TO 11..

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 3..

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH ONLY WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

BASIC INSPECTION

BASIC INSPECTION : Special Repair Requirement

INFOID:000000000993709

BASIC INSPECTION

1.INSPECTION START

1. Check the service history.
2. Check the following parts.
 - Fuse/circuit breaker blown.
 - Poor connection, open or short circuit of harness connector.
 - Battery voltage.

Is the inspection result normal?

- YES >> Inspection end.
NO >> Repair or replace the malfunctioning parts.

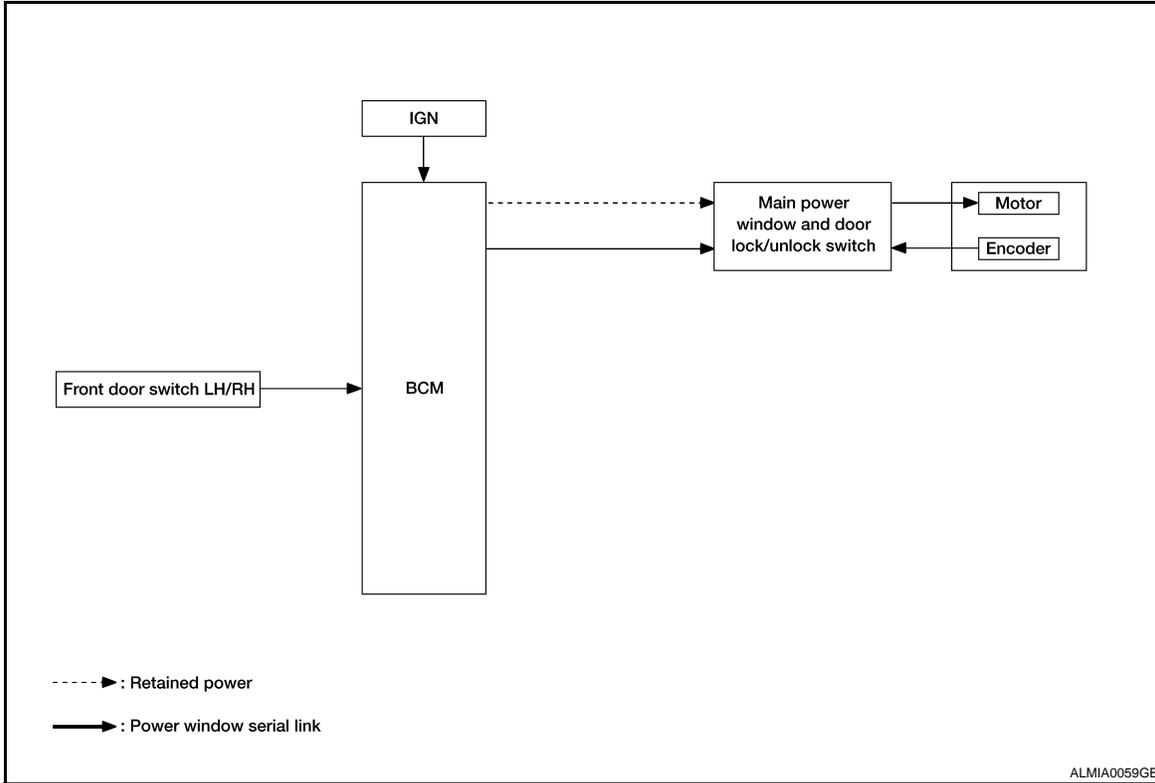
FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:000000000993710

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

INFOID:000000000993711

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
INPUT/OUTPUT SIGNAL CHART

PWC

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator
Encoder	Encoder pulse signal	Power window control	Front power window motor
Main power window and door lock/unlock switch	Front power window motor LH UP/DOWN signal		
Power window and door lock/unlock switch RH	Front power window motor RH UP/DOWN signal		
BCM	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Front & rear power window switches can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH)

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

RETAINED POWER OPERATION

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

Retained power function cancel conditions

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

POWER WINDOW LOCK

Ground circuit inside main power window and door lock/unlock switch shuts off when power window lock switch is ON. This inhibits power window switch operation except with the main power window and door lock/unlock switch.

ANTI-PINCH OPERATION (FRONT LH)

- 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 or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to main power window and door lock/unlock switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

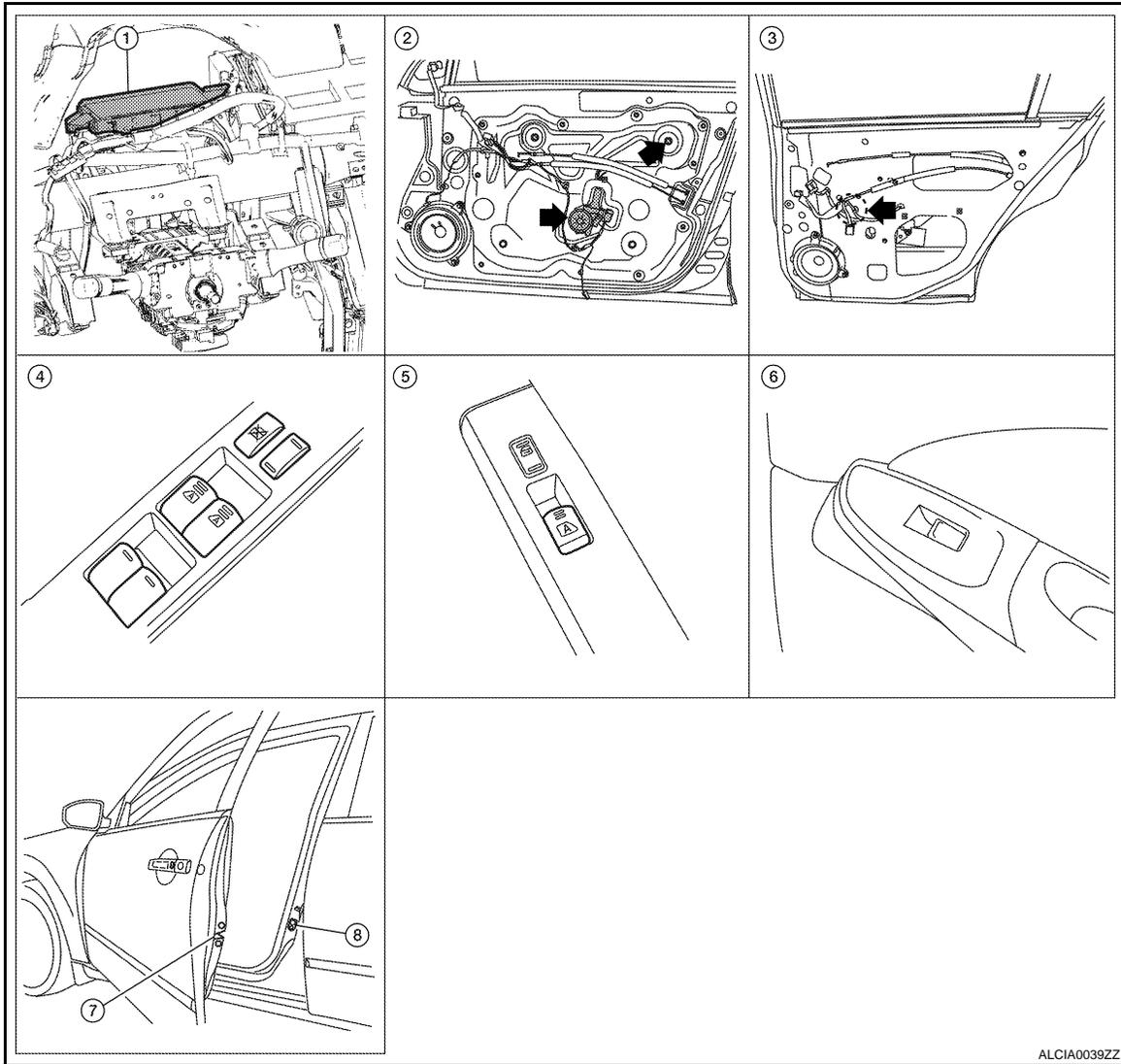
Component Parts Location

INFOID:000000000993712

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]



- | | | |
|---|---|--|
| 1. BCM M16, M17, M18, M19 | 2. Front power window motor LH D9, RH D104 | 3. Rear power window motor LH D204, RH D304 |
| 4. Main power window and door lock/unlock switch D7, D8 | 5. Power window and door lock/unlock switch RH D105 | 6. Rear power window switch LH D203, RH D303 |
| 7. Front door lock assembly LH | 8. Front door switch LH B8, RH B108 | |

Component Description

INFOID:000000000993713

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM

Component	Function
BCM	<ul style="list-style-type: none"> Supplies power supply to power window switch. Controls retained power.
Main power window and door lock/unlock switch	<ul style="list-style-type: none"> Directly controls all power window motor of all doors. Controls anti-pinch operation of front power window LH.
Power window and door lock/unlock switch RH	<ul style="list-style-type: none"> Controls front power window motor RH.
Rear power window switch	<ul style="list-style-type: none"> Controls rear power window motors LH and RH.
Front power window motor LH	<ul style="list-style-type: none"> Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Component	Function
Front power window motor RH	Starts operating with signals from main power window and door lock/unlock switch & power window and door lock/unlock switch RH.
Rear power window motor	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000000993714

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-72, "DTC Index" .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
RAP system	RETAINED PWR		×	

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:000000000993715

Data monitor

PWC

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:000000000993716

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000000993717

Main Power Window And Door Lock/unlock Switch

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation?

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.
NO >> Refer to [PWC-69, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"](#).

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000000993718

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Main power window and door lock/unlock switch connector	Terminal	Battery voltage
D7	10	
D8	19	

Is the measurement value within the specification?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and main power window and door lock/unlock switch.
3. Check continuity between BCM connector and main power window and door lock/unlock switch connector.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16	3	D7	10	Yes
	2	D8	19	

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		Ground
	2		

POWER SUPPLY AND GROUND CIRCUIT

[LH ONLY WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

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 main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D8	17		Yes

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector and ground.

Terminals		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	Ground
M16	3	
	2	
		Battery voltage

Is the measurement value within the specification?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5..
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6..
- NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#).

5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch and ground.

Terminal		Window condition	Voltage (V) (Approx.)
(+)	(-)		
Main power window and door lock/unlock switch connector	Terminal	Ground	Battery voltage
D7	1		
	3		DOWN
		DOWN	Battery voltage

Is the measurement value within the specification?

- YES >> GO TO 7..
- NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch and ground.

Terminal		(-)	Window condition	Voltage (V) (Approx.)
(+)	Terminal			
Main power window and door lock/unlock switch connector	D7	Ground	UP	Battery voltage
			DOWN	0
	7		UP	0
	5		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 8..

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-73. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

7. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7	1	D203	2	Yes
	3		3	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1		
	3		

Is the inspection result normal?

YES >> GO TO 9..

NO >> Repair or replace harness.

8. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	5	D303	3	Yes
	7		2	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

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Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	5		
	7		

Is the inspection result normal?

YES >> GO TO 9..

NO >> Repair or replace harness.

9. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to [PWC-72, "POWER WINDOW MAIN SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

POWER WINDOW MAIN SWITCH : Component Inspection

INFOID:000000000993719

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Check main power window and door lock/unlock switch.

Terminal		Main power window and door lock/unlock switch condition	Continuity
10	1	Rear LH	UP
10	7	Rear RH	
10	11	Front RH	
1	3	Rear LH	NEUTRAL
5	7	Rear RH	
12	11	Front RH	
10	3	Rear LH	DOWN
10	5	Rear RH	
10	8	Front RH	

2. Check continuity between main power window and door lock/unlock switch (power window lock switch). (Lock operation).

Terminal		Main power window and door lock/unlock switch condition	Continuity
3	17	Rear LH	UP
5		Rear RH	
11		Front RH	
1		Rear LH	NEUTRAL
3		Rear RH	
5		Rear RH	
7		Front RH	DOWN
12		Front RH	
16		Front RH	
1		Rear LH	DOWN
7		Rear RH	
8		Front RH	

3. Check continuity between main power window and door lock/unlock switch (power window lock switch). (Unlock operation).

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Terminal	Main power window and door lock/unlock switch condition	Continuity
3	Rear LH	UP
5	Rear RH	
8	Front RH	
1	Rear LH	NEUTRAL
3		
5	Rear RH	
7		
8	Front RH	DOWN
11		
1	Rear LH	
7	Rear RH	
11	Front RH	

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch is OK.
- NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:000000000993720

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

- YES >> GO TO 2..
- NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Refer to [PWC-85, "DRIVER SIDE : Component Function Check"](#)

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:000000000993721

- BCM supplies power.
- Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:000000000993722

Power Window And Door Lock/unlock Switch RH

1. CHECK POWER WINDOW MOTOR FUNCTION

Does front power window motor operate with power window and door lock/unlock switch RH operation?

Is the inspection result normal?

- YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.
- NO >> Refer to [PWC-73, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure"](#).

POWER SUPPLY AND GROUND CIRCUIT

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FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:00000000993723

Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between power window and door lock/unlock switch RH connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Power window and door lock/unlock switch RH connector	Terminal	
D105	8	Battery voltage

Is the measurement value within the specification?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and power window and door lock/unlock switch RH.
3. Check continuity between BCM connector and power window and door lock/unlock switch RH connector.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16	3	D105	8	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		No

Is the inspection result normal?

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

3. CHECK HARNESS CONTINUITY (POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
3. Check continuity between main power window and door lock/unlock switch connector and power window and door lock/unlock switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
D7	11	D105	11	Yes
	8		12	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	8		No
	11		

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
NO >> Repair or replace harness.

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4. CHECK HARNESS CONTINUITY

1. Disconnect BCM and power window and door lock/unlock switch RH.
2. Check continuity between BCM connector and power window and door lock/unlock switch RH connector.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16	3	D105	8	Yes

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		No

Is the inspection result normal?

YES >> GO TO 5..

NO >> Repair or replace harness.

5. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-76. "REAR POWER WINDOW SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58. "Removal and Installation"](#).

COMPONENT INSPECTION

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Power window and door lock/un/ock switch RH	Terminal		Power window switch condition	Continuity
D105	8	6	UP	Yes
	12	7		
	12	7	NEUTRAL	
	6	11		
	8	7	DOWN	
	6	11		

Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH is OK.

NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58. "Removal and Installation"](#).

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Description

INFOID:000000000993724

- BCM supplies power.
- Rear power window motor will be operated if rear power window switch is operated. Rear power window switch.

REAR POWER WINDOW SWITCH : Component Function Check

INFOID:000000000993725

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation?

Is the inspection result normal?

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- YES >> Rear power window switch power supply and ground circuit are OK.
 NO >> Refer to [PWC-75. "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000993726

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

Terminal (+)		Terminal	Terminal (-)	Condition	Voltage (V) (Approx.)
Rear power window switch connector					
LH	D203	1	Ground	Ignition switch ON	Battery voltage
RH	D303				

Is the measurement value within the specification?

- YES >> GO TO 2.. (Rear power window switch LH)
 YES >> GO TO 3.. (Rear power window switch RH)
 NO >> GO TO 4..

2. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and rear power window switch LH.
- Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7	1	D203	2	Yes
	3		3	

- Check continuity between main power window and door lock/unlock switchh connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1	Ground	No
	3		

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).
 NO >> Repair or replace harness.

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- Check continuity between main power window and door lock/unlock switchh connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	5	D303	3	Yes
	7		2	

- Check continuity between main power window and door lock/unlock switch connector and ground.

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Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity	
D7	5			No
	7			

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

1. Disconnect BCM and rear power window switch.
2. Check continuity between BCM connector and rear power window switch connector.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16	3	LH	D203	1	Yes
		RH	D303		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		

Is the inspection result normal?

YES >> GO TO 5..

NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-76, "REAR POWER WINDOW SWITCH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window switch. Refer to [PWC-58, "Removal and Installation"](#).

REAR POWER WINDOW SWITCH : Component Inspection

INFOID:000000000993727

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Terminal		Power window switch condition	Continuity
1	5	UP	Yes
3	4		
3	4	NEUTRAL	
5	2		
1	4	DOWN	
5	2		

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to [PWC-58, "Removal and Installation"](#).

POWER WINDOW MOTOR

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[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000000993728

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch.

DRIVER SIDE : Component Function Check

INFOID:000000000993729

1. CHECK FRONT POWER WINDOW MOTOR LH CIRCUIT

Does front power window motor LH operate with the main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Refer to [PWC-78, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:000000000993730

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

1. Disconnect front power window motor LH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH connector and ground.

Terminal		Main power window and door lock/unlock switch Condition	Voltage (V) (Approx.)
(+)	(-)		
Front power window motor LH connector	Terminal		
D9	2	UP	Battery voltage
		DOWN	0
	1	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
3. Check continuity between main power window and door lock/unlock switch connector and front power window motor (front power window motor lh).

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	16	D9	2	Yes
	12		1	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	16	Ground	No
	12		

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POWER WINDOW MOTOR

[LH ONLY WINDOW ANTI-PINCH]

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Is the inspection result normal?

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

3. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to [PWC-79, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
NO >> Replace front power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that,
Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).

DRIVER SIDE : Component Inspection

INFOID:000000000993731

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to power window motor?

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

- YES >> Front power window motor LH is OK.
NO >> Replace front power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that,
Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).

DRIVER SIDE : Special Repair Requirement

INFOID:000000000993732

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> GO TO 2..
NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> Inspection end.
NO >> Refer to [PWC-85, "DRIVER SIDE : Component Function Check"](#).

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000000993733

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

PASSENGER SIDE : Component Function Check

INFOID:000000000993734

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Does front power window motor RH operate with main power window and door lock/unlock switch or power window and door lock/unlock switch?

POWER WINDOW MOTOR

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Is the inspection result normal?

- YES >> Front power window motor RH is OK.
 NO >> Refer to [PWC-80. "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000000993735

Front Power Window Motor RH Circuit Check

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

1. Disconnect front power window motor RH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor RH connector and ground.

Terminal (+)		Terminal (-)	Front power window motor RH condition	Voltage (V) (Approx.)
Front power window motor RH connector	Terminal			
D104	1	Ground	UP	Battery voltage
			DOWN	0
	2		UP	0
			DOWN	Battery voltage

Is the measurement value within the specification?

- YES >> GO TO 2..
 NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-74. "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH and front power window motor RH.
3. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	6	D104	1	Yes
	7		2	

4. Check continuity between power window and door lock/unlock switch connector and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	6	Ground	No
	7		

Is the inspection result normal?

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

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.
 Refer to [PWC-81. "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).
 NO >> Replace front power window motor RH. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-81. "PASSENGER SIDE : Special Repair Requirement"](#).

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

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PASSENGER SIDE : Component Inspection

INFOID:00000000099376

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to front power window motor RH?

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor RH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-81, "PASSENGER SIDE : Special Repair Requirement"](#).

REAR LH

REAR LH : Description

INFOID:00000000099377

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or rear power window switch LH.

REAR LH : Component Function Check

INFOID:00000000099378

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Does rear power window motor LH operate with main power window and door lock/unlock switch or rear power window switch LH?

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to [PWC-81, "REAR LH : Diagnosis Procedure"](#)

REAR LH : Diagnosis Procedure

INFOID:00000000099379

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

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

Terminal		Window condition	Voltage (V) (Approx.)
(+)	(-)		
Rear power window motor LH connector D204	Terminal 1	UP	Battery voltage
		DOWN	0
	3	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Check rear power window switch LH. Refer to [PWC-75, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

POWER WINDOW MOTOR

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[LH ONLY WINDOW ANTI-PINCH]

2. CHECK HARNESS CONTINUITY

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203	5	D204	1	Yes
	4		3	

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

Rear power window switch LH connector	Terminal	Ground	Continuity
D203	5	Ground	No
	4		

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-82. "REAR LH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

NO >> Replace rear power window motor LH. Refer to [GW-24. "Removal and Installation"](#).

REAR LH : Component Inspection

INFOID:000000000993740

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to rear power window motor LH?

Terminal		Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to [GW-24. "Removal and Installation"](#).

REAR RH

REAR RH : Description

INFOID:000000000993741

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or rear power window switch RH.

REAR RH : Component Function Check

INFOID:000000000993742

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does rear power window motor RH operate with operating power window main switch or rear power window switch RH?

Is the inspection result normal?

POWER WINDOW MOTOR

[LH ONLY WINDOW ANTI-PINCH]

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- YES >> Power window motor is OK.
 NO >> Refer to [PWC-83, "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

INFOID:000000000993743

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Terminal		Rear power window switch RH condition	Voltage (V) (Approx.)
(+)	(-)		
Rear power window motor RH connector	Terminal		
D304	1	UP	Battery voltage
		DOWN	0
	3	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

- YES >> GO TO 2..
 NO >> Check rear power window switch RH. Refer to [PWC-75, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

2. CHECK HARNESS CONTINUITY

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

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303	5	D304	1	Yes
	4		3	

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

Rear power window switch RH connector	Terminal	Ground	Continuity
D303	5	Ground	No
	4		

Is the inspection result normal?

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

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.
 Refer to [PWC-84, "REAR RH : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
 NO >> Replace rear power window motor RH. Refer to [GW-24, "Removal and Installation"](#).

REAR RH : Component Inspection

INFOID:000000000993744

COMPONENT INSPECTION

POWER WINDOW MOTOR

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[LH ONLY WINDOW ANTI-PINCH]

1. CHECK REAR POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to rear power window motor RH?

Terminal		Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to [GW-24, "Removal and Installation"](#).

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ENCODER

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[LH ONLY WINDOW ANTI-PINCH]

ENCODER DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000000993745

Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE : Component Function Check

INFOID:000000000993746

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally with main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to [PWC-85, "DRIVER SIDE : Diagnosis Procedure"](#)

DRIVER SIDE : Diagnosis Procedure

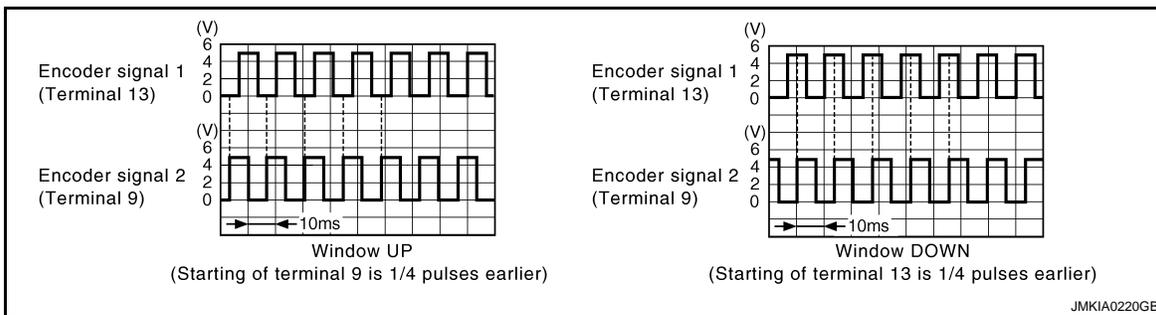
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Encoder Circuit Check

1. CHECK ENCODER OPERATION

1. Connect front power window motor LH.
2. Turn ignition switch ON.
3. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

Terminals		Signal (Reference value)
(+)	(-)	
Main power window and door lock/unlock switch connector	Terminal	Refer to following signal
D7	9 13	



Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> GO TO 2..

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between front power window motor LH connector and ground.

ENCODER

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Front power window motor LH connector	Terminal	
D9	4	Ground
		10

Is the measurement value within the specification?

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

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
3. Check continuity between main power window and door lock/unlock switch connector and front power window motor (front power window motor lh) connector.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	15	D9	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	15		No

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
 NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Front power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes

Is the inspection result normal?

- YES >> GO TO 6..
 NO >> GO TO 5..

5. CHECK HARNESS CONTINUITY 2

1. Disconnect main power window and door lock/unlock switch.
2. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH connector.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	2	D9	6	Yes

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
 NO >> Repair or replace harness.

ENCODER

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

6. CHECK HARNESS CONTINUITY 3

1. Disconnect main power window and door lock/unlock switch.
2. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH connector.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	9	D9	3	Yes
	13		5	

3. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	9	Ground	No
	13		

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).

NO >> Repair or replace harness.

DRIVER SIDE : Special Repair Requirement

INFOID:000000000993748

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-8, "BASIC INSPECTION : Special Repair Requirement"](#)

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

DOOR SWITCH

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DOOR SWITCH

Description

INFOID:000000000993749

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

INFOID:000000000993750

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to [PWC-68. "RETAINED PWR : CONSULT-III Function \(BCM - RETAINED PWR\)"](#).

Monitor item	Condition	
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF

Is the inspection result normal?

- YES >> Front door switch circuit is OK.
- NO >> Refer to [PWC-90. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000993751

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

Terminals		Door condition	Voltage (V) (Approx.)
(+)	(-)		
BCM connector	Terminal		
M18	32	Front door RH	OPEN : 0
			CLOSE : Battery voltage
	58	Front door LH	OPEN : 0
			CLOSE : Battery voltage

Is the measurement value within the specification?

- YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#).
- NO >> GO TO 2..

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and front door switch.
3. Check continuity between BCM connector and front door switch connector.

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18	32	RH: B108	2	Yes
	58	LH: B8		

4. Check continuity between BCM connector ground.

BCM connector	Terminal	Ground	Continuity
M18	32	Ground	No
	58		

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DOOR SWITCH

[LH ONLY WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	Battery voltage
M18	32	
	58	

Is the measurement value within the specification?

- YES >> GO TO 4..
NO >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#).

4. CHECK FRONT DOOR SWITCH

Check front door switch.
Refer to [PWC-91. "Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).
NO >> Replace front door switch.

Component Inspection

INFOID:000000000993752

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal		Door switch	Continuity
Door switches			
2	Ground part of door switch	Pressed	No
		Released	Yes

Is the inspection result normal?

- YES >> Front door switch is OK.
NO >> Replace front door switch.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description

INFOID:000000000993753

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

INFOID:000000000993754

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked.

Does power window lock operate?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, [PWC-8, "BASIC INSPECTION : Special Repair Requirement"](#)
- NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:000000000993755

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-8, "BASIC INSPECTION : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Check intermittenrt incident. Refer to [GI-39, "Intermittent Incident"](#).

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000000993756

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON

TERMINAL LAYOUT

Refer to [BCS-41, "Terminal Layout"](#).

PHYSICAL VALUES

Refer to [BCS-42, "Physical Values"](#).

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

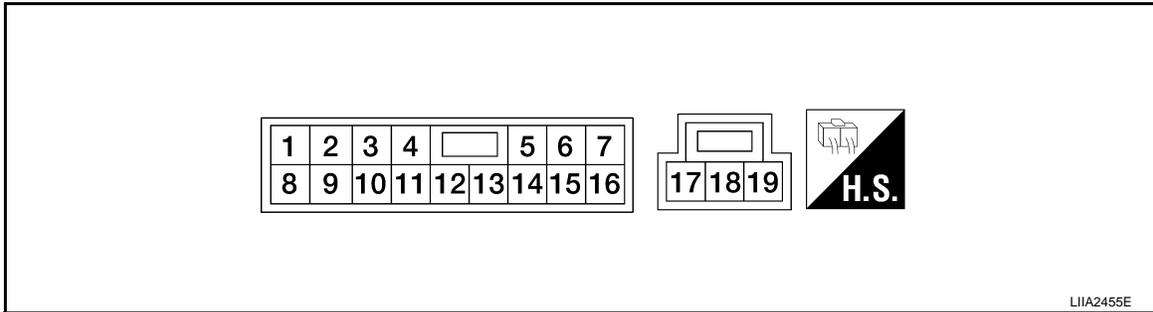
[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000000993757

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No. (Wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
1 (G/B)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage
2 (W/B)	Ground	Encoder ground	—	—	0
3 (G/O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage
5 (G/R)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage
6 (GR/R)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (G/W)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage
8 (R/B)	11	Front power window motor RH UP signal	Output	When front RH switch in power window main switch is operated UP.	Battery voltage
9 (G/W)	2	Encoder pulse signal 2	Input	When power window mo- tor operates.	

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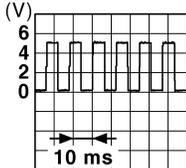
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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
10 (L/W)	Ground	RAP signal	Input	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF.	Battery voltage
				When driver side or passenger side door is opened during retained power operation.	0
11 (R/W)	8	Front power window motor RH DOWN signal	Output	When front RH switch in power window main switch is operated DOWN.	Battery voltage
12 (L/B)	16	Front power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage
13 (G/Y)	2	Encoder pulse signal 1	Input	When power window motor operates.	
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15 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
16 (L/R)	12	Front power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage
17 (B)	Ground	Ground	—	—	0
19 (R/Y)		Battery power supply	Input	—	Battery voltage

Wiring Diagram

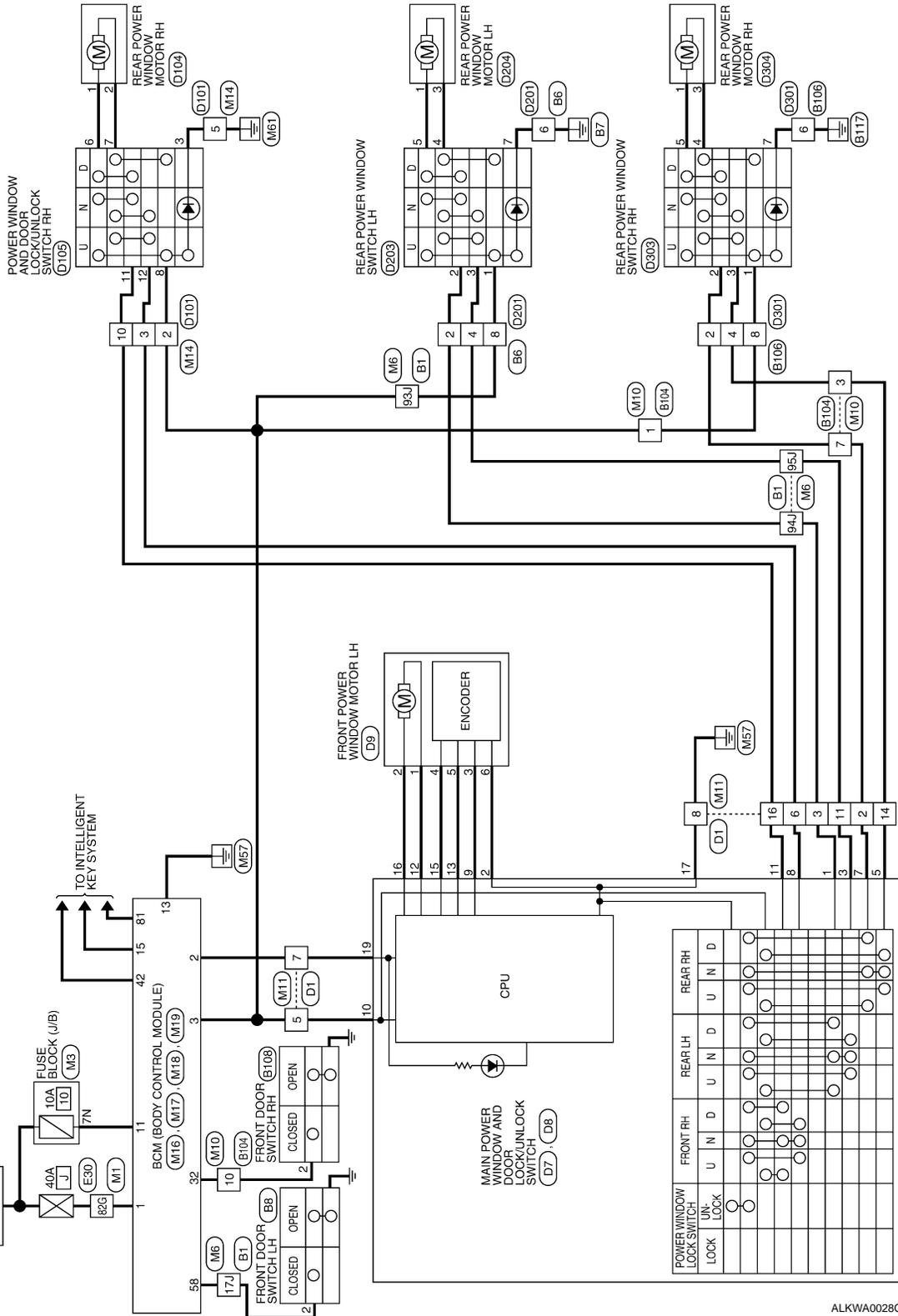
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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

POWER WINDOW SYSTEM/WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM



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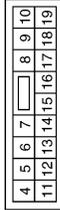
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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



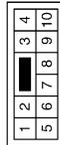
Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1
15	Y/L	ACC_LED

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



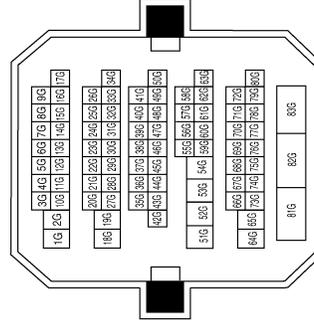
Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_FL
2	R/Y	P/W_POWER_SUPPL Y_PERM
3	L/W	POWER_WINDOW_ POWER_SUPPLY (RAP)

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	L/W	—
3	R/B	—
5	B	—
10	R/W	—

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
81	LG	IGN_ON_LED

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
32	R/B	AS_DOOR_SW
42	R	S/L_LOCK_LED
58	SB	DR_DOOR_SW

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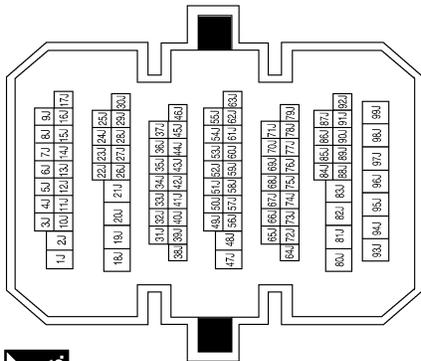
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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

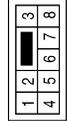
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Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



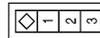
Terminal No.	Color of Wire	Signal Name
17J	SB	---
93J	L/W	---
94J	G/B	---
95J	G/O	---

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



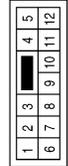
Terminal No.	Color of Wire	Signal Name
2	G/B	---
4	G/O	---
6	B/Y	---
8	L/W	---

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



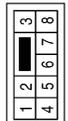
Terminal No.	Color of Wire	Signal Name
2	SB	DOOR SW(DR)

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/W	---
3	G/R	---
7	G/B	---
10	R/B	---

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



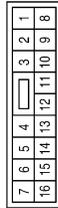
Terminal No.	Color of Wire	Signal Name
2	G/W	---
4	G/R	---
6	B	---
8	L/W	---

POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

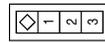
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Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



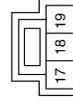
Terminal No.	Color of Wire	Signal Name
2	G/W	—
3	G/B	—
5	L/W	—
6	R/B	—
7	R/Y	—
8	B	—
11	G/O	—
14	V	—
16	R/W	—

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	R/B	DOOR SW (AS)

Connector No.	D8
Connector Name	(WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
17	B	GND
18	GR	LOCK
19	R/Y	BAT

Terminal No.	Color of Wire	Signal Name
1	G/B	RL UP
2	W/B	ENCODER_GND
3	G/O	RL_DOWN
4	—	—
5	G/R	RR_DOWN
6	GR/R	UNLOCK
7	G/W	RR_UP
8	R/B	AS_UP
9	G/W	ENCODER_SIG2
10	L/W	IGN
11	R/W	AS_DOWN
12	L/B	DR_DOWN
13	G/Y	ENCODER_SIG1
14	—	—
15	G/R	ENCODER_POWER
16	L/R	DR_UP

Connector No.	D7
Connector Name	(WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

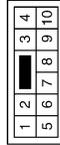
< ECU DIAGNOSIS >

Connector No.	D104
Connector Name	(WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM) FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	---
2	L/R	---
3	---	---
4	---	---
5	---	---
6	---	---

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



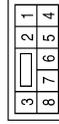
Terminal No.	Color of Wire	Signal Name
2	L/W	---
3	R/B	---
5	B	---
10	R/W	---

Connector No.	D9
Connector Name	FRONT POWER WINDOW MOTOR LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	---
2	L/R	---
3	G/W	---
4	G/R	---
5	G/Y	---
6	W/B	---

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/B	---
4	G/O	---
6	B	---
8	L/W	---

Terminal No.	Color of Wire	Signal Name
1	GR	LOCK
2	GR/R	UNLOCK
3	B	GND
4	---	---
5	---	---
6	L/B	DOWN
7	L/R	UP
8	L/W	IGN
9	---	---
10	---	---
11	R/W	DOWN
12	R/B	UP

Connector No.	D105
Connector Name	(WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM) POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE



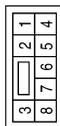
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POWER WINDOW MAIN SWITCH

[LH ONLY WINDOW ANTI-PINCH]

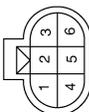
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Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



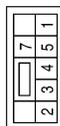
Terminal No.	Color of Wire	Signal Name
2	G/W	—
4	G/R	—
6	B	—
8	L/W	—

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GRAY



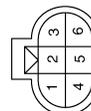
Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/B	UP
3	G/O	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D303
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/W	UP
3	G/R	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

ALKIA0187GB

INFOID:000000000993759

Fail Safe

FAIL-SAFE CONTROL

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

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors malfunction	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet updated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

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

- Auto-up operation
- Anti-pinch function
- Retained power function

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

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:000000000993760

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to [BCS-33, "Diagnosis Procedure"](#).

Is the inspection result normal?

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

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check main power window and door lock/unlock switch power supply and ground circuit.
Refer to [PWC-14, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

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

3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.
Refer to [PWC-14, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993761

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to [PWC-23, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993762

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-18, "FRONT POWER WINDOW SWITCH : 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 RH CIRCUIT

Check front power window motor RH circuit.

Refer to [PWC-24, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993763

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to [PWC-20, "REAR POWER WINDOW SWITCH : 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-26, "REAR LH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993764

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-20, "REAR POWER WINDOW SWITCH : 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-27, "REAR RH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:000000000993765

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-18, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-14, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:000000000993766

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-18, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to [PWC-14, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:000000000993767

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to [PWC-33, "Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH ONLY WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:000000000993768

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch.

Refer to [PWC-58, "Removal and Installation"](#). After that, [PWC-18, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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PRECAUTION

PRECAUTIONS

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

INFOID:000000000993769

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 and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SRS section.
- Do not 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.

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH ONLY WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000000993770

BASIC INSPECTION

1.INSPECTION START

1. Check the service history.
2. Check the following parts.
 - Fuse/circuit breaker blown.
 - Poor connection, open or short circuit of harness connector.
 - Battery voltage.

Is the inspection result normal?

- YES >> Inspection end.
NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW MAIN SWITCH

< ON-VEHICLE REPAIR >

[LH ONLY WINDOW ANTI-PINCH]

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:000000000993771

REMOVAL

1. Remove the power window main switch finisher (2).
Refer to [INT-11. "Removal and Installation"](#).
2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.

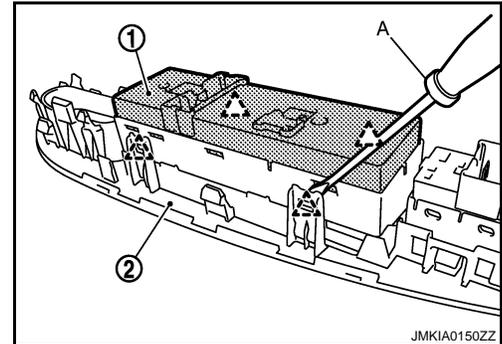
 : Pawl

CAUTION:

Do not fold the pawl of power window main switch finisher.

NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).



INSTALLATION

Install in the reverse order of removal.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

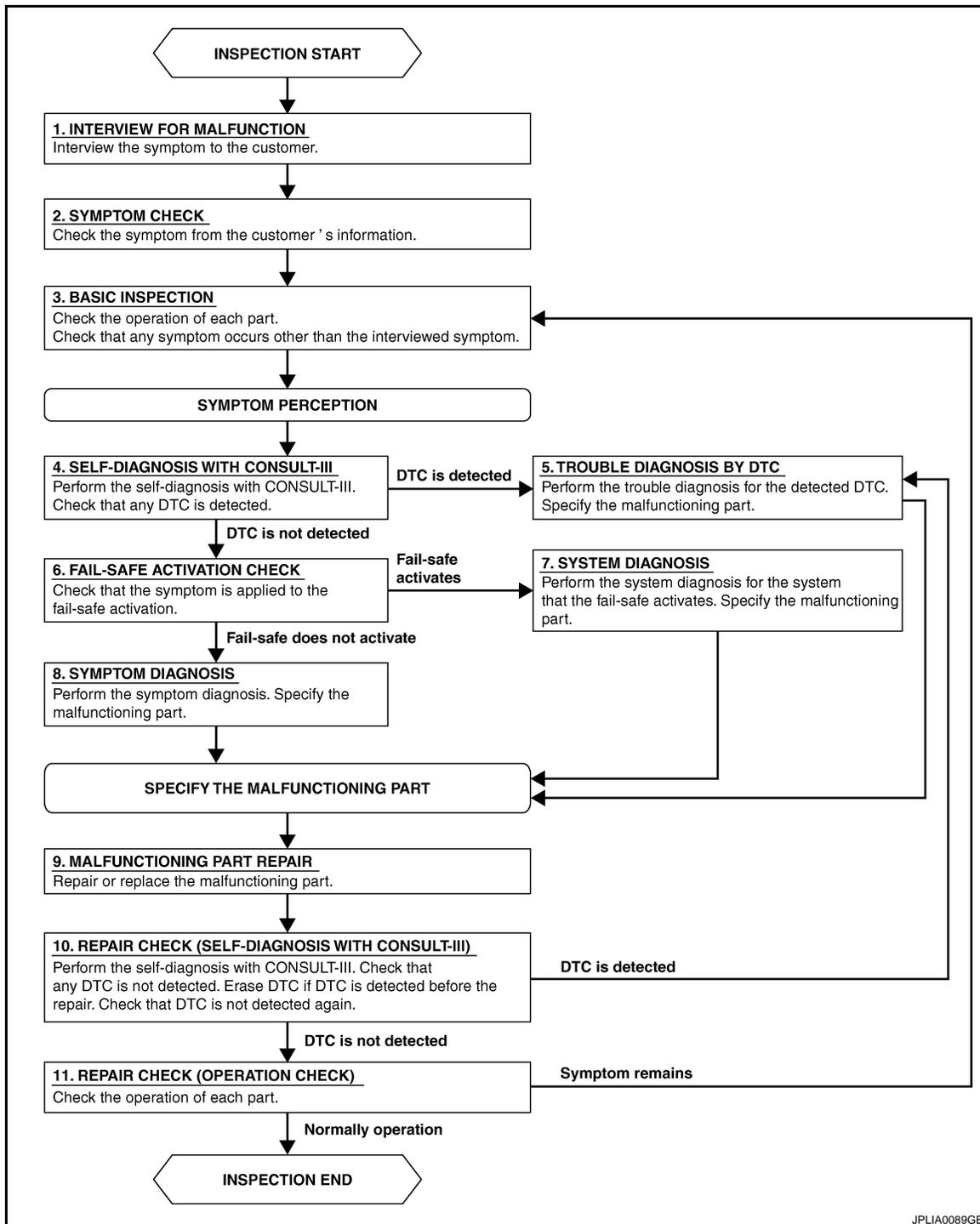
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:000000000993772

OVERALL SEQUENCE



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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

DETAILED FLOW

1. INTERVIEW FOR MALFUNCTION

Interview the symptom to the customer.

>> GO TO 2..

2. SYMPTOM CHECK

Check the symptom from the customer's information.

>> GO TO 3..

3. BASIC INSPECTION

Check the operation of each part. Check that any symptom occurs other than the interviewed symptom.

>> GO TO 4..

4. SELF-DIAGNOSIS WITH CONSULT-III

Perform the self-diagnosis with CONSULT-III. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5..

NO >> GO TO 6..

5. TROUBLE DIAGNOSIS BY DTC

Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.

>> GO TO 9..

6. FAIL-SAFE ACTIVATION CHECK

Check that the symptom is applied to the fail-safe activation.

Does the fail-safe activate?

YES >> GO TO 7..

NO >> GO TO 8..

7. SYSTEM DIAGNOSIS

Perform the system diagnosis for the system that the fail-safe activates. Specify the malfunctioning part.

>> GO TO 9..

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9..

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10..

10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III)

Perform the self-diagnosis with CONSULT-III. Check that any DTC is not detected. Erase DTC if DTC is detected before the repair. Check that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5..

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

NO >> GO TO 11..

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 3..

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

INFOID:000000000993773

Initial setting is necessary when battery terminal is removed.

CAUTION:

The following specified operations are not performed under the non-initialized condition.

- Auto-up operation
- Anti-pinch function
- Retained power operation

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement

INFOID:000000000993774

INITIALIZATION PROCEDURE

1. Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.
2. Turn ignition switch ON.
3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.
5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

1. Fully open the door window.
2. Place a piece of wood near fully closed position.
3. Close door glass completely with AUTO-UP.
 - Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.
 - Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when 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-108. "Fail Safe"](#).
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.

1. Auto-up operation
2. Anti-pinch function
3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:000000000993775

Initial setting is necessary when replacing power window main switch.

CAUTION:

The following specified operations are not performed under the non-initialized condition.

- Auto-up operation
- Anti-pinch function
- Retained power operation

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement

INFOID:000000000993776

INITIALIZATION PROCEDURE

1. Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

2. Turn ignition switch ON.
3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open) A
4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more. B
5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

1. Fully open the door window. C
2. Place a piece of wood near fully closed position.
3. Close door glass completely with AUTO-UP.
 - Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops. D
 - Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched. E
 - Check that AUTO-UP operates before inspection when 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-108, "Fail Safe"](#).
 - Perform initial setting when auto-up operation or anti-pinch function does not operate normally. F
 - Finish initial setting. Otherwise, next operation cannot be done.
1. Auto-up operation G
 2. Anti-pinch function H
 3. Retained power operation when ignition switch is OFF. I

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

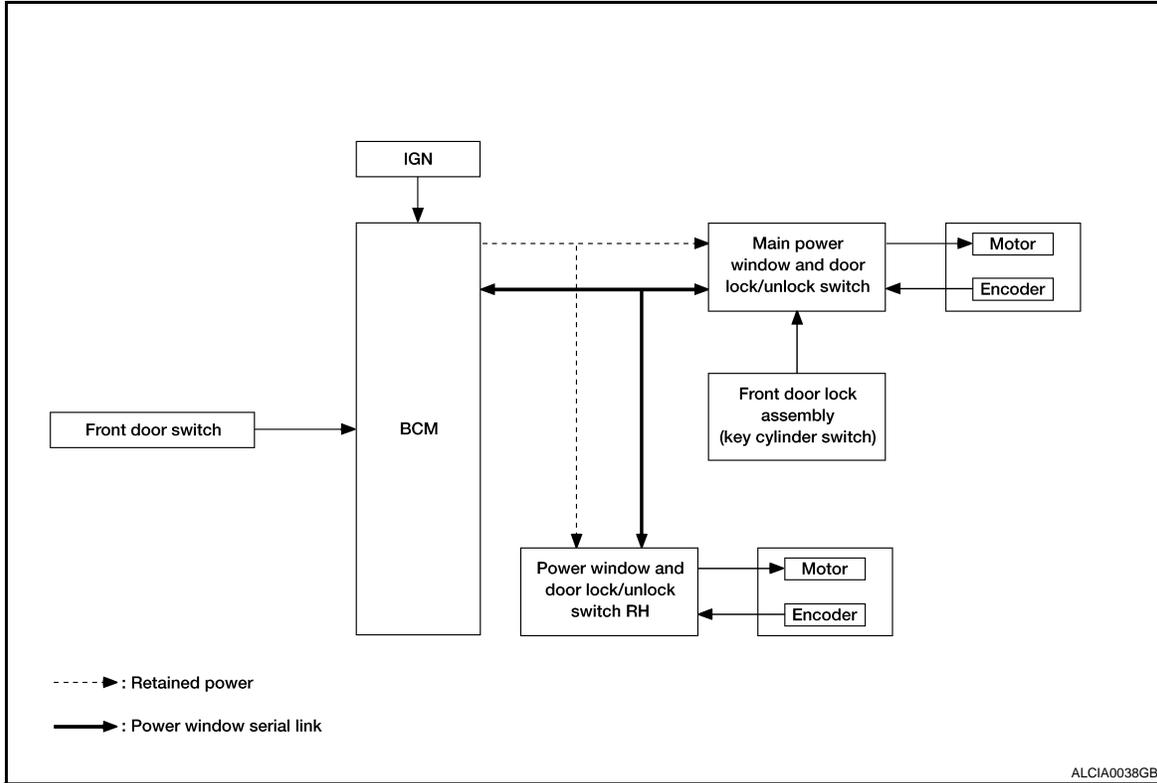
FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

INFOID:000000000993777

FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:000000000993778

POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator
Key cylinder switch	LOCK/UNLOCK signal (more than 1.5 seconds over)	Power window control	Front power window motor
Encoder	Encoder pulse signal		
Main power window and door lock/unlock switch	Front power window motor LH UP/DOWN signal		
Power window and door lock/unlock switch RH	Front power window motor RH UP/DOWN signal		
BCM	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Item	Input signal to front power window switch	Front power window switch function	Actuator
Power window and door lock/unlock switch RH	Front power window motor RH UP/DOWN signal	Power window control	Front power window motor RH
Encoder	Encoder pulse signal		
BCM	RAP signal		

POWER WINDOW OPERATION

- Power window system is operable during the retained power operation timer after turning ignition switch ON and OFF.
- Power window main switch (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (FRONT LH & RH)

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

RETAINED POWER OPERATION

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

Retained power function cancel conditions

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

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION (FRONT LH & RH)

- 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 or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE front power windows when ignition switch is OFF. In addition, it stops when key position is moved to NEUTRAL when operating.

OPERATION CONDITION

- Ignition switch OFF
- Hold door key cylinder to LOCK position for 1.5 seconds or more to perform CLOSE operation of the door glass.

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN OPERATION (FRONT LH & RH)

Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3* seconds with the ignition switch OFF. The windows keep opening if the unlock button is continuously pressed.

The power window opening stops when the following operations are performed:

- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.

While retained power operation activate, keyless power window down function cannot be operated.

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUPPORT". Refer to [SEC-23. "INTELLIGENT KEY : CONSULT-III Function \(BCM - INTELLIGENT KEY\)"](#).

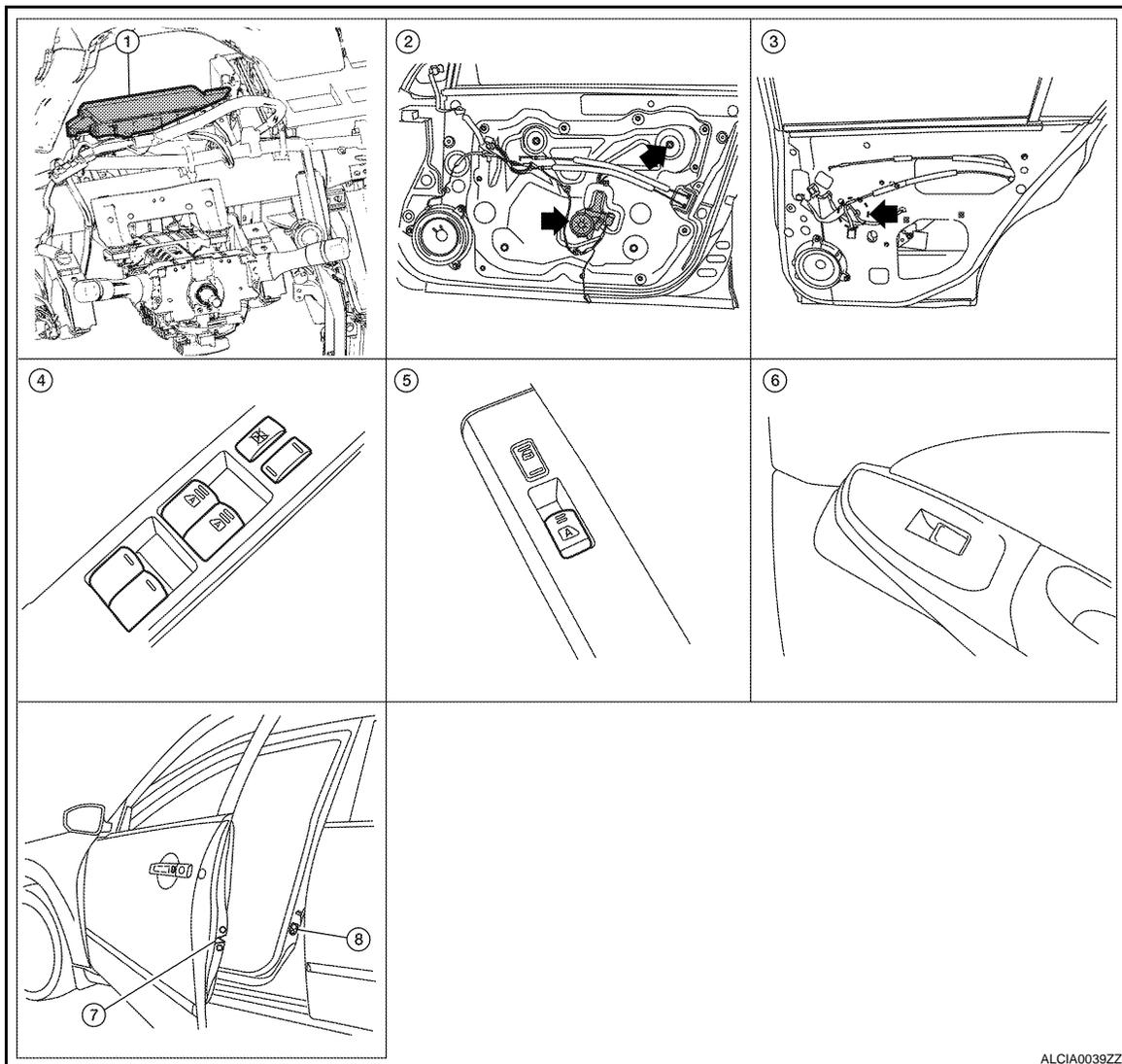
NOTE:

Use CONSULT-III to change settings.

MODE 1 (3sec) / MODE 2 (OFF) / MODE 3 (5sec)

Component Parts Location

INFOID:000000000993779



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1. BCM M16, M17, M18, M19 (view with instrument panel removed)
2. Front power window motor LH D9, RH D104
3. Rear power window motor LH D204, RH D304

POWER WINDOW SYSTEM

[LH&RH FRONT WINDOW ANTI-PINCH]

< FUNCTION DIAGNOSIS >

- | | | |
|--|---|--|
| 4. Main power window and door lock/unlock switch D7, D8 | 5. Power window and door lock/unlock switch RH D105 | 6. Rear power window switch LH D203, RH D303 |
| 7. Front door lock assembly LH (key cylinder switch) D10 | 8. Front door switch LH B8, RH B108 | |

Component Description

INFOID:000000000993780

FRONT WINDOW ANTI-PINCH SYSTEM

Component	Function
BCM	<ul style="list-style-type: none"> Supplies power supply to power window switch. Controls retained power.
Main power window and door lock/unlock switch	<ul style="list-style-type: none"> Directly controls all power window motor of all doors. Controls anti-pinch operation of front power window LH.
Power window and door lock/unlock switch RH	<ul style="list-style-type: none"> Controls front power window motor RH. Controls anti-pinch operation of front power window RH.
Rear power window switch	<ul style="list-style-type: none"> Controls rear power window motors LH and RH.
Front power window motor LH	<ul style="list-style-type: none"> Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.
Front power window motor RH	Starts operating with signals from main power window and door lock/unlock switch & power window and door lock/unlock switch RH.
Rear power window motor	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door lock assembly LH (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

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DIAGNOSIS SYSTEM (BCM)

[LH&RH FRONT WINDOW ANTI-PINCH]

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:000000000993781

APPLICATION ITEM

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-72, "DTC Index" .
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
RAP system	RETAINED PWR		×	

RETAINED PWR

RETAINED PWR : CONSULT-III Function (BCM - RETAINED PWR)

INFOID:000000000993782

Data monitor

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of front door switch LH.
DOOR SW-AS	Indicates [ON/OFF] condition of front door switch RH.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:000000000993783

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/down when main power window and door lock/unlock switch is operated.

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000000993784

Main Power Window And Door Lock/unlock Switch

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Does power window motor operate with main power window and door lock/unlock switch operation?

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.
NO >> Refer to [PWC-69, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"](#).

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000000993785

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Main power window and door lock/unlock switch connector	Terminal	Ground Battery voltage
D7	10	
D8	19	

Is the measurement value within the specification?

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

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and main power window and door lock/unlock switch.
3. Check continuity between BCM connector and main power window and door lock/unlock switch connector.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16	3	D7	10	Yes
	2	D8	19	

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		No
	2		

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POWER SUPPLY AND GROUND CIRCUIT

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

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 main power window and door lock/unlock switch.
3. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D8	17		Yes

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-135. "Removal and Installation"](#). After that, Refer to [PWC-62. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).
NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM.
2. Turn ignition switch ON.
3. Check voltage between BCM connector and ground.

Terminals		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	
M16	3	Ground Battery voltage
	2	

Is the measurement value within the specification?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5..
YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6..
NO >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#).

5. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch and ground.

Terminal		Window condition	Voltage (V) (Approx.)
(+)	(-)		
Main power window and door lock/unlock switch connector	Terminal		
D7	1	UP	Battery voltage
		DOWN	0
	3	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

- YES >> GO TO 7..
NO >> Replace main power window and door lock/unlock switch. Refer to . After that, Refer to Refer to Service Manual.

6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-

POWER SUPPLY AND GROUND CIRCUIT

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

ER WINDOW SWITCH RH)

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch and ground.

Terminal (+)		Terminal (-)	Window condition	Voltage (V) (Approx.)
Main power window and door lock/unlock switch connector	Terminal			
D7	7	Ground	UP	Battery voltage
			DOWN	0
	5		UP	0
			DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 8..

NO >> Replace main power window and door lock/unlock switch. Refer to . After that, Refer to Refer to Service Manual.

7. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch LH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7	1	D203	2	Yes
	3		3	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1	Ground	No
	3		

Is the inspection result normal?

YES >> GO TO 9..

NO >> Repair or replace harness.

8. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect rear power window switch RH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	5	D303	3	Yes
	7		2	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	5	Ground	No
	7		

POWER SUPPLY AND GROUND CIRCUIT

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

- YES >> GO TO 9..
- NO >> Repair or replace harness.

9. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.
Refer to Refer to Service Manual.

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).
- NO >> Replace main power window and door lock/unlock switch. Refer to . After that, Refer to Service Manual.

POWER WINDOW MAIN SWITCH : Component Inspection

INFOID:000000000993786

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Check main power window and door lock/unlock switch.

Terminal		Main power window and door lock/unlock switch condition		Continuity
10	1	Rear LH	UP	Yes
10	7	Rear RH		
1	3	Rear LH	NEUTRAL	
5	7	Rear RH		
10	3	Rear LH	DOWN	
10	5	Rear RH		

2. Check continuity between main power window and door lock/unlock switch (power window lock switch). (Lock operation).

Terminal		Main power window and door lock/unlock switch condition		Continuity
3	17	Rear LH	UP	No
5		Rear RH		
1		Rear LH	NEUTRAL	
3				
5		Rear RH	DOWN	
7				
1		Rear LH		
7		Rear RH		

3. Check continuity between main power window and door lock/unlock switch (power window lock switch). (Unlock operation).

Terminal		Main power window and door lock/unlock switch condition		Continuity
3	17	Rear LH	UP	Yes
5		Rear RH		
1		Rear LH	NEUTRAL	
3				
5		Rear RH	DOWN	
7				
1		Rear LH		
7		Rear RH		

Is the inspection result normal?

- YES >> Main power window and door lock/unlock switch is OK.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-73. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

POWER WINDOW MAIN SWITCH : Special Repair Requirement

INFOID:000000000993787

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

YES >> GO TO 2..

NO >> Check intermittent incident. Refer to [GI-39. "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#)

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to [PWC-85. "DRIVER SIDE : Component Function Check"](#)

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:000000000993788

- BCM supplies power.
- Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:000000000993789

Power Window And Door Lock/unlock Switch RH

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Does front power window motor RH operate with power window and door lock/unlock switch RH operation?

Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

NO >> Refer to [PWC-73. "FRONT POWER WINDOW SWITCH : Diagnosis Procedure"](#).

FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000993790

Power Window And Door Lock/unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Power window and door lock/unlock switch RH connector	Terminal	
D105	10	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 3..

NO >> GO TO 2..

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect BCM and power window and door lock/unlock switch RH.

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POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

3. Check continuity between BCM connector and power window and door lock/unlock switch RH connector.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M16	2	D105	10	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	2		No

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 and door lock/unlock switch RH.
3. Check continuity between power window and door lock/unlock switch RH connector and ground.

Power window and door lock/unlock switch RH	Terminal	Ground	Continuity
D105	11		Yes

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-74, "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector and ground.

Terminals		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	
M16	2	Battery voltage

Is the measurement value within the specification?

YES >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-74, "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#).

FRONT POWER WINDOW SWITCH : Special Repair Requirement

INFOID:000000000993791

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

POWER SUPPLY AND GROUND CIRCUIT

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Refer to [PWC-87. "PASSENGER SIDE : Component Function Check"](#).

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Description

INFOID:000000000993792

- BCM supplies power.
- Rear power window motor will be operated if rear power window switch is operated. Rear power window switch.

REAR POWER WINDOW SWITCH : Component Function Check

INFOID:000000000993793

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Does rear power window motor operate with rear power window switch operation?

Is the inspection result normal?

- YES >> Rear power window switch power supply and ground circuit are OK.
- NO >> Refer to [PWC-75. "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000993794

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

Terminal		Terminal	Condition	Voltage (V) (Approx.)
(+)				
Rear power window switch connector		1	Ground	Ignition switch ON
LH	D203			
RH	D303			

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Is the measurement value within the specification?

- YES >> GO TO 2.. (Rear power window switch LH)
- YES >> GO TO 3.. (Rear power window switch RH)
- NO >> GO TO 4..

2. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and rear power window switch LH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7	1	D203	2	Yes
	3		3	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1	Ground	No
	3		

Is the inspection result normal?

POWER SUPPLY AND GROUND CIRCUIT

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
NO >> Repair or replace harness.

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
3. Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7	5	D303	3	Yes
	7		2	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	5		No
	7		

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

1. Disconnect BCM and rear power window switch.
2. Check continuity between BCM connector and rear power window switch connector.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16	3	LH	D203	1	Yes
		RH	D303		

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M16	3		No

Is the inspection result normal?

- YES >> GO TO 5..
NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-76, "REAR POWER WINDOW SWITCH : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
NO >> Replace rear power window switch. Refer to [PWC-58, "Removal and Installation"](#).

REAR POWER WINDOW SWITCH : Component Inspection

INFOID:000000000993795

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Rear power window switch	Terminal		Power window switch condition	Continuity
D203 (LH) D303 (RH)	1	5	UP	Existed
	3	4		
	3	4	NEUTRAL	
	5	2	DOWN	
	1	4		
	5	2		

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to [PWC-58, "Removal and Installation"](#).

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POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000000993796

Door glass moves UP/DOWN by receiving the signal from power window main switch.

DRIVER SIDE : Component Function Check

INFOID:000000000993797

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor LH operate with operating main power window and door lock/unlock switch?
Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Refer to [PWC-78, "DRIVER SIDE : Diagnosis Procedure"](#).

DRIVER SIDE : Diagnosis Procedure

INFOID:000000000993798

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

1. Disconnect front power window motor LH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH connector and ground.

Terminal		Main power window and door lock/unlock switch Condition	Voltage (V) (Approx.)
(+)	(-)		
Power window motor LH connector	Terminal		
D9	2	UP	Battery voltage
		DOWN	0
	1	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
3. Check continuity between main power window and door lock/unlock switch connector and front power window motor (driver side).

Main power window and door lock/unlock switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D7	8	D9	2	Yes
	11		1	

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	8		
	11		

POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

3. CHECK POWER WINDOW MOTOR

Check front power window motor LH.

Refer to [PWC-79, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
- NO >> Replace power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).

DRIVER SIDE : Component Inspection

INFOID:000000000993799

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to power window motor?

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

- YES >> Front power window motor LH is OK.
- NO >> Replace front power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).

DRIVER SIDE : Special Repair Requirement

INFOID:000000000993800

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> GO TO 2..
- NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Refer to [PWC-85, "DRIVER SIDE : Component Function Check"](#).

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000000993801

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

PASSENGER SIDE : Component Function Check

INFOID:000000000993802

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does power window motor operate with operating main power window and door lock/unlock switch or power window and door lock/unlock switch RH?

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POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to [PWC-80, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000000993803

Front Power Window Motor RH Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect front power window motor RH.
2. Turn ignition switch ON.
3. Check voltage between front power window motor RH connector and ground.

Terminal (+)		Terminal (-)	Front power window motor RH condition	Voltage (V) (Approx.)
Front power window motor RH connector	Terminal			
D104	2	Ground	UP	Battery voltage
			DOWN	0
	1		UP	0
			DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-74, "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH and front power window motor RH.
3. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	8	D104	2	Yes
	9		1	

4. Check continuity between power window and door lock/unlock switch RH connector and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	8		No
	9		

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to [PWC-81, "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace front power window motor RH. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-81, "PASSENGER SIDE : Special Repair Requirement"](#).

POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

PASSENGER SIDE : Component Inspection

INFOID:000000000993804

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to front power window motor RH?

Terminal		Motor condition
(+)	(-)	
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Replace front power window motor RH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-81, "PASSENGER SIDE : Special Repair Requirement"](#).

PASSENGER SIDE : Special Repair Requirement

INFOID:000000000993805

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to [PWC-87, "PASSENGER SIDE : Component Function Check"](#).

REAR LH

REAR LH : Description

INFOID:000000000993806

Door glass moves UP/DOWN by receiving the signal from power window main switch or rear power window switch LH.

REAR LH : Component Function Check

INFOID:000000000993807

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Does rear power window motor LH operate with main power window and door lock/unlock switch or rear power window switch LH?

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to [PWC-81, "REAR LH : Diagnosis Procedure"](#)

REAR LH : Diagnosis Procedure

INFOID:000000000993808

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

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

Terminal (+)		Terminal (-)	Window condition	Voltage (V) (Approx.)
Rear power window motor LH connector	Terminal			
D204	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Check rear power window switch LH. Refer to [PWC-75, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

2. CHECK HARNESS CONTINUITY

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203	5	D204	1	Yes
	4		3	

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

Rear power window switch LH connector	Terminal	Ground	Continuity
D203	5	Ground	No
	4		

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-82, "REAR LH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window motor LH. Refer to [GW-24, "Removal and Installation"](#).

REAR LH : Component Inspection

INFOID:000000000993809

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

Does motor operate by connecting the battery voltage directly to rear power window motor LH?

POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Terminal		Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to [GW-24, "Removal and Installation"](#).

REAR RH

REAR RH : Description

INFOID:000000000993810

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or rear power window switch RH.

REAR RH : Component Function Check

INFOID:000000000993811

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Does rear power window motor RH operate with operating main power window and door lock/unlock switch or rear power window switch RH?

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Refer to [PWC-83, "REAR RH : Diagnosis Procedure"](#).

REAR RH : Diagnosis Procedure

INFOID:000000000993812

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Terminal		Rear power window switch RH condition	Voltage (V) (Approx.)
(+)	(-)		
Rear power window motor RH connector	Terminal		
D304	1	UP	Battery voltage
		DOWN	0
	3	UP	0
		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2..

NO >> Check rear power window switch RH. Refer to [PWC-75, "REAR POWER WINDOW SWITCH : Component Function Check"](#).

2. CHECK HARNESS CONTINUITY

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

POWER WINDOW MOTOR

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303	5	D304	1	Yes
	4		3	

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

Rear power window switch RH connector	Terminal	Ground	Continuity
D303	5	Ground	No
	4		

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to [PWC-84, "REAR RH : Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace rear power window motor RH. Refer to [GW-24, "Removal and Installation"](#).

REAR RH : Component Inspection

INFOID:000000000993813

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

Does motor operate by connecting the battery voltage directly to rear power window motor RH?

Terminal		Motor condition
(+)	(-)	
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Replace rear power window motor RH. Refer to [GW-24, "Removal and Installation"](#).

ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

ENCODER DRIVER SIDE

DRIVER SIDE : Description

INFOID:000000000993814

Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE : Component Function Check

INFOID:000000000993815

1. CHECK ENCODER OPERATION

Does front door glass LH perform AUTO open/close operation normally when operating main power window and door lock/unlock switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to [PWC-85, "DRIVER SIDE : Diagnosis Procedure"](#)

DRIVER SIDE : Diagnosis Procedure

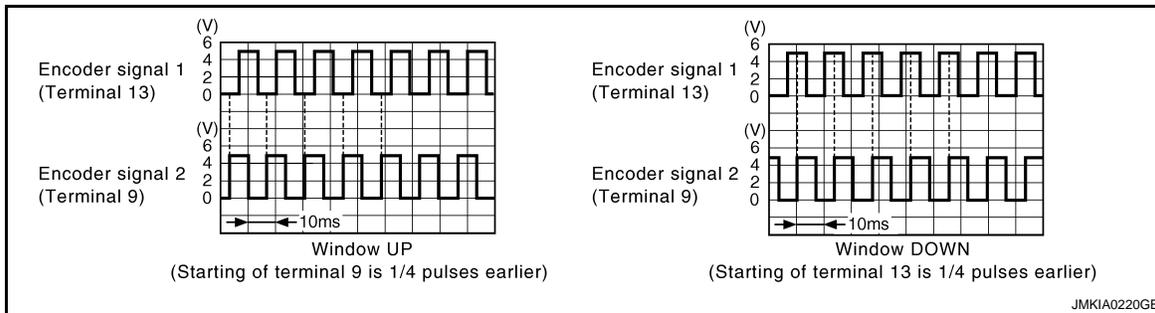
INFOID:000000000993816

Encoder Circuit Check

1. CHECK ENCODER OPERATION

1. Turn ignition switch ON.
2. Check signal between main power window and door lock/unlock switch connector and ground with oscilloscope.

Terminals		Signal (Reference value)
(+)	(-)	
Main power window and door lock/unlock switch connector	Terminal	Ground
D7	9 13	



Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> GO TO 2..

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between front power window motor LH connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
Front power window motor LH connector	Terminal	10
D9	4	

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ENCODER

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the measurement value within the specification?

YES >> GO TO 4..

NO >> GO TO 3..

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
3. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH connector.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	15	D9	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	15		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Front power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes

Is the inspection result normal?

YES >> GO TO 6..

NO >> GO TO 5..

5. CHECK HARNESS CONTINUITY 2

1. Disconnect main power window and door lock/unlock switch.
2. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH connector.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH-connector	Terminal	Continuity
D7	2	D9	6	Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect main power window and door lock/unlock switch.
2. Check continuity between main power window and door lock/unlock switch connector and front power window motor LH connector.

ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7	9	D9	3	Yes
	13		5	

3. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	9	Ground	No
	13		

Is the inspection result normal?

- YES >> Replace front power window motor LH. Refer to [GW-18, "Removal and Installation"](#). After that, Refer to [PWC-79, "DRIVER SIDE : Special Repair Requirement"](#).
 NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:000000000993817

Detects condition of the front power window motor RH operation and transmits to power window and door lock/unlock switch RH as pulse signal.

PASSENGER SIDE : Component Function Check

INFOID:000000000993818

1. CHECK ENCODER OPERATION

Does front door glass RH perform AUTO open/close operation normally when operating power window and door lock/unlock switch RH?

Is the inspection result normal?

- YES >> Encoder operation is OK.
 NO >> Refer to [PWC-87, "PASSENGER SIDE : Diagnosis Procedure"](#).

PASSENGER SIDE : Diagnosis Procedure

INFOID:000000000993819

1. CHECK ENCODER SIGNAL

1. Connect front power window motor RH.
2. Turn ignition switch ON.
3. Check signal between power window and door lock/unlock switch RH connector and ground with oscilloscope.

Terminals		Signal (Reference value)
(+)	(-)	
Power window and door lock/unlock switch RH connector	Terminal	0V ↔↔
D105	12	
	15	

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
 NO >> GO TO 2..

2. CHECK FRONT POWER WINDOW MOTOR RH POWER SUPPLY

1. Turn ignition switch ON.
2. Check voltage between front power window motor RH connector and ground.

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ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Terminal			Voltage (V) (Approx.)
(+)		(-)	
Front power window motor RH connector	Terminal		
D105	4	Ground	10

Is the measurement value within the specification?

YES >> GO TO 4..

NO >> GO TO 3..

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH and front power window motor RH.
3. Check continuity between power window and door lock/unlock switch rh connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	4	D104	4	Yes

4. Check continuity between power window and door lock/unlock switch rh connector and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	4		No

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-74. "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Front power window motor RH connector	Terminal	Ground	Continuity
D104	6		Yes

Is the inspection result normal?

YES >> GO TO 6..

NO >> GO TO 5..

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH.
2. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	3	D104	6	Yes

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-74. "FRONT POWER WINDOW SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

ENCODER

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

6. CHECK HARNESS CONTINUITY 3

1. Disconnect power window and door lock/unlock switch RH.
2. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	12	D104	5	Yes
	15		3	

3. Check continuity between power window and door lock/unlock switch RH connector and front power window motor RH connector.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	12	Ground	No
	15		

Is the inspection result normal?

- YES >> Replace front power window motor RH. Refer to [GW-18. "Removal and Installation"](#). After that, Refer to [PWC-81. "PASSENGER SIDE : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

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DOOR SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOOR SWITCH

Description

INFOID:000000000993820

Detects door open/close condition and transmits the signal to BCM.

Component Function Check

INFOID:000000000993821

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to [PWC-68. "RETAIND PWR : CONSULT-III Function \(BCM - RETAINED PWR\)"](#).

Monitor item	Condition	
DOOR SW-DR	OPEN	: ON
	CLOSE	: OFF
DOOR SW-AS	OPEN	: ON
	CLOSE	: OFF

Is the inspection result normal?

- YES >> Front door switch circuit is OK.
 NO >> Refer to [PWC-90. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000993822

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

Terminals		Door condition	Voltage (V) (Approx.)
(+)	(-)		
BCM connector	Terminal		
M18	32	Front door RH	OPEN : 0
			CLOSE : Battery voltage
	58	Front door LH	OPEN : 0
			CLOSE : Battery voltage

Is the measurement value within the specification?

- YES >> Replace BCM. Refer to [BCS-76. "Removal and Installation"](#).
 NO >> GO TO 2..

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and front door switch.
- Check continuity between BCM connector and front door switch connector.

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18	32	RH: B108	2	Yes
	58	LH: B8		

4. Check continuity between BCM connector ground.

BCM connector	Terminal	Ground	Continuity
M18	32		
	58		

DOOR SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

3. CHECK BCM OUTPUT SIGNAL

1. Connect BCM connector.
2. Check voltage between BCM connector and ground.

Terminal		Voltage (V) (Approx.)
(+)	(-)	
BCM connector	Terminal	Battery voltage
M18	32	
	58	

Is the measurement value within the specification?

- YES >> GO TO 4..
- NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#).

4. CHECK FRONT DOOR SWITCH

Check front door switch.
Refer to [PWC-91, "Component Inspection"](#).

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).
- NO >> Replace front door switch.

Component Inspection

INFOID:000000000993823

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal		Door switch	Continuity
Door switches			
2	Ground part of door switch	Pressed	No
		Released	Yes

Is the inspection result normal?

- YES >> Front door switch is OK.
- NO >> Replace front door switch.

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DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOOR KEY CYLINDER SWITCH

Description

INFOID:000000000993824

Power window main switch detects condition of the door key cylinder and transmits to BCM as the LOCK or UNLOCK signals.

Component Function Check

INFOID:000000000993825

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to [SEC-22. "COMMON ITEM : CONSULT-III Function"](#).

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to [PWC-92. "Diagnosis Procedure"](#).

Diagnosis Procedure

INFOID:000000000993826

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

1. Turn ignition switch ON.
2. Check voltage between main power window and door lock/unlock switch connector and ground.

Terminals		Key position	Voltage (V) (Approx.)	
(+)	(-)			
Main power window and door lock/unlock switch connector	Terminal	Ground	Lock	0
			Neutral / Unlock	5
D7	6		Unlock	0
			Neutral / Lock	5

Is the measurement value within the specification?

YES >> Replace main power window and door lock/unlock switch. After that, Refer to [PWC-73. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

NO >> GO TO 2..

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
3. Check continuity between main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

Main power window and door lock/unlock switch connector	Terminal	Front door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
D7	4	D10	6	Yes
	6		5	

DOOR KEY CYLINDER SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

4. Check continuity between main power window and door lock/unlock switch connector and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	4		
	6		

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

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

Front door lock assembly LH (key cylinder switch) connector	Terminal	Ground	Continuity
D10	4		

Is the inspection result normal?

YES >> GO TO 4..

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to [PWC-93, "Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace front door lock assembly LH (door key cylinder switch). After that, Refer to [PWC-93, "Special Repair Requirement"](#).

Component Inspection

INFOID:000000000993827

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch).

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). After that, Refer to [PWC-93, "Special Repair Requirement"](#).

Special Repair Requirement

INFOID:000000000993828

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#)

Is the inspection result normal?

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DOOR KEY CYLINDER SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

POWER WINDOW SERIAL LINK

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

INFOID:000000000993829

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

- Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH : Component Function Check

INFOID:000000000993830

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to [SEC-22, "COMMON ITEM : CONSULT-III Function"](#).

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to [PWC-95, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"](#).

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000000993831

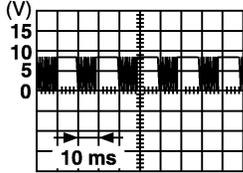
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Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Remove key from ignition switch, and close front door LH and RH.
2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

Terminal		Signal (Reference value)
(+)	(-)	
BCM connector	Terminal	
M18	40	Ground



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Is the inspection result normal?

YES >> Power window serial link is OK.

POWER WINDOW SERIAL LINK

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM and main power window and door lock/unlock switch.
3. Check continuity between BCM connector and main power window and door lock/unlock switch connector.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18	40	D7	14	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M18	40		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58, "Removal and Installation"](#). After that, Refer to [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH : Description

INFOID:000000000993832

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

- Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

- Front door window RH operation signal
- Power window control by key cylinder switch signal
- Retained power operation signal
- Power window lock switch signal

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:000000000993833

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

Check ("CDL LOCK SW ", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to [SEC-22, "COMMON ITEM : CONSULT-III Function"](#).

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to [PWC-96, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure"](#).

FRONT POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000000993834

Power Window Serial Link Check

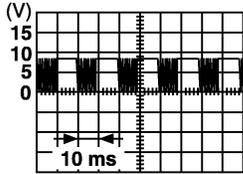
POWER WINDOW SERIAL LINK

[LH&RH FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

1. Remove key from ignition switch, and close the front door LH and RH.
2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

Terminal (+)		Terminal (-)	Signal (Reference value)
BCM connector	Terminal		
M18	40	Ground	 <p style="text-align: right; font-size: small;">PIIA1297E</p>

Is the inspection result normal?

- YES >> Power window serial link is OK.
 NO >> GO TO 2..

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Turn ignition switch OFF
2. Disconnect BCM.
3. Check continuity between BCM connector and power window and door lock/unlock switch RH connector.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M18	40	D105	16	Yes

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M18	40		No

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58. "Removal and Installation"](#). After that, Refer to [PWC-73. "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).
- NO >> Repair or replace harness.

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POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description

INFOID:000000000993835

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

INFOID:000000000993836

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked.

Does power window lock operate?

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-58. "Removal and Installation"](#). After that, [PWC-98. "Special Repair Requirement"](#)
- NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:000000000993837

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Check intermittenrt incident. Refer to [GI-39. "Intermittent Incident"](#).

BCM (BODY CONTROL MODULE)

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000000993838

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
DOOR SW-DR	Front door LH closed	OFF
	Front door LH opened	ON
DOOR SW-AS	Front door RH closed	OFF
	Front door RH opened	ON
KEY CYL LK-SW	Other than front door key cylinder LH LOCK position	OFF
	Front door key cylinder LH LOCK position	ON
KEY CYL UN-SW	Other than front door key cylinder LH UNLOCK position	OFF
	Front door key cylinder LH UNLOCK position	ON
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF

TERMINAL LAYOUT

Refer to [BCS-41, "Terminal Layout"](#).

PHYSICAL VALUES

Refer to [BCS-42, "Physical Values"](#).

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

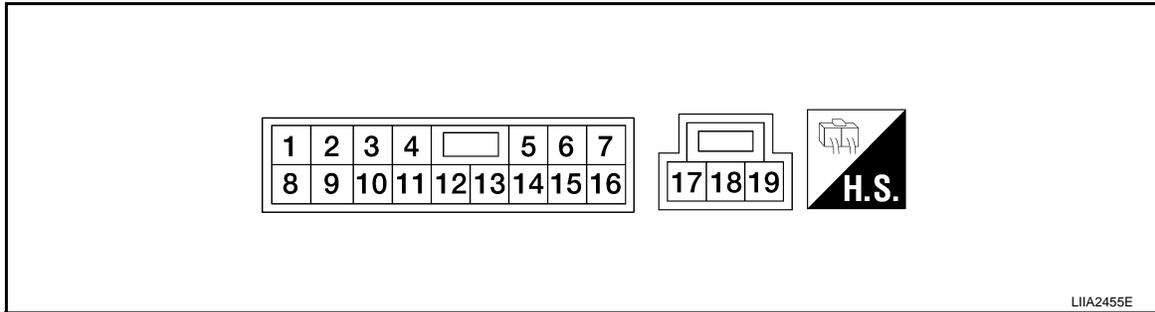
[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000000993839

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

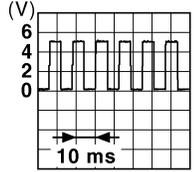
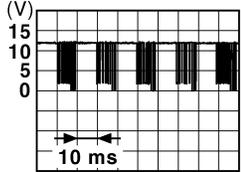
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
1 (G/B)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage
2 (W/B)	Ground	Encoder ground	—	—	0
3 (G/O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage
4 (L/B)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5 (G/R)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage
6 (L/R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (G/W)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage
8 (L/R)	11	Front door power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage
9 (G/W)	2	Encoder pulse signal 2	Input	When power window motor operates.	

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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
10 (L/W)	Ground	RAP signal	Input	IGN SW ON	Battery voltage
				Within 45 second after ignition switch is turned to OFF.	Battery voltage
				When front LH or RH door is opened during retained power operation.	0
11 (L/B)	8	Front door power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage
13 (G/Y)	2	Encoder pulse signal 1	Input	When power window motor operates.	 <small>JMKIA0070GB</small>
14 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 <small>JPMIA0013GB</small>
15 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
17 (B)	Ground	Ground	—	—	0
19 (R/Y)		Battery power supply	Input	—	Battery voltage

Wiring Diagram

INFOID:000000000993840

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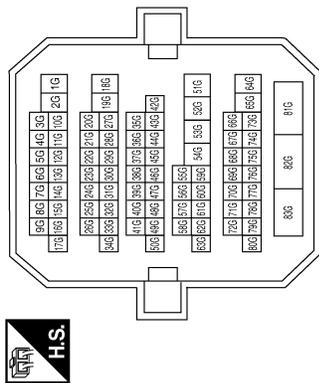
POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

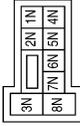
POWER WINDOW SYSTEM/WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM CONNECTORS

Connector No.	M1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



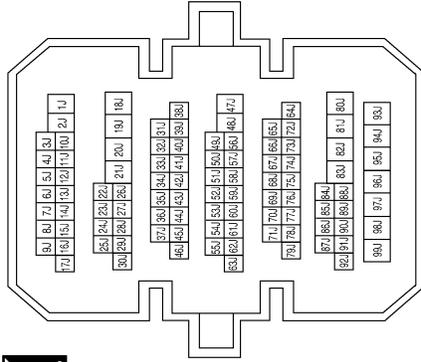
Terminal No.	Color of Wire	Signal Name
82G	W/B	—

Connector No.	M3
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
7N	Y/R	—

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



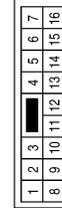
Terminal No.	Color of Wire	Signal Name
17J	SB	—
93J	L/W	—
94J	G/B	—
95J	G/O	—

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/W	—
3	G/R	—
7	G/B	—
10	R/B	—

Connector No.	M11
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
3	G/B	—
5	L/W	—

Terminal No.	Color of Wire	Signal Name
7	R/Y	—
8	B	—
11	G/O	—
14	G/R	—

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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

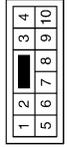
< ECU DIAGNOSIS >

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L
2	R/Y	P/W_POWER_SUPPL_Y_PERM
3	L/W	POWER_WINDOW_POWER_SUPPLY_(RAP)

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



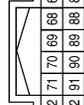
Terminal No.	Color of Wire	Signal Name
4	R/Y	—
5	B	—
8	Y/G	—

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE



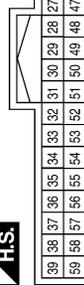
Terminal No.	Color of Wire	Signal Name
10	Y/G	—

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



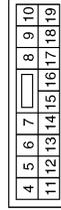
Terminal No.	Color of Wire	Signal Name
81	LG	IGN_ON_LED

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
32	R/B	AS_DOOR_SW
40	Y/G	PW_K-LINE
42	R	S/L_LOCK_LED
58	SB	DR_DOOR_SW

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1
15	Y/L	ACC_LED

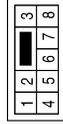
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

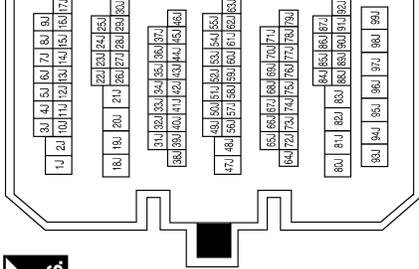
< ECU DIAGNOSIS >

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



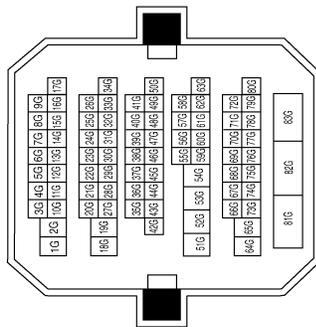
Terminal No.	Color of Wire	Signal Name
2	G/B	—
4	G/O	—
6	B/Y	—
8	L/W	—

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



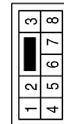
Terminal No.	Color of Wire	Signal Name
17J	SB	—
93J	L/W	—
94J	G/B	—
95J	G/O	—

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



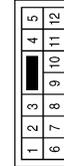
Terminal No.	Color of Wire	Signal Name
82G	W/B	—
83G	—	—

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
4	G/R	—
6	B	—
8	L/W	—

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/W	—
3	G/R	—
7	G/B	—
10	R/B	—

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SB	DOOR SW(DR)

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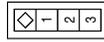
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



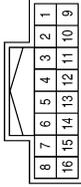
Terminal No.	Color of Wire	Signal Name
2	R/B	DOOR SW (AS)

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
3	G/B	—
5	L/W	—
7	R/Y	—
8	B	—
11	G/O	—
14	V	—

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



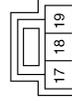
Terminal No.	Color of Wire	Signal Name
10	Y/G	—

Connector No.	D7
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/B	RL_UP
2	W/B	ENCODER_GND
3	G/O	RL_DOWN
4	L/B	LOCK
5	G/R	RR_DOWN
6	L/R	UNLOCK
7	G/W	RR_UP
8	L/R	AS_UP
9	G/W	ENCODER_SIG2
10	L/W	IGN
11	L/B	AS_DOWN
12		
13	G/Y	ENCODER_SIG1
14	Y/G	COM
15	G/R	ENCODER_POWER
16		

Connector No.	D8
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
17	B	GND
18	GR	LOCK
19	R/Y	BAT

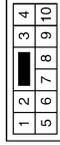
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

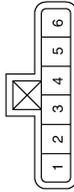
< ECU DIAGNOSIS >

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R/Y	—
5	B	—
8	Y/G	—

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
4	B	GND
5	L/R	DOOR_KEY/C_UNLOCK_SW_
6	L/B	DOOR_KEY/C_LOCK_SW

Connector No.	D9
Connector Name	FRONT POWER WINDOW MOTOR LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	—
2	L/R	—
3	G/W	—
4	G/R	—
5	G/Y	—
6	W/B	—

Terminal No.	Color of Wire	Signal Name
1	—	—
2	—	—
3	W/B	GND
4	G/R	ENCODER POWER
5	—	—
6	—	—
7	—	—
8	L/R	UP
9	L/B	DOWN
10	R/Y	BATT
11	B	GND
12	G/Y	ENCODER SIG1
13	—	—
14	—	—
15	G/W	ENCODER SIG2
16	Y/G	COM

Connector No.	D105
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE



Connector No.	D104
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	—
2	L/R	—
3	—	—
4	—	—
5	—	—
6	—	—

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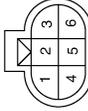
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

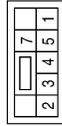
< ECU DIAGNOSIS >

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GRAY



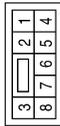
Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Color	WHITE



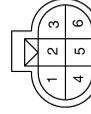
Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/B	UP
3	G/O	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



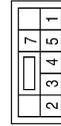
Terminal No.	Color of Wire	Signal Name
2	G/B	—
4	G/O	—
6	B	—
8	L/W	—

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GRAY



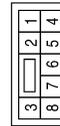
Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D303
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/W	UP
3	G/R	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
4	G/R	—
6	B	—
8	L/W	—

Fail Safe

FAIL-SAFE CONTROL

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

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INFOID:000000000993841

POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors malfunction	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet updated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

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

- Auto-up operation
- Anti-pinch function
- Retained power function

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

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PWC

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS >

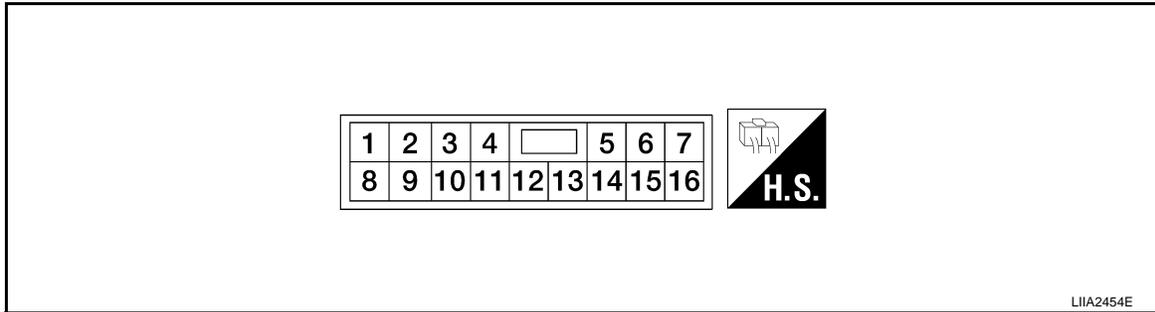
[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Reference Value

INFOID:000000000993842

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

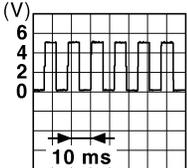
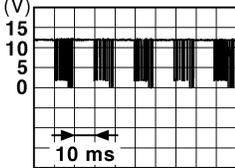
Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
3 (W/B)	Ground	Encoder ground	—	—	0
4 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
8 (L/R)	9	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
9 (L/B)	8	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
10 (R/Y)	Ground	Battery power supply	Input	—	Battery voltage
11 (B)	Ground	Ground	—	—	0
12 (G/Y)	3	Encoder pulse signal 1	Input	When power window motor operates.	

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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Terminal No.		Description		Condition	Voltage [V] (Approx.)
+	-	Signal name	Input/ Output		
15 (G/W)	3	Encoder pulse signal 2	Input	When power window motor operates.	 <p>JMKIA0070GB</p>
16 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	 <p>JPMIA0013GB</p>

Wiring Diagram

INFOID:000000000993843

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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

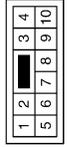
< ECU DIAGNOSIS >

Connector No.	M16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
1	W/B	BAT_POWER_F/L
2	R/Y	P/W_POWER_SUPPL_Y_PERM
3	L/W	POWER_WINDOW_POWER_SUPPLY_(RAP)

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



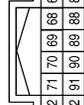
Terminal No.	Color of Wire	Signal Name
4	R/Y	—
5	B	—
8	Y/G	—

Connector No.	M12
Connector Name	WIRE TO WIRE
Connector Color	WHITE



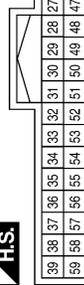
Terminal No.	Color of Wire	Signal Name
10	Y/G	—

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
81	LG	IGN_ON_LED

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
32	R/B	AS_DOOR_SW
40	Y/G	PW_K-LINE
42	R	S/L_LOCK_LED
58	SB	DR_DOOR_SW

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
11	Y/R	BAT_BCM_FUSE
13	B	GND1
15	Y/L	ACC_LED

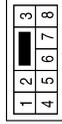
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

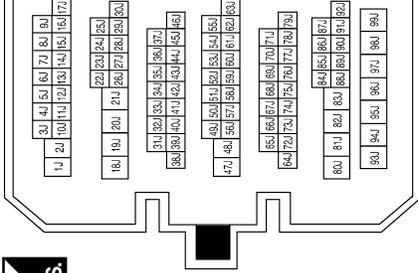
< ECU DIAGNOSIS >

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



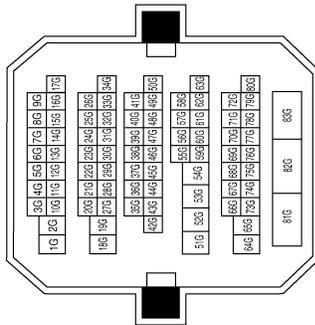
Terminal No.	Color of Wire	Signal Name
2	G/B	—
4	G/O	—
6	B/Y	—
8	L/W	—

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



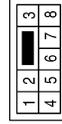
Terminal No.	Color of Wire	Signal Name
17J	SB	—
93J	L/W	—
94J	G/B	—
95J	G/O	—

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE



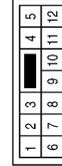
Terminal No.	Color of Wire	Signal Name
82G	W/B	—
83G	—	—

Connector No.	B106
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
4	G/R	—
6	B	—
8	L/W	—

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	BROWN



Terminal No.	Color of Wire	Signal Name
1	L/W	—
3	G/R	—
7	G/B	—
10	R/B	—

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	SB	DOOR SW(DR)

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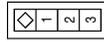
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE



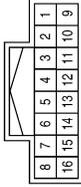
Terminal No.	Color of Wire	Signal Name
2	R/B	DOOR SW (AS)

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
3	G/B	—
5	L/W	—
7	R/Y	—
8	B	—
11	G/O	—
14	V	—

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



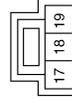
Terminal No.	Color of Wire	Signal Name
10	Y/G	—

Connector No.	D7
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	G/B	RL_UP
2	W/B	ENCODER_GND
3	G/O	RL_DOWN
4	L/B	LOCK
5	G/R	RR_DOWN
6	L/R	UNLOCK
7	G/W	RR_UP
8	L/R	AS_UP
9	G/W	ENCODER_SIG2
10	L/W	IGN
11	L/B	AS_DOWN
12		
13	G/Y	ENCODER_SIG1
14	Y/G	COM
15	G/R	ENCODER_POWER
16		

Connector No.	D8
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
17	B	GND
18	GR	LOCK
19	R/Y	BAT

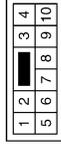
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

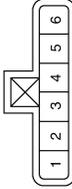
< ECU DIAGNOSIS >

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	R/Y	—
5	B	—
8	Y/G	—

Connector No.	D10
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY



Terminal No.	Color of Wire	Signal Name
4	B	GND
5	L/R	DOOR_KEY/C_UNLOCK_SW_
6	L/B	DOOR_KEY/C_LOCK_SW

Connector No.	D9
Connector Name	FRONT POWER WINDOW MOTOR LH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	—
2	L/R	—
3	G/W	—
4	G/R	—
5	G/Y	—
6	W/B	—

Terminal No.	Color of Wire	Signal Name
1	—	—
2	—	—
3	W/B	GND
4	G/R	ENCODER POWER
5	—	—
6	—	—
7	—	—
8	L/R	UP
9	L/B	DOWN
10	R/Y	BATT
11	B	GND
12	G/Y	ENCODER SIG1
13	—	—
14	—	—
15	G/W	ENCODER SIG2
16	Y/G	COM

Connector No.	D105
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE



Connector No.	D104
Connector Name	(WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM) FRONT POWER WINDOW MOTOR RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/B	—
2	L/R	—
3	—	—
4	—	—
5	—	—
6	—	—

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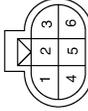
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

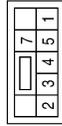
< ECU DIAGNOSIS >

Connector No.	D204
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GRAY



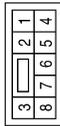
Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D203
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Color	WHITE



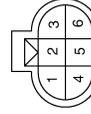
Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/B	UP
3	G/O	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE



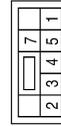
Terminal No.	Color of Wire	Signal Name
2	G/B	—
4	G/O	—
6	B	—
8	L/W	—

Connector No.	D304
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GRAY



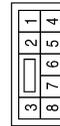
Terminal No.	Color of Wire	Signal Name
1	L/R	UP
2	—	—
3	L/B	DOWN
4	—	—
5	—	—
6	—	—

Connector No.	D303
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L/W	IGN
2	G/W	UP
3	G/R	DOWN
4	L/B	DOWN
5	L/R	UP
6	—	—
7	B	GND
8	—	—

Connector No.	D301
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	G/W	—
4	G/R	—
6	B	—
8	L/W	—

Fail Safe

FAIL-SAFE CONTROL

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

ALKIA0193GB

INFOID:000000000993844

FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors malfunction	When both pulse signals have not been detected for more than the specified value during glass open/close operation.
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.
Malfunction of not yet updated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).

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

- Auto-up operation
- Anti-pinch function
- Retained power function

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

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SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:000000000993845

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.
Refer to [BCS-33, "Diagnosis Procedure"](#).

Is the inspection result normal?

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

2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window switch main power supply and ground circuit.
Refer to [PWC-69, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

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

3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH SERIAL CIRCUIT

Check main power window and door lock/unlock switch serial circuit.
Refer to [PWC-69, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

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

4. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.
Refer to [PWC-69, "POWER WINDOW MAIN SWITCH : Component Function Check"](#).

Is the inspection result normal?

- YES >> Inspection end.
- NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993846

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to [PWC-78, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993847

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-73, "FRONT POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH SERIAL LINK CIRCUIT

Check power window and door lock/unlock switch RH serial link circuit.

Refer to [PWC-96, "FRONT POWER WINDOW SWITCH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace the malfunctioning parts.

3. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to [PWC-79, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993848

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to [PWC-75, "REAR POWER WINDOW SWITCH : 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-81, "REAR LH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993849

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to [PWC-75, "REAR POWER WINDOW SWITCH : 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-83, "REAR RH : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:000000000993850

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-85, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE)
< SYMPTOM DIAGNOSIS > **[LH&RH FRONT WINDOW ANTI-PINCH]**

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

Diagnosis Procedure

INFOID:000000000993851

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- A foreign material adheres to window glass or glass run rubber.
- Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3..

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-87, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:000000000993852

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to [PWC-85, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:000000000993853

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to [PWC-87, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:000000000993854

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to [PWC-90, "Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

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DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:000000000993855

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to [PWC-62, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> GO TO 2..

NO >> Repair or replace the malfunctioning parts.

2. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check front door lock assembly LH (key cylinder switch).

Refer to [PWC-92, "Component Function Check"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000000993856

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to [DLK-89, "Component Function Check"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

NO >> Replace BCM. Refer to [BCS-76, "Removal and Installation"](#).

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:000000000993857

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch.

Refer to [PWC-58, "Removal and Installation"](#). After that, [PWC-73, "POWER WINDOW MAIN SWITCH : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to [GI-39, "Intermittent Incident"](#).

PRECAUTION

PRECAUTIONS

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

INFOID:000000000993858

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 and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SRS section.
- Do not 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.

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ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

INFOID:000000000993859

BASIC INSPECTION

1.INSPECTION START

1. Check the service history.
2. Check the following parts.
 - Fuse/circuit breaker blown.
 - Poor connection, open or short circuit of harness connector.
 - Battery voltage.

Is the inspection result normal?

- YES >> Inspection end.
NO >> Repair or replace the malfunctioning parts.

POWER WINDOW MAIN SWITCH

< ON-VEHICLE REPAIR >

[LH&RH FRONT WINDOW ANTI-PINCH]

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:000000000993860

REMOVAL

1. Remove the power window main switch finisher (2).
Refer to [INT-11, "Removal and Installation"](#).
2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.

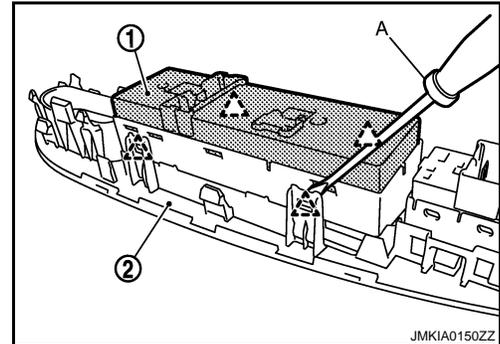
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CAUTION:

Do not fold the pawl of power window main switch finisher.

NOTE:

The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).



INSTALLATION

Install in the reverse order of removal.

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