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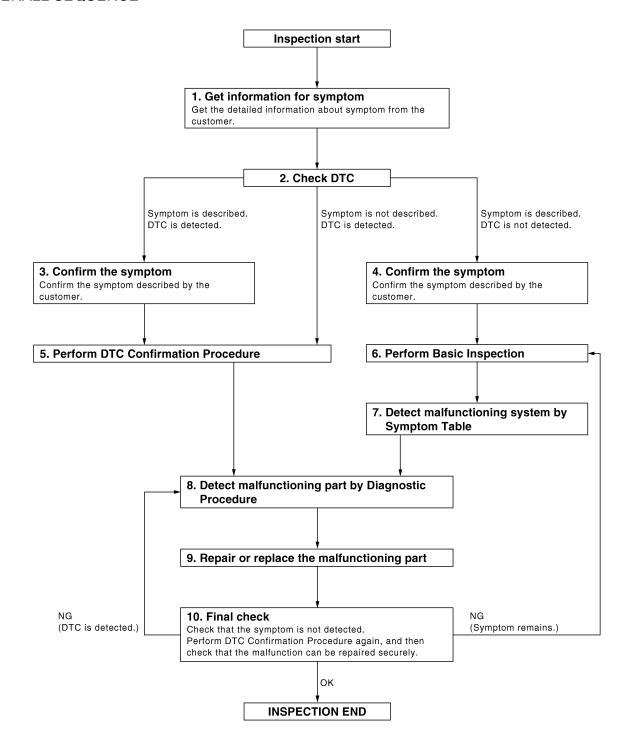
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-COUPE]

${f 1}$. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

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

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described. DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 5

f 4 . CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 6

$oldsymbol{5}$. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to XX-XX, "*****" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 8

NO >> Refer to XX-XX. "*****".

6. PERFORM BASIC INSPECTION

Perform PWC-52, "Work Flow".

Inspection End>>GO TO 7

/. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 8

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-COUPE]

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

<u>Is malfunctioning part detected?</u>

YES >> GO TO 9

NO >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

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

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8

YES (Symptom remains)>>GO TO 6

NO >> Inspection End.

[LH ONLY ANTI-PINCH-COUPE]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000001838170

Initial setting is necessary when battery terminal is diconnected.

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:0000000001838171

INITIALIZATION PROCEDURE

- 1. Disconnect battery negative terminal or main power window and door lock/unlock switch. 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 4 seconds or more.
- 5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 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-151, "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
- 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:0000000001838172

Initial setting is necessary when replacing main power window and door lock/unlock 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:0000000001838173

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or main power window and door lock/unlock switch. Reconnect it after a minute or more.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-COUPE]

- 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 4 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 main power window and door lock/unlock switch while lowering.

CAUTION:

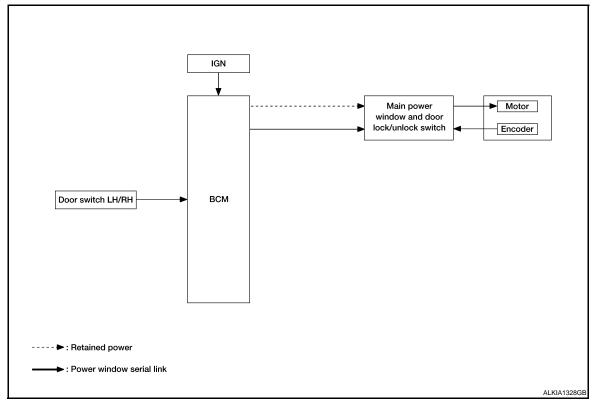
- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-151, "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.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

INFOID:0000000001716927

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK 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	
Encoder	Encoder pulse signal			
Main power window and door lock/unlock switch	Power window motor LH UP/DOWN signal	Power window control	Power window motor	
Power window and door lock/unlock switch RH	Power window motor RH UP/DOWN signal		rower window motor	
BCM	RAP signal			

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.
- Power window switches can open/close the corresponding windows.

POWER WINDOW AUTO-OPERATION (LH)

 AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch turns to AUTO.

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

- 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

- 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 (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)

NŎTE:

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

Component Parts Location

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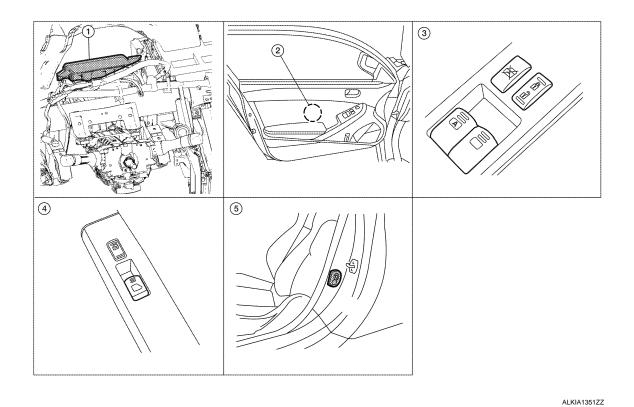
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- I. BCM M16, M17, M18, M19 (view with instrument panel removed)
- 4. Power window and door lock/unlock 5. switch RH D105
- Power window motor LH D9, RH D104
- Door switch LH B8, RH B108

 Main power window and door lock/ unlock switch D7

Component Description

INFOID:0000000001716929

POWER WINDOW LH ANTI-PINCH SYSTEM

Component	Function	
BCM	Supplies power supply to power window switch.Controls retained power.	
Main power window and door lock/unlock switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window LH. 	
Power window and door lock/unlock switch RH	Controls power window motor RH.	
Power window motor LH	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.	
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.	
Door switch LH or RH	Detects door open/close condition and transmits to BCM.	

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[LH ONLY ANTI-PINCH-COUPE]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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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-85, "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		
System			DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
RAP system	RETAINED PWR		×	

RETAINED PWR

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

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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.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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

Main Power Window And Door Lock/unlock Switch

${f 1}$. 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-17, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

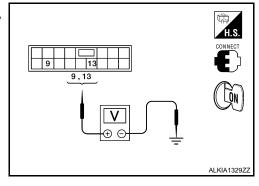
Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON

Check voltage between main power window and door lock/ unlock switch connectors and ground.

Ter			
(+)		Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	(-)	(Approx.)
	9	Ground	Battery voltage
D1	13	Cround	Dattery Voltage



Is the measurement value within the specification?

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

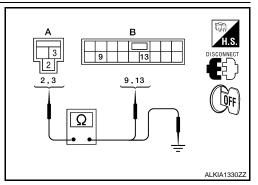
2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- Disconnect BCM and main power window and door lock/unlock 2. switch.
- Check continuity between BCM connector (A) and main power window and door lock/unlock switch connector (B).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	13	Yes
WITO (A)	2	D1 (D)	9	163

Check continuity between BCM connector and ground.



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BCM connector	Terminal		Continuity
M16 (A)	3	Ground	No
MT6 (A)	2		INO

Is the inspection result normal?

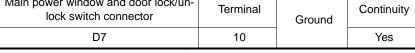
>> GO TO 4 YES

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

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

Main power window and door lock/un- lock switch connector	Terminal	Ground	Continuity
D7	10		Yes



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-51, "Removal and Installation".

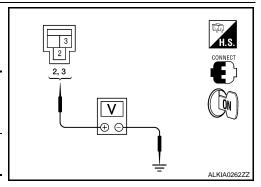
After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

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

Term	V 16 0.0			
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,	
M16	3	Ground	Battery voltage	
	2	Giodila	Battery voltage	



Is the measurement value within the specification?

YFS >> GO TO 5

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

${f 5}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-18, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace main power window and door lock/unlock switch. Refer to PWC-51, "Removal and Instal-NO lation". After that, refer to PWC-19, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

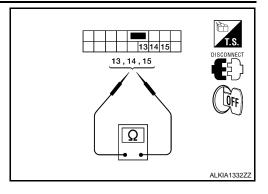
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

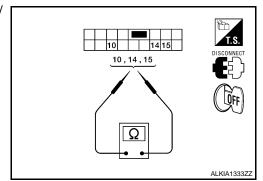
Check main power window and door lock/unlock switch.

Terminal		Main power window switch	Continuity	
13	15	RH	UP	
14	15	RH	NEUTRAL	Yes
13	14	RH	DOWN	



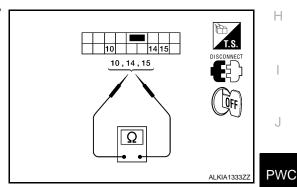
Check continuity between main power window and door lock/ unlock switch (power window lock switch) (Lock operation).

Terr	minal	Main power window and door lock/unlock switch condition		Continuity
14		RH	UP	
14	10	RH	NEUTRAL	No
15	10	KII	NEOTIVAL	INO
15		RH	DOWN	



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

Terr	ninal	Main power window and door lock/un- lock switch condition		Continuity
14		RH	UP	
14	10	RH	NEUTRAL	Yes
15	10	KΠ	NEUTRAL	res
15		RH	DOWN	



Is the inspection result normal?

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

>> Replace main power window and door lock/unlock switch. Refer to PWC-51, "Removal and Instal-NO lation". After that, refer to PWC-120, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000001716936

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-112, "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-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-112, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-127, "DRIVER SIDE: Component Function Check"

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PASSENGER SIDE

PASSENGER SIDE : Description

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

PASSENGER SIDE: Component Function Check

INFOID:0000000001716938

Power Window And Door Lock/unlock Switch RH

${f 1}$. CHECK POWER WINDOW MOTOR RH FUNCTION

Does power window motor RH operate with power window and door lock/unlock switch RH operation? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-20, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

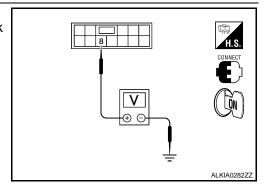
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Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

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.

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



Is the measurement value within the specification?

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

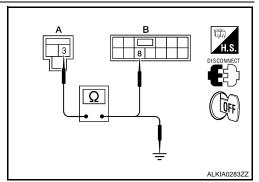
2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM and power window and door lock/unlock switch RH.
- 3. Check continuity between BCM connector (A) and power window and door lock/unlock switch RH connector (B).

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

4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Cround	Continuity
M16 (A)	3	Ground	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)

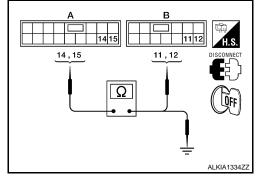
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window and door lock/ unlock switch RH connector (B).

Main power win- dow and door lock/unlock switch connector	Terminal	Power window and door lock/un- lock switch RH connector	Terminal	Continuity
D7 (A)	15	D105 (B)	11	Yes
D7 (A)	14	D 103 (B)	12	165



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

Main power window and door lock/ unlock switch connector	Terminal		Continuity
D7 (A)	14	Ground	No
Di (A)	15		110

Is the inspection result normal?

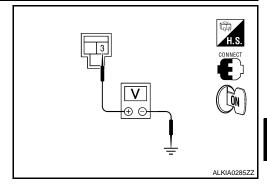
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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.

BCM connector Terminal (-)	Terminal				
BCM connector Terminal	(+)	Voltage (V) (Approx.)			
1440	BCM connector	,			
M16 3 Ground Ba	M16	Battery voltage			



Is the measurement value within the specification?

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-21, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-51, "Removal and Installation".

PASSENGER SIDE: Component Inspection

COMPONENT INSPECTION

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

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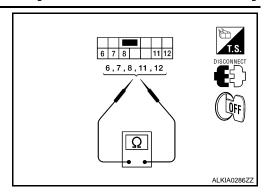
POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

Check power window and door lock/unlock switch RH.

Terr	ninal	Power window switch condition	Continuity
8	6	UP	
12	7	OF .	
12	7	NEUTRAL	Yes
6	11	NEOTIVAL	163
8	7	DOWN	
6	11	DOWN	



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-51, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

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

DRIVER SIDE : Component Function Check

INFOID:0000000001716945

1. CHECK POWER WINDOW MOTOR LH CIRCUIT

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

YES >> Power window motor LH is OK.

NO >> Refer to PWC-23, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

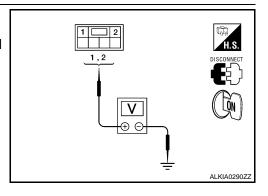
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Power Window Motor LH Circuit Check

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

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

Terminal					
(+)	(+)		Main power win- dow and door	Voltage (V)	
Power window motor LH con- nector	Terminal	(–)	lock/unlock switch condition	(Approx.)	
	2		UP	Battery voltage	
D9		Ground	DOWN	0	
D9	1	Giouria	UP	0	
	'		DOWN	Battery voltage	



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Is the measurement value within the specification?

YES >> GO TO 2

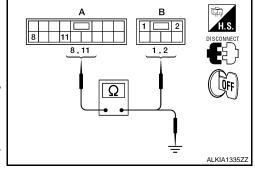
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-51, "Removal and Installation". After that, refer to PWC-19, "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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
Di (A)	11	D5 (B)	1	103



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

< COMPONENT DIAGNOSIS >

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

$3.\,$ CHECK POWER WINDOW MOTOR LH

Check power window motor LH.

Refer to PWC-124, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor LH. Refer to <u>GW-19, "Removal and Installation"</u>. After that, refer to <u>PWC-24, "DRIVER SIDE: Special Repair Requirement"</u>.

DRIVER SIDE: Component Inspection

INFOID:0000000001716947

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR LH

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

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

Is the inspection result normal?

YES >> Power window motor LH is OK.

NO >> Replace power window motor LH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-24</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Special Repair Requirement

INFOID:0000000001716948

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-112, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-27, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE: Description

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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:0000000001716950

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCIUT

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

Is the inspection result normal?

YES

>> Power window motor RH is OK.

NO >> Refer to PWC-25, "PASSENGER SIDE: Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

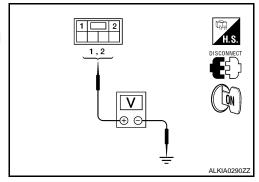
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Power Window Motor RH Circuit Check

${f 1}$. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

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

Terminal			B		
(+)			Power window motor RH con-	Voltage (V)	
Power window mo- tor RH connector	Terminal	(–)	dition	(Approx.)	
	1 2	1	UP	Battery voltage	
D104		Ground	DOWN	0	
D104		2	Giodila	UP	0
2			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-51, "Removal and Installation".

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and power window motor RH connector (B).

Power window and door lock/unlock-switch RH connector	Terminal	Power window motor RH connector	Terminal	Continuity
D105 (A)	6	D104 (B)	1	Yes
D103 (A)	7	D104 (B)	2	163

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Check continuity between power window and door lock/unlock switch connector (A) and ground.

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

INFOID:0000000001716952

Power window and door lock/ unlock switch RH connector	Terminal		Continuity
D105 (A)	6	Ground	No
D103 (A)	7		INO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR RH

Check power window motor RH.

Refer to PWC-26, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor RH. Refer to <u>GW-19</u>, "Removal and Installation".

PASSENGER SIDE: Component Inspection

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR RH

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

Terminal		Motor condition
(+)	(–)	Wotor condition
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace power window motor RH. Refer to GW-19, "Removal and Installation".

ENCODER

DRIVER SIDE

INFOID:0000000001716961

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DRIVER SIDE : Description

Detects condition of the 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:0000000001716962

1. CHECK ENCODER OPERATION

Does 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-127, "DRIVER SIDE : Diagnosis Procedure"

DRIVER SIDE: Diagnosis Procedure

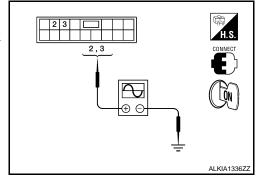
INFOID:0000000001716963

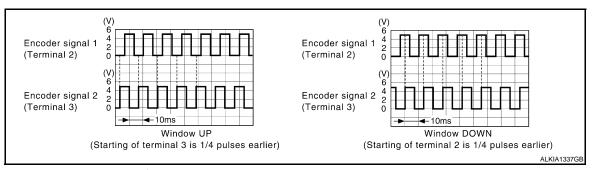
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Connect 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.

(+)				
Main power window and door lock/unlock switch connector	and door lock/unlock switch Terminal		Signal (Reference value)	
D7	2	Ground	Refer to following signal	
	3	Giodila	Refer to following signal	





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2

2. CHECK POWER WINDOW MOTOR LH POWER SUPPLY

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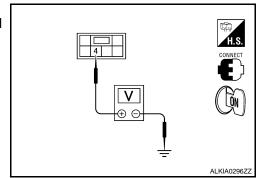
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< COMPONENT DIAGNOSIS >

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

Term			
(+)		Voltage (V)	
Power window motor LH con- nector	lerminal		(Approx.)
D9	4	Ground	10



Is the measurement value within the specification?

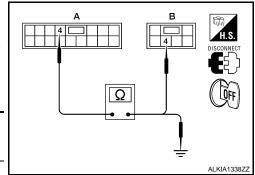
YES >> GO TO 4 NO >> GO TO 3

3. CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.

- 2. Disconnect main power window and door lock/unlock switch and power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window motor LH connector	Terminal	Continuity
D7 (A)	4	D9 (B)	4	Yes



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

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	4		No

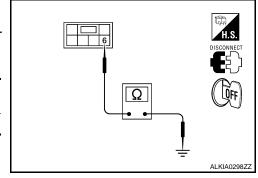
Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-51</u>, "Removal and Installation". After that, refer to <u>PWC-29</u>, "DRIVER SIDE: Special Repair Requirement".
- NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes



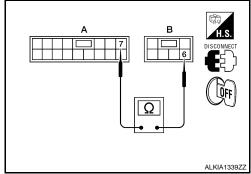
Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	7	D9 (B)	6	Yes



Is the inspection result normal?

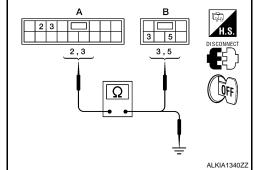
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-51, "Removal and Installation". After that, refer to PWC-29, "DRIVER SIDE": Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window motor LH con- nector	Terminal	Continuity
D7 (A)	3	D9 (B)	3	Yes
DT (A)	2	D9 (B)	5	163



Check continuity between main power window and door lock/ unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	2	Ground	No
Dr (A)	3		140

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Is the inspection result normal?

YES >> Replace power window motor LH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-24</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

DRIVER SIDE : Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-11</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOOR SWITCH

Description INFOID:0000000001716965

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

Component Function Check

INFOID:0000000001716966

1. CHECK DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-16, "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 >> Door switch circuit is OK.

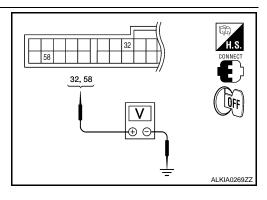
>> Refer to PWC-30, "Diagnosis Procedure". NO

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

Terminals					
(+)			Door o	condition	Voltage (V)
BCM connector	Terminal	(–)			(Approx.)
	32 58		RH	OPEN	0
M18		Ground	IXII	CLOSE	Battery voltage
IVITO		Ground	LH	OPEN	0
			LIT	CLOSE	Battery voltage



INFOID:0000000001716967

Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-88, "Removal and Installation".

>> GO TO 2 NO

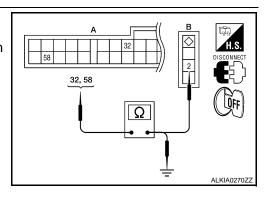
2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect BCM and door switch.
- Check continuity between BCM connector (A) and door switch connector (B).

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
W10 (A)	58	LH: B8 (B)	2	103

Check continuity between BCM connector (A) and ground.



< COMPONENT DIAGNOSIS >

BCM connector	Terminal		Continuity
M18	32	Ground	No
	58		NO

Is the inspection result normal?

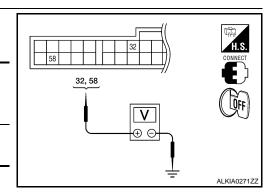
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

	V 14 0.0			
(+)		(–)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		
M18	32	Ground	Battery voltage	
14110	58	Giodila	Battery Voltage	



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

4. CHECK DOOR SWITCH

Check front door switch.

Refer to PWC-31, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace door switch.

Component Inspection

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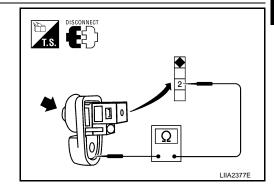
1. CHECK DOOR SWITCH

Check front door switches.

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

Is the inspection result normal?

YES >> Door switch is OK.
NO >> Replace door switch.



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POWER WINDOW LOCK SWITCH

[LH ONLY ANTI-PINCH-COUPE]

POWER WINDOW LOCK SWITCH

Description INFOID:000000001716969

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:0000000001716970

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 <u>PWC-51</u>, "Removal and Installation". After that, <u>PWC-11</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:0000000001716971

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-11</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

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

TERMINAL LAYOUT

Refer to BCS-45, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-45, "Physical Values".

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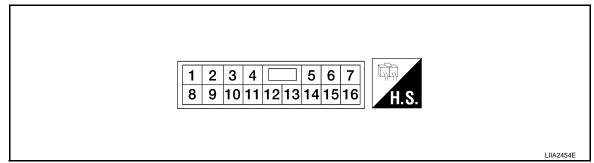
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POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT

< ECU DIAGNOSIS >



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No. (Wire color)		Description		Condition	Voltage [V]	
+	_	Signal name	Input/ Output	Gondinon	(Approx.)	
2 (G/Y)	7	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
3 (G/W)	7	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
4 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	
7 (W/B)	Ground	Encoder ground	_	_	0	
8 (L/R)	11	Power window motor LH UP signal	Output	When LH switch in power window main switch is operated UP.	Battery voltage	
9 (R/Y)	Ground	Battery power supply	Input	_	Battery voltage	
10 (B)	Ground	Ground	_	_	0	
11 (L/B)	8	Power window motor LH DOWN signal	Output	When LH switch in power window main switch is operated DOWN.	Battery voltage	

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

Terminal No. (Wire color)		Description		Condition	Voltage [V]
+	_	Signal name	Input/ Output	Condition	(Approx.)
13 (L/W) Grou		ound RAP signal	Input	IGN SW ON	Battery voltage
	Ground			Within 45 second after ignition switch is turned to OFF.	Battery voltage
	J. Gara			When driver side or passenger side door is opened during retained power operation.	0
14 (R/B)	15	Power window motor RH UP signal	Output	When RH switch in power window main switch is operated UP.	Battery voltage
15 (R/W)	14	Power window motor RH DOWN signal	Output	When RH switch in power window main switch is operated DOWN.	Battery voltage

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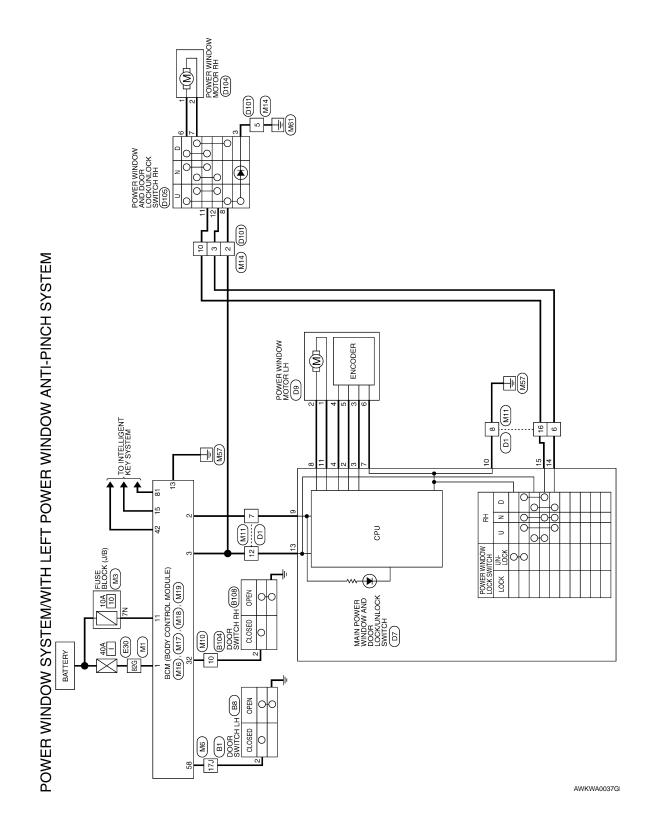
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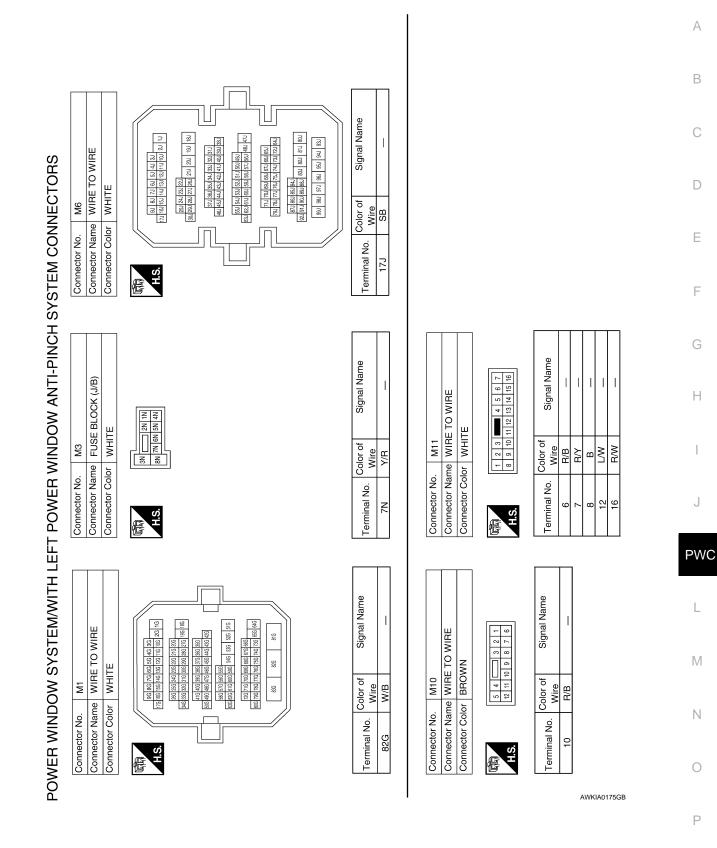
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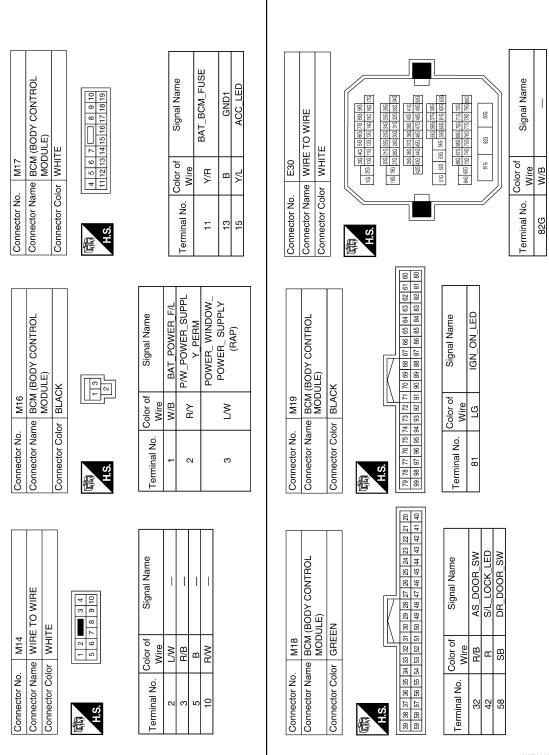
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Wiring Diagram

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		А
Signal Name	Signal Name — — — — — — — — — — — — — — — — — — —	В
B104 WIRE TO WIR BROWN	Sign	С
	0. Color of Wire R/B R/Y R/W	D
Connector No. Connector Color Connector Color Terminal No. To Connector Color Terminal No. To Connector No. To Connector No.	Terminal No. 6 6 7 7 7 12 12 16 16	Е
		F
Signal Name DOOR SW(DR)	1	G
Signature Dood	A STATE OF THE STA	Н
No. B8 Name DOOR: Color of WHITE SB SB SB	1	I
Connector No. B8 Connector Name DOOR SWITCH LH Connector Color WHITE Terminal No. Wire 2 SB DOOR SW	Connector No. Connector Name Connector Color	J
		PWC
WIRE VIRE State State	Signal Name DOOR SW (AS)	L
WINE TO WIRE WHITE WHITE	B108 DOOR SWIT WHITE Ior of Single S	M
Name WH Name W Name W Name W Name Name	No. B108 Name DOO Color WHI	Ν
Connector No. B1	Connector No. B108 Connector Name DOOR SWITCH RH Connector Color WHITE H.S. Color of 3 3 Terminal No. Wire Signal Ne 2 R/B DOOR SW	0
	AWKIA0176GB	
		Р

AWKIA0177GB

Dior Signal Name Signal	No. D9 Name POWER WINDOW MOTOR LH	Color WHITE		["	F C	0000			Color of	No. Wire Signal Name	L/B —	L/R	G/W —	G/R		W/B			r Name POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT POWER WINDOW	ANTI-PINCH SYSTEM)	Color WHILE	1 2	No. Color of Signal Name	GR	GB/B UNLOCK				L/B DOWN	L/R UP	L/W IGN	1		NWOO NAME
D7	Connector No. Connector Name	Connector Color			ATT TO	H.S.			- F	l erminal i	-	2	3	4	5	ç		Connector	Connector Name	C	Connector	品.	Terminal No	-	2	က	4	2	9	7	80	6	10	7
D7	Signal Name	ENCODER_SIG1	ENCODER_SIG2	ENCODER_POWER	LOCK	UNLOCK	ENCODER_GND	DR_UP	BAT	GND	DR_DOWN		IGN	AS-UP	AS DOWN				A WINDOW A RH (WITH LEFT R WINDOW INCH SYSTEM)			11	Signal Name	1	_	1	I		ı					
D7	Color of Wire	G/Y	G/W	G/R	G/R	GR/R	M/B	Z,	R/Υ	В	L/B	-	Ŋ	R/B	B/W	1	1 1		ne POWEI MOTOI POWE ANTI-P	_		1	Color of Wire	L/B	L/R	I	ı	I						
MAIN POWER WIND SWITCH		2	3	4	5	9	7	8	6	10	11	12	13	14	15	16		Connector No.	Connector Nan	Connector Cold		品S.H		-	2	3	4	5	9					
	INDOW	_EFT	TEM			9	3 4 5 6 7	9 10 11 12 13 14 15 16	6	10	11	12	13	14	15	9,			TO WIRE		6 8 2 9		Signal Name						9					

Fail Safe INFOID:0000000001716981

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.

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

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 mal- function	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 up- dated 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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NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH [LH ONLY ANTI-PINCH-COUPE]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH**

Diagnosis Procedure

INFOID:0000000001716986

${f 1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-36, "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-17, "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-17, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

[LH ONLY ANTI-PINCH-COUPE]

< SYMPTOM DIAGNOSIS > DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000001716987 1. CHECK POWER WINDOW MOTOR LH В Check power window motor LH. Refer to PWC-23, "DRIVER SIDE: Component Function Check". C Is the inspection result normal? YES >> Inspection End. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO D Е F Н J **PWC** L M

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PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001716988

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

Check power window and door lock/unlock switch RH.

Refer to PWC-20, "PASSENGER SIDE: 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 power window motor RH circuit.

Refer to PWC-25, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH ONLY ANTI-PINCH-COUPE]

< SYMPTOM DIAGNOSIS >

Diagnosis Procedure

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

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "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-17, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001716992

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-19, "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-17, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

INFOID:0000000001716993

Diagnosis Procedure

1. CHECK DOOR SWITCH

Check door switch.

Refer to PWC-30, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-COUPE]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000001716994

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

Replace main power window and door lock/unlock switch.

Refer to <u>PWC-51</u>, "Removal and Installation". After that, <u>PWC-19</u>, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PRECAUTION

PRECAUTIONS

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

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 SR 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 SR 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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PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH ONLY ANTI-PINCH-COUPE]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

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.

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

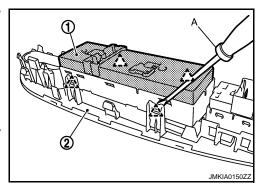
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not bend the pawl of power window main switch finisher. NOTE:

The same procedure is also performed for passenger side power window switch.



INSTALLATION

Installation is in the reverse order of removal.

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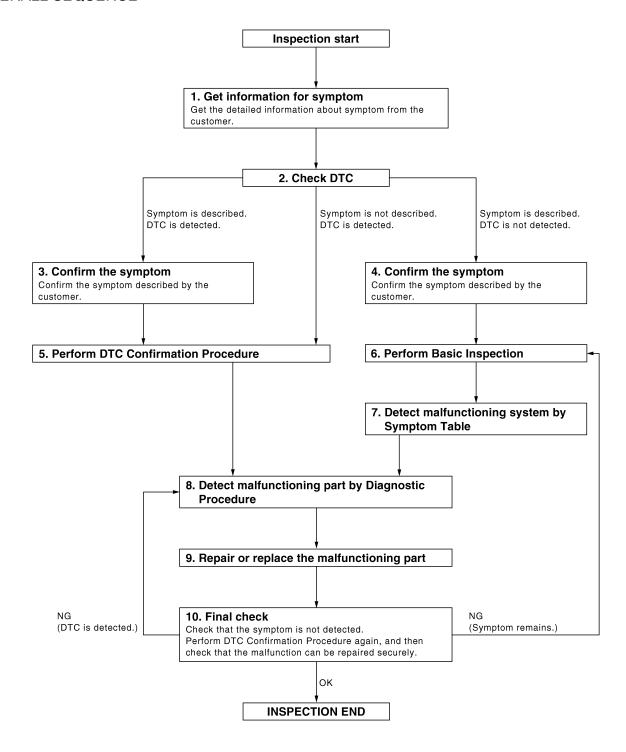
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-SEDAN]

${f 1}$. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

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

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described. DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 5

f 4 . CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 6

$oldsymbol{5}$. PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to BCS-83, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 8

NO >> Refer to GI-42, "Intermittent Incident".

$oldsymbol{6}$. PERFORM BASIC INSPECTION

Perform PWC-52, "Work Flow".

Inspection End>>GO TO 7

/. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 8

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-SEDAN]

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

<u>Is malfunctioning part detected?</u>

YES >> GO TO 9

NO >> Check voltage of related BCM terminals using CONSULT-III.

$oldsymbol{9}.$ REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

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

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8

YES (Symptom remains)>>GO TO 6

NO >> Inspection End.

[LH ONLY ANTI-PINCH-SEDAN]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000003220361

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:0000000003220362

INITIALIZATION PROCEDURE

- Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.
- 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 4 seconds or more.
- 5. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 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-95, "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
- 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:0000000003220363

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:0000000003220364

INITIALIZATION PROCEDURE

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

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH ONLY ANTI-PINCH-SEDAN]

- Turn ignition switch ON.
- Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 4 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:

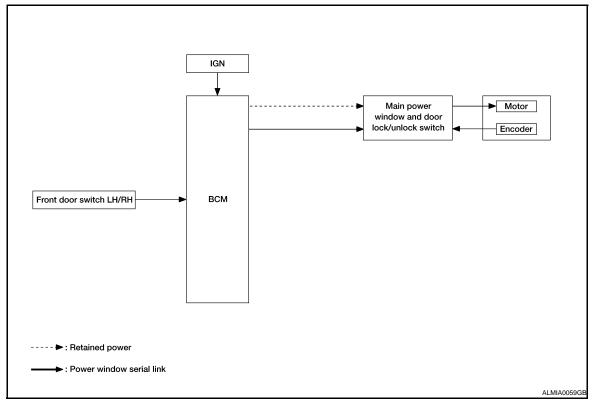
- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-95, "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.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

INFOID:0000000003220366

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK 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		
Encoder	Encoder pulse signal				
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal		Front power window motor		
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control	From power window motor		
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)

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

- 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

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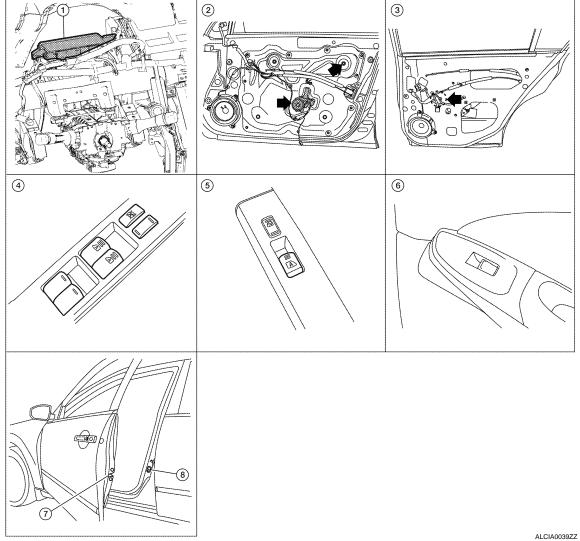
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- BCM M16, M17, M18, M19
- Main power window and door lock/ unlock switch D7, D8
- Front door lock assembly LH
- Front power window motor LH D9, RH D104
- Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- Rear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

Component Description

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM

Component	Function
BCM	Supplies power supply to power window switch.Controls retained power.
Main power window and door lock/unlock switch	 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	Controls front power window motor RH.
Rear power window switch	Controls rear power window motors LH and RH.

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

Component	Function
Front power window motor LH	 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 switch LH or RH	Detects door open/close condition and transmits to BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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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-85, "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							
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST					
BCM	BCM	×							
RAP system	RETAINED PWR		×						

RETAINED PWR

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

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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.

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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

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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? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-62, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

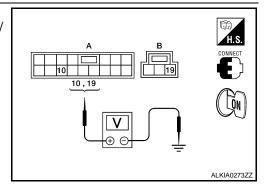
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Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

${f 1}$. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/ unlock switch connectors (A and B) and ground.

Ter	minal						
(+)	(+)						
Main power window and door lock/unlock switch connector	Terminal	(–)	Voltage (V) (Approx.)				
D7 (A)	10 Ground		Battery voltage				
D8 (B)	19	Giodila	Dattery Voltage				



Is the measurement value within the specification?

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

$2.\,$ CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
WHO (A)	2	D8 (C)	19	163

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4. Check continuity between BCM connector and ground.

< COMPONENT DIAGNOSIS >

BCM connector	Terminal		Continuity
M16 (A)	3	Ground	No
WTO (A)	2		INO

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

Main power window and door lock/un- lock 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-108, "Removal and Installation".

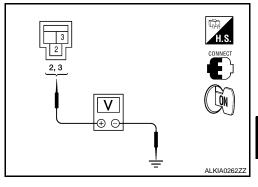
After that, refer to PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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.

Term	V 16 0.0		
(+)			Voltage (V) (Approx.)
BCM connector	Terminal	(-)	, , ,
M16	3	Ground	Battery voltage
IVITO	2	Giouna	Ballery Vollage

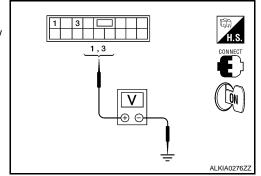


Is the measurement value within the specification?

- 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 <u>BCS-88</u>, "Removal and Installation".

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

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



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

Is the measurement value within the specification?

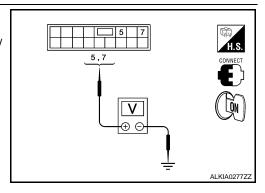
YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and <a href="Installation". After that, refer to PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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

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

Te	Terminal							
(+)			Window	Voltage (V)				
Main power window and door lock/unlock switch connector	Terminal	(–)	condition	(Approx.)				
	7	7	7	7	7		UP	Battery voltage
D7		Ground	DOWN	0				
D1		Giodila	UP	0				
3		DOWN	Battery voltage					



Is the measurement value within the specification?

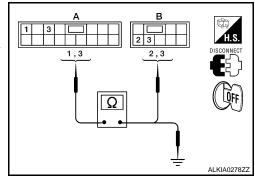
YES >> GO TO 8

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and <a href="Installation". After that, refer to PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

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

- Turn ignition switch OFF.
- 2. 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 (A) and rear power window switch LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7 (A)	1	D203 (B)	2	Yes
DT (A)	3	D203 (B)	3	162



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

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	1		No
DI (A)	3		NO

Is the inspection result normal?

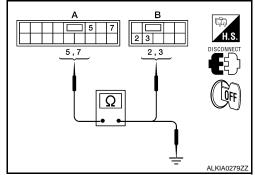
YES >> GO TO 9

NO >> Repair or replace harness.

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

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch RH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7 (A)	5	D303 (B)	3	Yes
Dr (A)	7	D303 (B)	2	165



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	01	Continuity
D7 (A)	5	Ground	No
	'		

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-65, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to <u>GI-42, "Intermittent Incident"</u>. NO >> Replace main power window and door lock/unlock switch. Refe

>> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and <a href="Installation". After that, refer to PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair <a href="Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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

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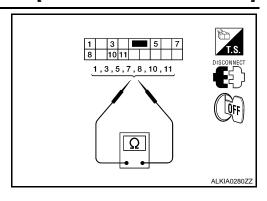
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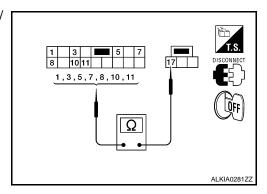
1. Check main power window and door lock/unlock switch.

Terr	minal	Main power window switch	Continuity	
10	1	Rear LH		
10	7	Rear RH	UP	
10	8	Front RH		
1	3	Rear LH		
5	7	Rear RH	NEUTRAL	Yes
8	11	Front RH		
10	3	Rear LH		
10	5	Rear RH	DOWN	
10	11	Front RH		



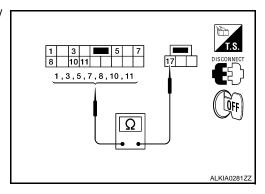
2. Check continuity between main power window and door lock/ unlock switch (power window lock switch) (Lock operation).

Terr	minal	Main power window and door lock/unlock switch condition		Continuity
3		Rear LH		
5		Rear RH	UP	
11		Front RH		
1		Rear LH		
3		Real Ln		
5	17	Rear RH	NEUTRAL	No
7	17	Near Kir	NEOTIVAL	NO
8		Front RH		
11		FIOREKH		
1		Rear LH		
7		Rear RH	DOWN	
8		Front RH		



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

Terr	minal	Main power window lock switch		Continuity
3		Rear LH		
5		Rear RH	UP	
11		Front RH		
1		Rear LH		
3		Near Lit		
5	17	Rear RH	NEUTRAL	Yes
7	17	Neal KH	NEUTRAL	ies
8		Front RH		
11		FIONI KH		
1		Rear LH		
7		Rear RH	DOWN	
8	-	Front RH		



< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

Is the inspection result normal?

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

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and Installation". After that, refer to PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

$oldsymbol{1}_{ ext{-}}$ PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

>> Refer to PWC-62, "POWER WINDOW MAIN SWITCH: Component Function Check" NO

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

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

Power Window And Door Lock/unlock Switch RH

${f 1}$. 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-67, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

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

CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON.

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

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

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Is the measurement value within the specification?

YES >> GO TO 3 **PWC**

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< COMPONENT DIAGNOSIS >

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM and power window and door lock/unlock switch RH
- 3. Check continuity between BCM connector (A) and power window and door lock/unlock switch RH connector (B).

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

4. Check continuity between BCM connector (A) and ground.

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BCM connector	onnector Terminal Groun		Continuity
M16 (A)	3	Glound	No

Is the inspection result normal?

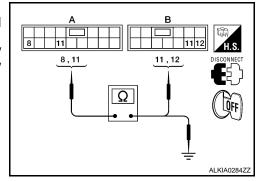
YES >> GO TO 4

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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window and door lock/ unlock switch RH connector (B).

Main power win- dow and door lock/unlock switch connector	Terminal	Power window and door lock/un- lock switch RH connector	Terminal	Continuity
D7 (A)	11	D105 (B)	11	Yes
D7 (A)	8	Б 103 (В)	12	163



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

Main power window and door lock/ unlock switch connector	Terminal	0	Continuity
D7 (A)	8	Ground	No
Dr (A)	11		INO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

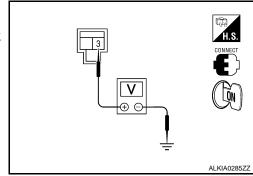
4. CHECK HARNESS CONTINUITY

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

- Connect BCM.
- Turn ignition switch ON.
- Check voltage between power window and door lock/unlock switch RH connector and ground.

Т	V I 00		
(+)	(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	,
D105	8	Ground	Battery voltage



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-69, "FRONT POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace power window and door lock/unlock switch RH. Refer to PWC-108, "Removal and Instal-NO

FRONT POWER WINDOW SWITCH: Component Inspection

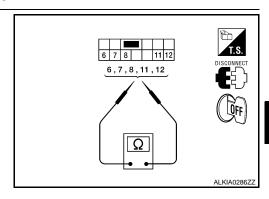
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COMPONENT INSPECTION

${f 1}$. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Terr	ninal	Power window switch condition	Continuity
8	6	UP	
12	7	UF	
12	7	NEUTRAL	Yes
6	11	NEOTRAL	165
8	7	DOWN	
6	11	DOWN	



Is the inspection result normal?

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

>> Replace power window and door lock/unlock switch RH. Refer to PWC-108, "Removal and Instal-NO lation".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

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

Rear Power Window Switch

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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< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to PWC-70, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

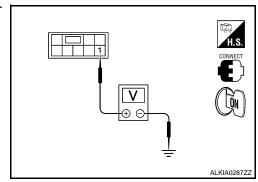
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Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

Terminal					
(+)			Condition	Voltage (V)	
	wer window connector	Terminal	(–)		(Approx.)
LH	D203	1	Ground	Ignition switch	Battery
RH	D303	I	Giodila	ON	voltage



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

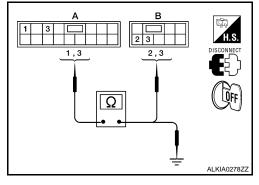
YES >> GO TO 3 (Rear power window switch RH)

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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power win- dow switch LH connector	Terminal	Continuity
D7 (A)	1	D203 (B)	2	Yes
Dr (A)	3	D203 (B)	3	162



4. Check continuity between main power window and door lock/unlock switchh connector (A) and ground.

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

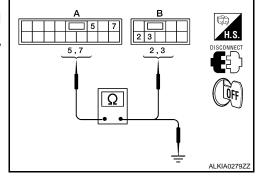
3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

- Turn ignition switch OFF.
- 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 (A) and rear power window switch RH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7 (A)	5	D303 (B)	3	Yes
υ/ (A)	7	D303 (B)	2	162



Check continuity between main power window and door lock/unlock switch connector (A) and ground.

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

- Disconnect BCM and rear power window switch.
- Check continuity between BCM connector (A) and rear power window switch connector (B).

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16 (A)	3	LH	D203 (B)	1	Yes
WITO (A)	3	RH	D303 (B)	ı	163

Check continuity between BCM connector and ground.

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BCM connector	Terminal	Ground Continuity No	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-71, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace rear power window switch. Refer to PWC-108, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

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< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

Terminal		Power window switch condition	Continuity
1	5	LID	
3	4	OF .	
3	4	NEUTRAL	
5	2	NEOTIVAL	
1	4	DOWN	
5	2	DOWN	

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-108, "Removal and Installation".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

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

DRIVER SIDE: Component Function Check

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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.

>> Refer to PWC-73, "DRIVER SIDE : Diagnosis Procedure". NO

DRIVER SIDE: Diagnosis Procedure

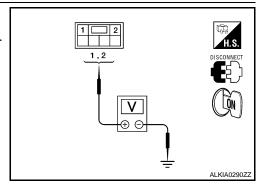
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Front Power Window Motor LH Circuit Check

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

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

-	Terminal				
(+)			Main power win- dow and door	Voltage (V) (Approx.)	
Front power window motor LH connector	Terminal	(–)	lock/unlock switch condition		
	2		UP	Battery voltage	
D9	_	Ground	DOWN	0	
D9	1	Giouna	UP	0	
	1	DOWN	Battery voltage		



Is the measurement value within the specification?

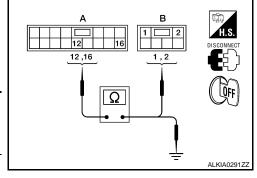
YES >> GO TO 2

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and Installation". After that, refer to PWC-74, "DRIVER SIDE: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Main power windo and door lock/unlo switch connector		Front power window motor LH connector	Terminal	Continuity
D7 (A)	16	D9 (B)	2	Yes
DI (A)	12	D9 (B)	1	163



Check continuity between main power window and door lock/unlock switch connector (A) and ground.

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< COMPONENT DIAGNOSIS >

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

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

${f 3.}$ CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-74, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor LH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-74</u>, "<u>DRIVER SIDE</u>: Special Repair Requirement".

DRIVER SIDE: Component Inspection

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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
(+)	(–)	Wotor 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 <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-74</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-73, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

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PASSENGER SIDE: Description

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

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCIUT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-75, "PASSENGER SIDE : Diagnosis Procedure".

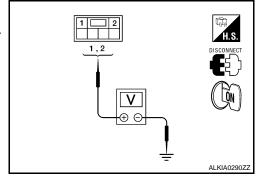
PASSENGER SIDE : Diagnosis Procedure

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.

Te	rminal				
(+)			Front power window motor	Voltage (V) (Approx.)	
Front power window motor RH connector	Terminal	(–)	RH condition		
	1		UP	Battery voltage	
D104	ļ	•	Ground	DOWN	0
D104	2	Giodila	UP	0	
	2	·	DOWN	Battery voltage	



Is the measurement value within the specification?

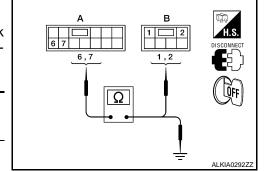
YES >> GO TO 2

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-108, "Removal and Installation".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

Power window and door lock/unlock-switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	6	D104 (B)	1	Yes
D103 (A)	7	D104 (B)	2	165



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

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< COMPONENT DIAGNOSIS >

Power window and door lock/ unlock switch RH connector	Terminal		Continuity
D405 (A)	6	Ground	No
D105 (A)	7		NO

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-76, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to PWC-108, "Removal and Installation".

PASSENGER SIDE: Component Inspection

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
(+)	(–)	Wotor 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 <u>GW-19</u>, "<u>Removal and Installation</u>".

REAR LH

REAR LH: Description

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

${f 1}$. 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-76, "REAR LH : Diagnosis Procedure"

REAR LH: Diagnosis Procedure

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

PWC-76

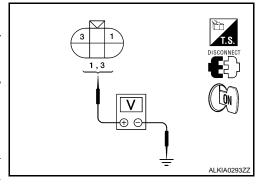
POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

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

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



Is the measurement value within the specification?

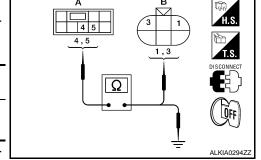
YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to PWC-77, "REAR LH: Component Inspection".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH connector (A) and rear power window motor LH connector (B).

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203 (A)	5	D204 (B)	1	Yes
D203 (A)	4	D204 (B)	3	163



Check continuity between rear power window switch LH connector (A) and ground.

Rear power window switch LH connector	Terminal		Continuity	
D203 (A)	5	Ground	No	
D203 (A)	4		140	

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-77, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-14, "Removal and Installation".

REAR LH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

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

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< COMPONENT DIAGNOSIS >

Teri	minal	Motor condition
(+)	(-)	Wotor 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 <u>GW-14, "Removal and Installation"</u>.

REAR RH

REAR RH: Description

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

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?

YES >> Power window motor is OK.

NO >> Refer to PWC-78, "REAR RH: Diagnosis Procedure".

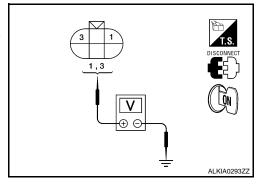
REAR RH: Diagnosis Procedure

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.

Te	erminal				
(+)			Rear power windowswitch	Voltage (V)	
Rear power window motor RH connector	Terminal	(–)	RH condition	(Approx.)	
	1		UP	Battery voltage	
D304			DOWN	0	
3		Ground	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-79, "REAR RH: Component Inspection".

2. CHECK HARNESS CONTINUITY

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- 3. Check continuity between rear power window switch RH connector (A) and rear power window motor RH connector (B).

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303 (A)	5	D304 (B)	1	Yes
D303 (A)	4	D304 (B)	3	163

Check continuity between rear power window switch RH connector (A) and ground.

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Rear power window switch RH connector	Terminal		Continuity	
D303 (A)	5	Ground	No	
D000 (A)	4		NO	

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-79, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-14, "Removal and Installation"</u>.

REAR RH: Component Inspection

INFOID:0000000003220400

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

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

Terr	minal	Motor condition
(+)	(-)	Wotor 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 <u>GW-14, "Removal and Installation"</u>.

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ENCODER

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000003220401

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:0000000003220402

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-80, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

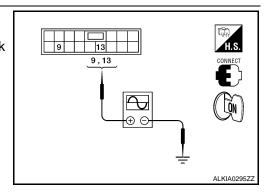
INFOID:0000000003220403

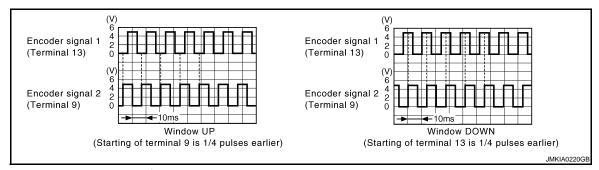
Encoder Circuit Check

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.

(+)			<u>.</u>
Main power window and door lock/unlock switch connector	Terminal	(–)	Signal (Reference value)
D7	9	Ground	Refer to following signal
Di	13	Oround	Refer to following signal





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

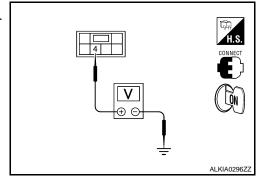
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

[LH ONLY ANTI-PINCH-SEDAN]

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

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



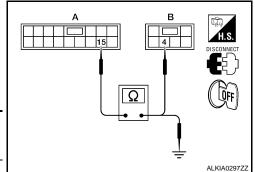
Is the measurement value within the specification?

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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor connector (B).

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



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

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

Is the inspection result normal?

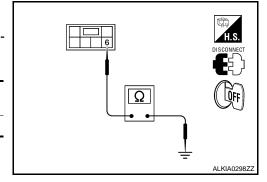
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and <a href="Installation". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- 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

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< COMPONENT DIAGNOSIS >

- Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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

Is the inspection result normal?

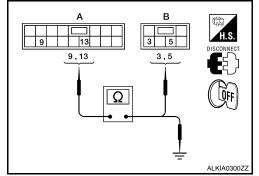
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and Installation". After that, refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

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 (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	3	Yes
D7 (A)	13	D9 (B)	5	163



Check continuity between main power window and door lock/ unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity	
D7 (A)	9		No	
D7 (A)	13		140	

Is the inspection result normal?

>> Replace front power window motor LH. Refer to GW-19, "Removal and Installation". After that, YES refer to PWC-82, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

DRIVER SIDE: Special Repair Requirement

INFOID:0000000003220404

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DOOR SWITCH

Description

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

Component Function Check

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-61, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

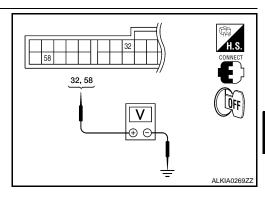
NO >> Refer to PWC-83, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

	Terminals					
(+)			Door o	condition	Voltage (V)	
BCM connector	Terminal	(–)			(Approx.)	
	32	Ground	Front door	OPEN	0	
M18			RH	CLOSE	Battery voltage	
IVITO	58	Ground	Front door	OPEN	0	
	30		LH	CLOSE	Battery voltage	



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-88, "Removal and Installation".

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

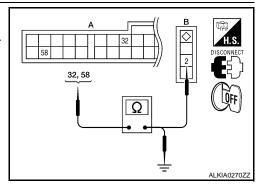
1. Turn ignition switch OFF.

Disconnect BCM and front door switch.

3. Check continuity between BCM connector (A) and front door switch connector (B).

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
	58	LH: B8 (B)	2	162

4. Check continuity between BCM connector (A) and ground.



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BCM connector	Terminal		Continuity	
M18	32	Ground	No	
WITO	58		NO	

Is the inspection result normal?

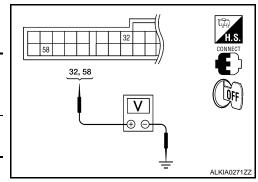
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

	V K 0.0			
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		
M18	32	Ground	Battery voltage	
WITO	58	Glound		



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-84, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

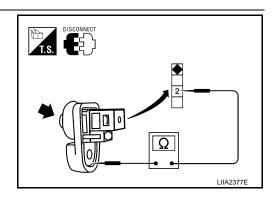
Component Inspection

INFOID:0000000003220408

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Te	erminal	Door switch	Continuity	
Door	switches	DOOL SWITCH		
2	Ground part of door	Pressed	No	
	switch	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 ANTI-PINCH-SEDAN]

POWER WINDOW LOCK SWITCH Α Description INFOID:0000000003220409 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:0000000003220410 $oldsymbol{1}_{ ext{-}}$ CHECK POWER WINDOW LOCK SIGNAL D Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Does power window lock operate? >> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and Е Installation". After that, refer to PWC-85, "Special Repair Requirement". NO >> Check condition of harness and connector. Special Repair Requirement INFOID:0000000003220411 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-55, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement". Is the inspection result normal? Н YES >> Inspection end. NO >> Check intermittenrt incident. Refer to GI-42, "Intermittent Incident".

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BCM (BODY CONTROL MODULE)

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[LH ONLY ANTI-PINCH-SEDAN]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

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-45, "Terminal Layout".

PHYSICAL VALUES

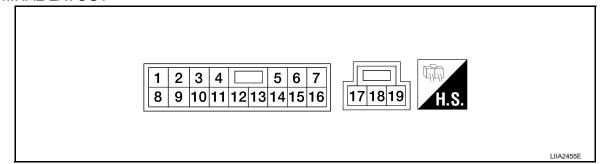
Refer to BCS-45, "Physical Values".

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No. (Wire color)		Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
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
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 motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

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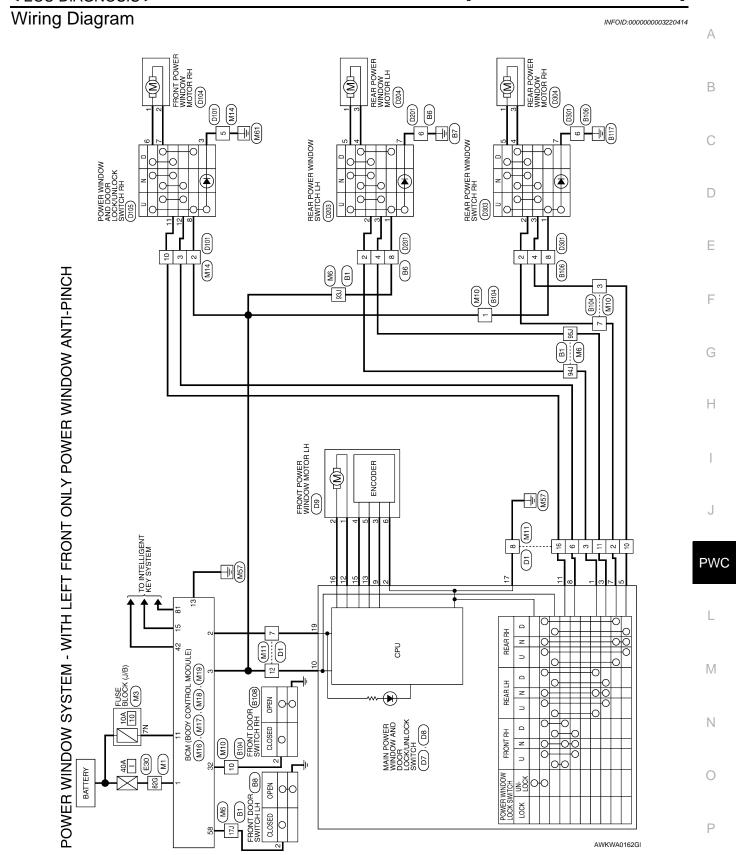
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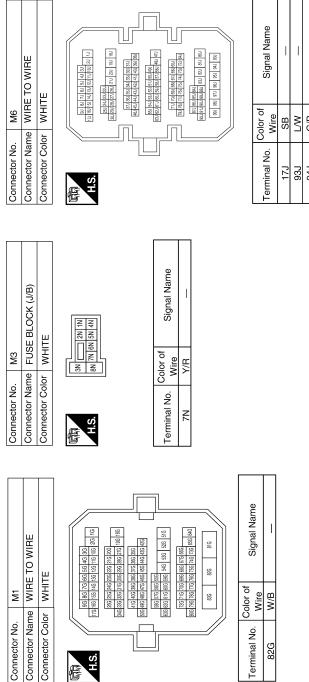
POWER WINDOW MAIN SWITCH

[LH ONLY ANTI-PINCH-SEDAN]

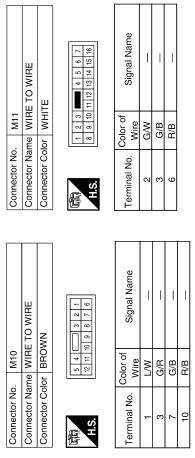
	nal No. color)	Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
				IGN SW ON	Battery voltage
10	Ground	RAP signal	Input	Within 45 second after ignition switch is turned to OFF.	Battery voltage
(L/W)		S	•	When driver side or passenger side door is opened during retained 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.	(V) 4 2 0 10 ms JMKIA0070GB
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)	Ground	Battery power supply	Input	_	Battery voltage

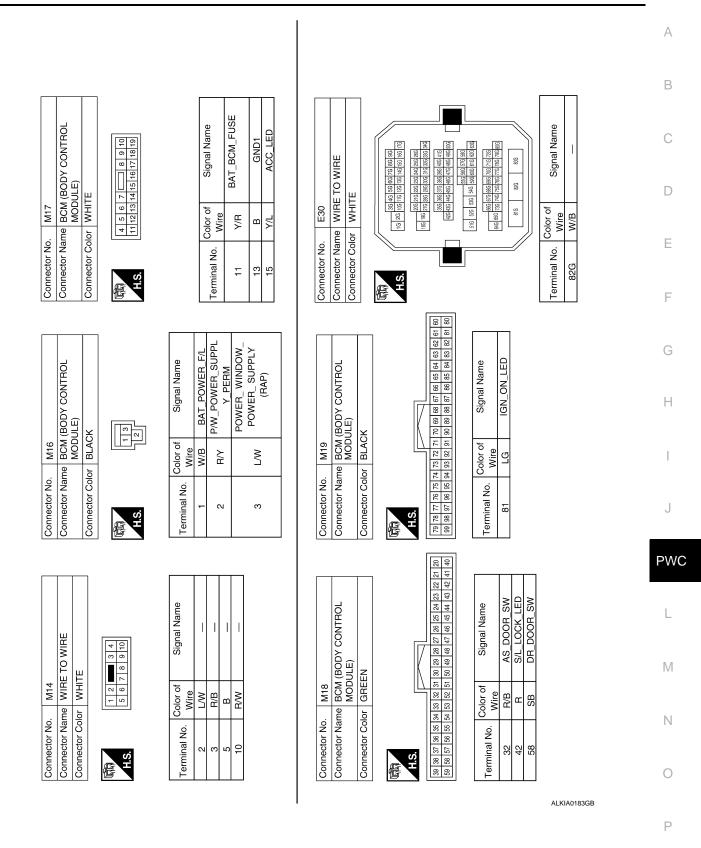


POWER WINDOW SYSTEM CONNECTORS - WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH



_	_	_	_	. 1							
		_	_		Signal Name	1	I		_	-	
SB	L/W	G/B	G/0		Color of Wire	₽V	В	G/R	G/O	T/W	W/A
17.1	63J	94J	95J		Terminal No.	7	8	10	11	12	16
						SB L/W G/B G/O Color of Wire	SB L/W G/B G/O Color of Wire	SB L/W G/B G/O Color of Wire B	SB L/W G/B G/O G/N G/O Wire B/Y B/R G/R G/R	SB L/W G/B G/O G/N G/O G	SB L/W G/B G/O G/N G/O C/W C



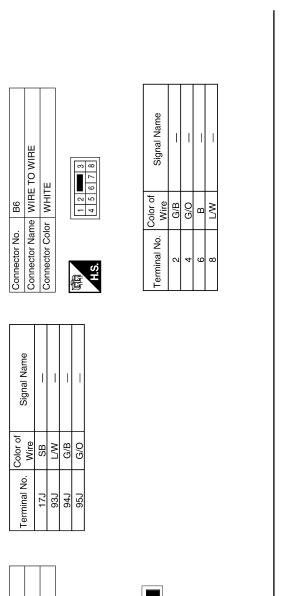


Signal Name

Color of Wire

G/W

G/R W M



49J 50J 51J 52J 53J 54J 55J 47J 48J 56J 57J 58J 59J 60J 61J 62J 63J

31.0 32.0 33.0 34.0 35.1 38.0 37.1 38.0 37.1 45.0 46.0

22J 23J 24J 25J 25J 25J 25J 25J 25J 32J 32J

Connector Name WIRE TO WIRE

<u>m</u>

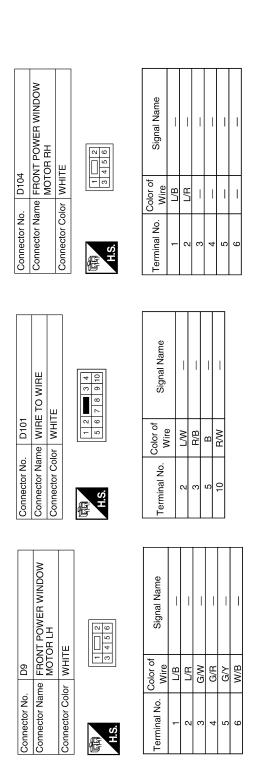
Connector No.

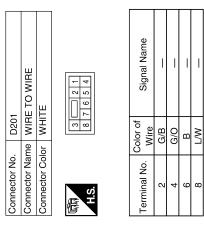
Connector Color WHITE

Connector Name WIRE TO WIRE Connector Color WHITE Connector No. B106 Terminal No. H.S. Signal Name Connector Name WIRE TO WIRE 1 2 3 **6 7** 8 9 10 11 12 Connector Color | BROWN Connector No. B104 Color of Wire G/R G/B R/B Terminal No. 9 H.S. **E** Connector Name FRONT DOOR SWITCH LH DOOR SW(DR) Signal Name Connector Color WHITE Color of B8 SB Connector No. Terminal No. E

AWKIA0384GB

Connector No. D8 Connector Name MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH Connector Color WHITE To let 19 Terminal No. Wire Signal Name 17 B GND 18 - 19 RM RM RM RM RM RM RM RM RM R	A B C D F
D1	G H
Connector No. Connector Na. Co	J
Signal Name Signal Name DOOR SWITCH RH Signal Name DOOR SW (AS) 1	L
Connector No. B108 Connector Name FRO Connector No. Wire 2 R/B Connector Name AND SWI Connector Color WHI Connector Name SWI H.S.	N O
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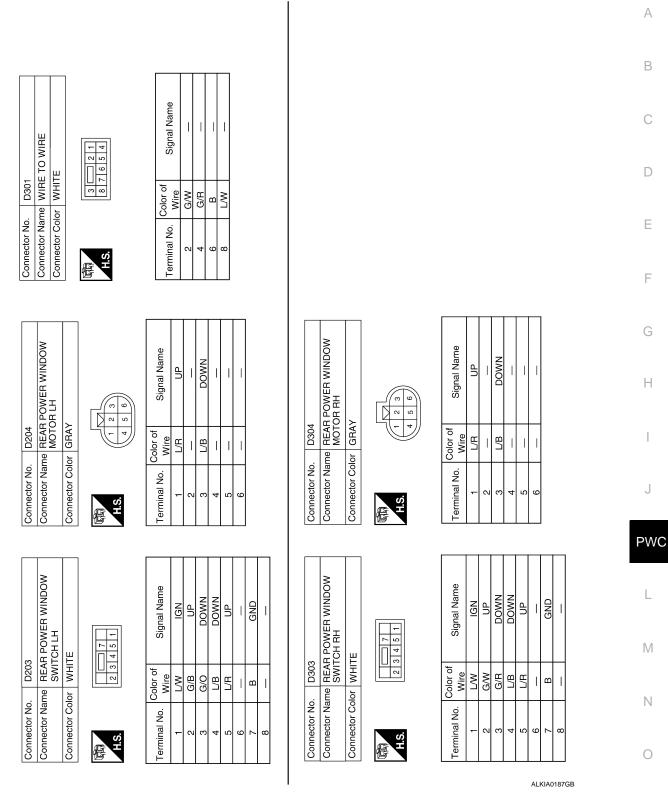


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Signal Name	TOCK	UNLOCK	GND	1		DOWN	UP	IGN	1	_	DOWN	UP
Color of Wire	GR	GR/R	В	-		L/B	L/R	MΠ	I	1	R/W	R/B
Terminal No.	1	2	3	4	5	6	7	8	9	10	11	12

D105	Connector Name DOOR LOCK/UNLOCK SWITCH RH	WHITE	1 2 3 4 5	6 7 8 9 10 11 12
Connector No.	Connector Name	Connector Color WHITE	偃	Ţ



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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.

POWER WINDOW MAIN SWITCH

[LH ONLY ANTI-PINCH-SEDAN]

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 mal- function	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 up- dated 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.

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH < SYMPTOM DIAGNOSIS > [LH ONLY ANTI-PINCH-SEDAN]

SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH** В **Diagnosis Procedure** INFOID:0000000003220416 1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT C Check BCM power supply and ground circuit. Refer to BCS-36, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. Е 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. F Refer to PWC-62, "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-62, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> Inspection end. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003220417

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-73, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NATE	OT OPER-
Diagnosis Procedure	INFOID:0000000003220418
1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH	D
Check power window and door lock/unlock switch RH. Refer to PWC-67, "FRONT POWER WINDOW SWITCH: Component Function Check".	С
<u>Is the inspection result normal?</u> YES >> GO TO 2	
YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts.	D
2. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT	
Check front power window motor RH circuit. Refer to PWC-75, "PASSENGER SIDE: Component Function Check".	E
Is the inspection result normal? YES >> Inspection end.	F
NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".	
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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003220419

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-69, "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-76, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003220420 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-69, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-78, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection end. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH ONLY ANTI-PINCH-SEDAN]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000003220421

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-67, "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-62, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000003220422

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-67, "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-62, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000003220423

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-83, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH ONLY ANTI-PINCH-SEDAN]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000003220424

1.REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Replace main power window and door lock/unlock switch.

Refer to PWC-108, "Removal and Installation". After that, PWC-67, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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PRECAUTION

PRECAUTIONS

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

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 SR 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 SR 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

[LH ONLY ANTI-PINCH-SEDAN]

< ON-VEHICLE MAINTENANCE > **ON-VEHICLE MAINTENANCE** Α PRE-INSPECTION FOR DIAGNOSTIC **Basic Inspection** INFOID:0000000003220426 В **BASIC INSPECTION** 1.INSPECTION START C Check the service history. 2. Check the following parts. D • Fuse/circuit breaker blown. • Poor connection, open or short circuit of harness connector. · Battery voltage. Is the inspection result normal? Е YES >> Inspection end. NO >> Repair or replace the malfunctioning parts. F Н J **PWC** L

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ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

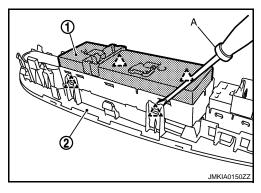
- 1. Remove the power window main switch finisher (2). Refer to INT-31, "Exploded View".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



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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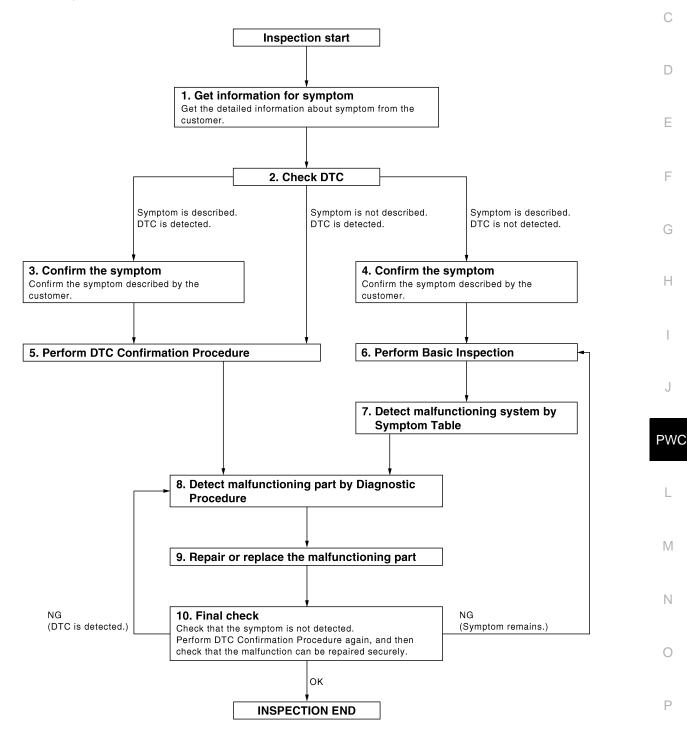
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000001717029 В

OVERALL SEQUENCE



JMKIA0101GB

DIAGNOSIS AND REPAIR WORKFLOW

[LH&RH FRONT ANTI-PINCH-COUPE]

< BASIC INSPECTION >

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

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

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described, DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

3. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 5

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 6

PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again.

At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time.

If two or more DTCs are detected, refer to XX-XX, "*****" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 8

NO >> Refer to XX-XX. "*****".

6. PERFORM BASIC INSPECTION

Perform PWC-109, "Work Flow".

Inspection End>>GO TO 7

$7.\,$ DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

>> GO TO 8

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT ANTI-PINCH-COUPE]

8. Detect malfunctioning part by diagnostic procedure

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

Is malfunctioning part detected?

YES >> GO TO 9

NO >> Check voltage of related BCM terminals using CONSULT-III.

$oldsymbol{9}.$ REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

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

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8

YES (Symptom remains)>>GO TO 6

NO >> Inspection End.

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[LH&RH FRONT ANTI-PINCH-COUPE]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Initial setting is necessary when battery terminal is diconnected.

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

INITIALIZATION PROCEDURE

- Disconnect battery negative terminal or main power window and door lock/unlock switch. 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 4 seconds or more.
- 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-151, "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:0000000001717032

Initial setting is necessary when replacing main power window and door lock/unlock 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

INITIALIZATION PROCEDURE

1. Disconnect battery negative terminal or main power window and door lock/unlock switch. Reconnect it after a minute or more.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT ANTI-PINCH-COUPE]

- 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)
- Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 4 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 main power window and door lock/unlock 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-151, "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.

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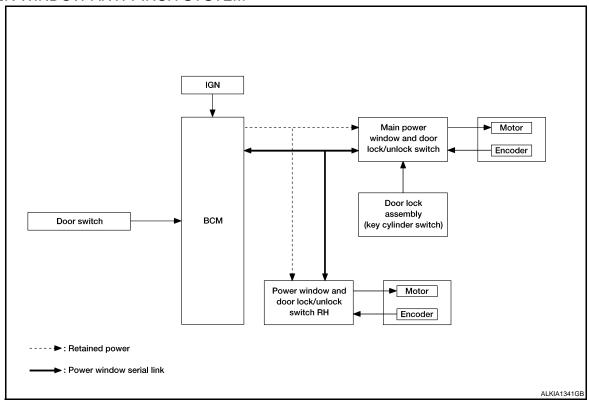
PWC-113

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

POWER WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000001717035

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)		
Encoder	Encoder pulse signal		
Main power window and door lock/unlock switch	Power window motor LH UP/DOWN signal	Power window control	Front power window motor
Power window and door lock/unlock switch RH	Power window motor RH UP/DOWN signal		
BCM	RAP signal		

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

Item	Input signal to front power window switch	Front power window switch function	Actuator	
Power window and door lock/unlock switch RH	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.
- Main power window and door lock/unlock switch can open/close all windows.
- Power window and door lock unlock switch RH can open/close the corresponding window.

POWER WINDOW AUTO-OPERATION (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

- 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 (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 more than 1 second 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 more than 1 second to perform CLOSE operation of the door glass.

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

 Hold door key cylinder to UNLOCK position for more than 1 second to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN OPERATION (LH & RH)

Front power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than 3^(NOTE) 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.

NOTE:

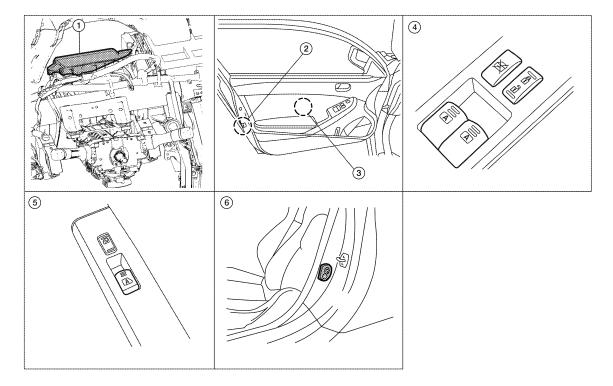
Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to PWC-118, "COMMON ITEM: CONSULT-III Function (BCM - COMMON ITEM)".

NOTE:

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

Component Parts Location

INFOID:0000000001717036



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- BCM M16, M17, M18, M19 (view with instrument panel removed)
- Main power window and door lock/ unlock switch D7
- Door lock assembly LH (key cylinder 3. switch) D10
- Power window and door lock/unlock 6. switch RH D105
- Power window motor LH D9, RH D104
- Front door switch LH B8, RH B108

Component Description

INFOID:0000000001717037

POWER WINDOW ANTI-PINCH SYSTEM

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

Component	Function		
ВСМ	Supplies power supply to power window switch.Controls retained power.		
Main power window and door lock/unlock switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window LH. 		
Power window and door lock/unlock switch RH	Controls front power window motor RH. Controls anti-pinch operation of power window RH.		
Power window motor LH	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.		
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.		
Door lock assembly LH (key cylinder switch)	Transmits operation condition of key cylinder switch to main power window and door lock/unlock switch.		
Door switch LH or RH	Detects door open/close condition and transmits to BCM.		

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000001717038

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-85, "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.

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

RETAINED PWR

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

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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.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

- 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

Main Power Window And Door Lock/Unlock Switch

 ${f 1}$. 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-119, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

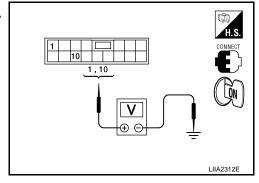
POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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

1. CHECK POWER SUPPLY CIRCUIT

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

(+)			Voltage (V)
Main power window and door lock/unlock switch connector		(-)	(Approx.)
	1	Ground	Battery voltage
D1	10	Ground	Dattery Voltage



Is the measurement value within the specification?

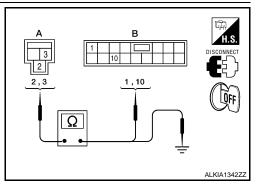
YES >> GO TO 3 NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock 2. switch.
- Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
WITO (A)	2	טי (ט)	1	163

Check continuity between BCM connector (A) and ground.



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Main power window and door

lock/unlock switch connector

< COMPONENT DIAGNOSIS >

BCM connector	Terminal		Continuity
M16	3	Ground	No
IVI IO	2		NO

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

- 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
D7	15		Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and Installation".

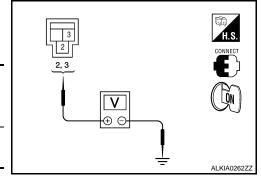
After that, refer to PWC-112, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

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	BCM connector Terminal		(11 -)		
M16	3	Ground	Battery voltage		
WITO	2		Battery voltage		



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Is the measurement value within the specification?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and <a href="Installation". After that, refer to PWC-112, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-112, "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-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-112, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-127, "DRIVER SIDE : Component Function Check"

PASSENGER SIDE

PASSENGER SIDE : Description

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BCM supplies power.

Power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

PASSENGER SIDE : Component Function Check

INFOID:0000000001717046

Power Window And Door Lock/Unlock Switch RH

 ${f 1}$. CHECK POWER WINDOW MOTOR RH FUNCTION

Does power window motor RH operate with power window and door lock/unlock switch RH operation? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-121, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

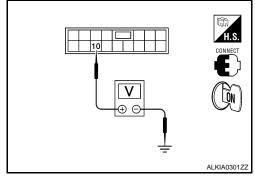
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Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

Terr			
(+)		Voltage (V)	
Power window and door lock/ unlock Terminal switch RH connector		(-)	(Approx.)
D105	10	Ground	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.
- Disconnect BCM and power window and door lock/unlock switch RH.
- Check continuity between BCM connector (A) and power window and door lock/unlock switch RH connector (B).

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

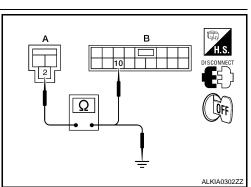
4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	2	Ground	No

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.



PWC-121

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POWER SUPPLY AND GROUND CIRCUIT

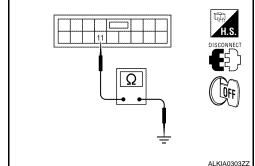
< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

$\overline{3}$. 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-175, "Removal and Installation". After

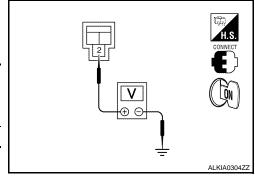
that, refer to PWC-122, "PASSENGER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

f 4. CHECK BCM OUTPUT SIGNAL

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

	V II 00		
(+)		(-)	Voltage (V) (Approx.)
BCM connector	Terminal	()	, , ,
M16	2	Ground	Battery voltage



Is the measurement value within the specification?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-175</u>, "Removal and Installation". After that, refer to <u>PWC-122</u>, "PASSENGER SIDE : Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000001717048

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-112</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-129, "PASSENGER SIDE : Component Function Check".

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000001717053

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

DRIVER SIDE : Component Function Check

INFOID:0000000001717054

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

YES >> Power window motor LH is OK.

NO >> Refer to PWC-123, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

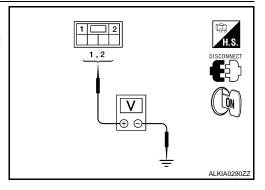
INFOID:0000000001717055

Power Window Motor LH Circuit Check

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

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

7	erminal		NA	
(+)			Main power win- dow and door lock/	Voltage (V)
Power window motor LH con- nector	Terminal	(–)	unlock switch con- dition	(Approx.)
	2		UP	Battery voltage
D9	2	Ground	DOWN	0
Da	1	Giodila	UP	0
	'		DOWN	Battery voltage



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Is the measurement value within the specification?

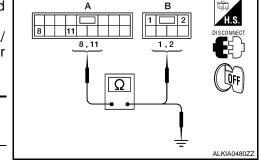
YES >> GO TO 2

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and <a href="Installation". After that, refer to PWC-120, "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 power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor connector LH (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
DT (A)	11	D9 (B)	1	165



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

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< COMPONENT DIAGNOSIS >

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7 (A)	8		No
DT (A)	11		NO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR

Check power window motor LH.

Refer to PWC-124, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor LH. Refer to <u>GW-19, "Removal and Installation"</u>. After that, refer to <u>PWC-124, "DRIVER SIDE: Special Repair Requirement"</u>.

DRIVER SIDE: Component Inspection

INFOID:0000000001717056

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR LH

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

Terminal		Motor condition
(+)	(–)	Wotor condition
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Power window motor LH is OK.

>> Replace power window motor LH. Refer to <u>GW-19</u>, "Removal and Installation". After that, refer to PWC-124, "DRIVER SIDE: Special Repair Requirement".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000001717057

INFOID:0000000001717058

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

NO

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-112</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-127, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE : Description

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

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1. CHECK POWER WINDOW MOTOR CIRCIUT

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

Is the inspection result normal?

YES >> Power window motor RH is OK.

NO >> Refer to PWC-125, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

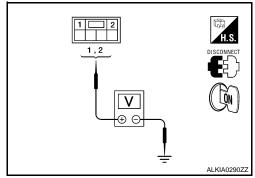
INFOID:0000000001717060

Power Window Motor RH Circuit Check

1. CHECK POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

Terminal					
(+)	(+)		Power window motor RH con-	Voltage (V)	
Power window mo- tor RH connector	Terminal	(–)	dition	(Approx.)	
	2		2 Ground	UP	Battery voltage
D104	1	Ground		DOWN	0
D104		Giodila		UP	0
	'		DOWN	Battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2

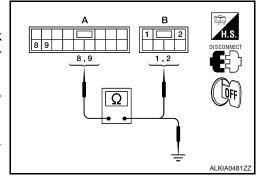
NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-175, "Removal and Installation". After that, refer to PWC-122, "PASSENGER SIDE: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Power window mo- tor RH connector	Terminal	Continuity
D105 (A)	8	D104 (P)	2	Yes
D105 (A)	9	D104 (B)	1	162



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

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	8		No
D 100 (A)	9		140

Is the inspection result normal?

YES >> GO TO 3

ctor (A) and ground.

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PWC-125

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR RH

Check power window motor RH.

Refer to PWC-126, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermitten

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace power window motor RH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-126</u>, "<u>PASSENGER SIDE</u>: Special Repair Requirement".

PASSENGER SIDE: Component Inspection

INFOID:0000000001717061

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR RH

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

Terr	minal	Motor condition
(+)	(-)	Wotor condition
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Power window motor RH is OK.

NO

>> Replace power window motor RH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-126</u>, "<u>PASSENGER SIDE</u>: Special Repair Requirement".

PASSENGER SIDE : Special Repair Requirement

INFOID:0000000001717062

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-112</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-129, "PASSENGER SIDE : Component Function Check".

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DRIVER SIDE

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DRIVER SIDE: Description

Detects condition of the 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:0000000001717072

1. CHECK ENCODER OPERATION

Does 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-127, "DRIVER SIDE : Diagnosis Procedure"

DRIVER SIDE: Diagnosis Procedure

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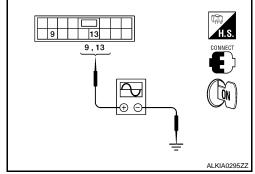
Encoder Circuit Check

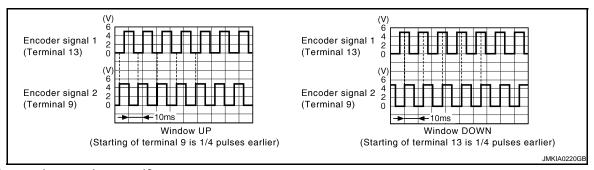
1. CHECK ENCODER OPERATION

1. Turn ignition switch ON.

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

Т				
(+)	(+)		Signal	
Main power window and door lock/unlock switch connector	Terminal	(–)	(Reference value)	
D7	9	Ground	Refer to following signal	
D1	13	Ground	Refer to following signal	





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2

$2.\,$ CHECK POWER WINDOW MOTOR LH POWER SUPPLY

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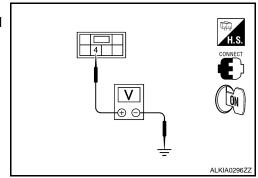
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[LH&RH FRONT ANTI-PINCH-COUPE]

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

(+)			Voltage (V)	
Power window mo- tor LH connector	Terminal	(–)	(Approx.)	
D9	4	Ground	10	



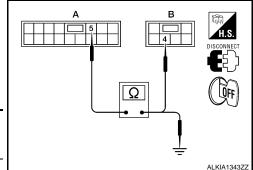
Is the measurement value within the specification?

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 power window motor LH.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	5	D9 (B)	4	Yes



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

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

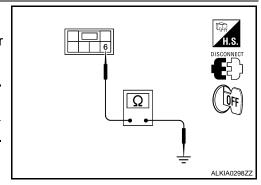
Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and <a href="Installation". After that, refer to PWC-120, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".
- NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Power window motor LH connector	Terminal	Ground	Continuity
D9	6		Yes



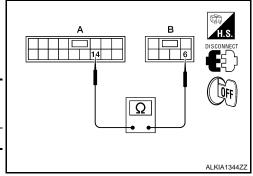
Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 5

CHECK HARNESS CONTINUITY 2

- Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	14	D9 (B)	6	Yes



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and Installation". After that, refer to PWC-120, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

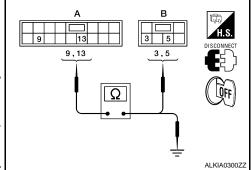
NO >> Repair or replace harness.

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 (A) and power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Power window mo- tor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	5	Yes
Dr (A)	13	D9 (B)	3	162



Check continuity between main power window and door lock/ unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	9	Ground	No
D1 (A)	13		140

Is the inspection result normal?

YES >> Replace power window motor LH. Refer to GW-19, "Removal and Installation". After that, refer to PWC-124, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE: Description

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

PASSENGER SIDE: Component Function Check

1. CHECK ENCODER OPERATION

Does 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-130, "PASSENGER SIDE: Diagnosis Procedure". **PWC**

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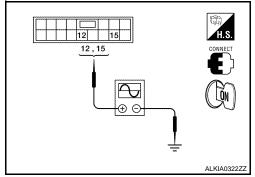
PASSENGER SIDE: Diagnosis Procedure

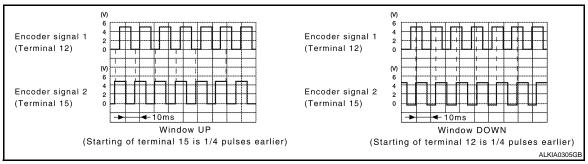
INFOID:0000000001717076

1. CHECK ENCODER SIGNAL

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

(+)			Signal	
Power window and door lock/unlock switch RH connector	Terminal	(–)	(Reference value)	
D105	12	Ground	Refer to following	
	15	Ground	signal	





Is the inspection result normal?

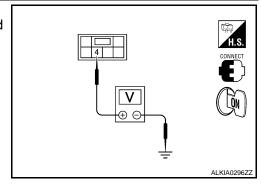
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> GO TO 2

2. CHECK POWER WINDOW MOTOR RH POWER SUPPLY

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

(+)			Voltage (V)
Power window motor RH connector	Terminal	(–)	(Approx.)
D105	4	Ground	10



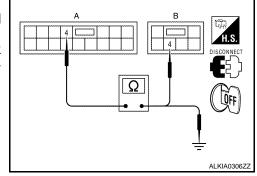
Is the measurement value within the specification?

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

${f 3.}$ CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- Disconnect power window and door lock/unlock switch RH and power window motor RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Power window mo- tor RH connector	Terminal	Continuity
D105 (A)	4	D104 (B)	4	Yes



Check continuity between power window and door lock/unlock switch RH connector (A) and ground.

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

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-175, "Removal and Installation". After that, refer to PWC-122, "PASSENGER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Power window motor RH con- nector	Terminal	Ground	Continuity
D104	6		Yes

Is the inspection result normal?

YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

Disconnect power window and door lock/unlock switch RH.

Check continuity between power window and door lock/unlock switch RH connector (A) and power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Power window mo- tor RH connector	Terminal	Continuity
D105 (A)	3	D104 (B)	6	Yes

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-175, "Removal and Installation". After that, refer to PWC-122, "PASSENGER SIDE : Special Repair Requirement".

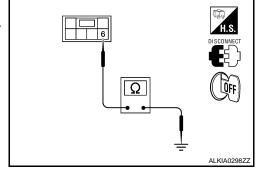
NO >> Repair or replace harness.

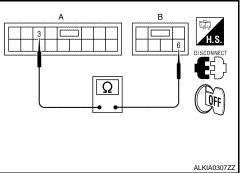
6. CHECK HARNESS CONTINUITY 3

- Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector (A) and power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Power window mo- tor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	3	Yes
D103 (A)	15	D 104 (B)	5	165

Check continuity between power window and door lock/unlock switch RH connector (A) and ground.





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[LH&RH FRONT ANTI-PINCH-COUPE]

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

Is the inspection result normal?

- YES >> Replace power window motor RH. Refer to <u>GW-19, "Removal and Installation"</u>. After that, refer to <u>PWC-126, "PASSENGER SIDE: Special Repair Requirement"</u>.
- NO >> Repair or replace harness.

DOOR SWITCH

Description

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

Component Function Check

1. CHECK DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-118, "RETAINED PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Door switch circuit is OK.

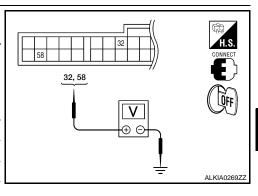
NO >> Refer to PWC-133, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

Terminals (+)					
			Door condition		Voltage (V)
BCM connector	Terminal	(–)			(Approx.)
	32		Front door		0
M18	32	Ground	RH	CLOSE	Battery voltage
IVI IO	58	Giodila	Front door	OPEN	0
	50		LH	CLOSE	Battery voltage



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-88, "Removal and Installation".

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

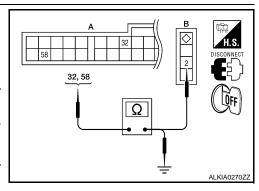
Turn ignition switch OFF.

Disconnect BCM and door switch.

3. Check continuity between BCM connector (A) and door switch connector (B).

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
WTO (A)	58	LH: B8 (B)	2	163

4. Check continuity between BCM connector (A) and ground.



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BCM connector	Terminal		Continuity
M18 (A)	32	Ground	No
	58	-	INO

Is the inspection result normal?

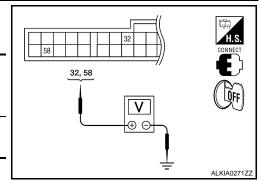
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

Terminal			Malka a A O	
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)		
M18	32	Ground	Battery voltage	
10110	58	Giodila	Dattery Voltage	



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

4. CHECK DOOR SWITCH

Check door switch.

Refer to PWC-134, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace door switch.

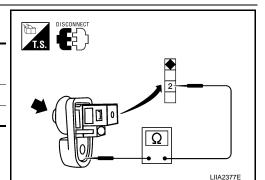
Component Inspection

INFOID:0000000001717080

1. CHECK DOOR SWITCH

Check door switches.

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



Is the inspection result normal?

YES >> Door switch is OK.
NO >> Replace door switch.

DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

DOOR KEY CYLINDER SWITCH

Description INFOID:000000001717081

Main power window and door lock/unlock switch detects condition of the door key cylinder and transmits to BCM as the LOCK or UNLOCK signals.

Component Function Check

INFOID:0000000001717082

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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 <u>DLK-36</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-135, "Diagnosis Procedure".

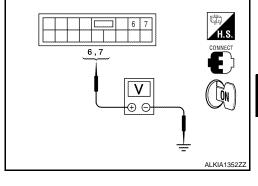
Diagnosis Procedure

INFOID:0000000001717083

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Terminals				
(+)				Voltage (V)
Main power window and door lock/unlock switch connector	door lock/unlock Terminal		Key position	(Approx.)
	6		Lock	0
D7	O	Ground	Neutral/Unlock	5
D1	7	Ground	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-120, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

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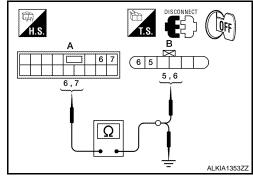
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

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

Main power window and door lock/unlock switch connector	Terminal	Door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
D7 (A)	6	D10 (B)	6	Yes
D7 (A)	7	D10 (B) 5	res	



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

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	6	Ground	No
	7		NO

Is the inspection result normal?

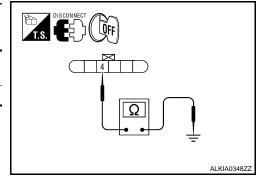
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

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

Door lock assembly LH (key cyl- inder switch) connector	Terminal	Ground	Continuity
D10	4		Yes



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-136, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace door lock assembly LH (door key cylinder switch). After that, refer to PWC-137, "Special Requirement".

Component Inspection

INFOID:0000000001717084

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

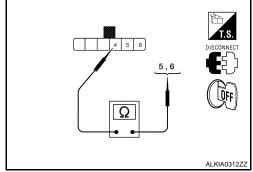
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

Check door lock assembly LH (key cylinder switch).

Terminal Door lock assembly LH (key cylinder switch) connector			
		Key position	Continuity
5	6 4	Unlock	Yes
5		Neutral/Lock	No
6		Lock	Yes
б		Neutral/Unlock	No



Is the inspection result normal?

YES >> Key cylinder switch is OK.

>> Replace door lock assembly LH (key cylinder switch). After that, refer to PWC-137, "Special NO Repair Requirement".

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-112, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". Α В

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000001717086

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

- 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:0000000001717087

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

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to <u>DLK-36</u>, "DOOR LOCK: <u>CONSULT-III Function</u> (BCM - DOOR LOCK)".

Monitor item	C	ondition	
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDL UNLOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-138, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

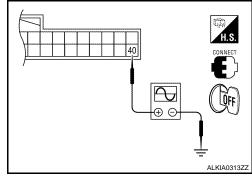
POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000001717088

Power Window Serial Link Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 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	(–)	(Notoronoc value)
M18	40	Ground	(V) 15 10 5 0

Is the inspection result normal?

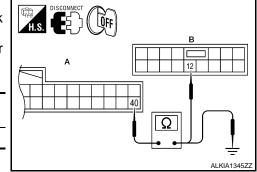
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connector (B).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18 (A)	40	D7 (B)	12	Yes



4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40	Giodila	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-175, "Removal and <a href="Installation". After that, refer to PWC-120, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

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

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

PASSENGER SIDE : Component Function Check

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

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INFOID:0000000001717090

INFOID:0000000001717089

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to DLK-36, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

Monitor item	С	ondition	
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDE UNEOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-140, "PASSENGER SIDE : Diagnosis Procedure".

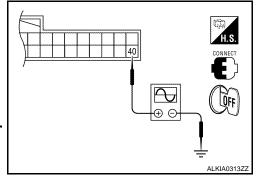
PASSENGER SIDE : Diagnosis Procedure

Power Window Serial Link Check

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

- 1. Remove Intelligent Key, and close the 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".
- 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	(V) 15 10 5 0 10 ms = PIIA1297E



INFOID:0000000001717091

Is the inspection result normal?

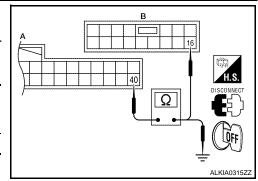
YES >> Power window serial link is OK.

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 (A) and power window and door lock/unlock switch RH connector (B).

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



4. Check continuity between BCM connector (A) and ground.

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

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ВС	CM connector	Terminal	Ground	Continuity	Α
	M18 (A)	40	Ground	No	
Is the i	nspection resu	ılt normal?		·	В
YES	<u>Installatio</u>	on". After that, re	ndow and door efer to <u>PWC-1</u> 2	r lock/unlock switch. Refer to <u>PWC-175, "Removal and 20, "POWER WINDOW MAIN SWITCH: Special Repair</u>	Ь
NO	Requirer >> Repair or	nent. r replace harnes:	S.		С
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POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

POWER WINDOW LOCK SWITCH

Description INFOID:000000001717092

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:0000000001717093

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-175, "Removal and Installation". After that, refer to PWC-142, "Special Repair Requirement"

NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:0000000001717094

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status	
DOOR SW-DR	Door LH closed	OFF	
	Door LH opened	ON	
DOOR SW-AS	Door RH closed	OFF	
	Door RH opened	ON	
KEY CYL LK-SW	Other than door key cylinder LH LOCK position	OFF	
	Door key cylinder LH LOCK position	ON	
KEY CYL UN-SW	Other than door key cylinder LH UNLOCK position	OFF	F
	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-45, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-45, "Physical Values".

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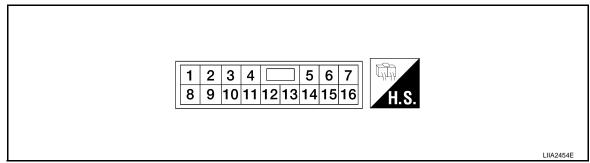
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POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No.		Description			Voltogo [V]	
+	_	Signal name	Input/ Output	Condition Voltage [V] (Approx.)		
1 (R/Y)	Ground	Battery power supply	Input	_	Battery voltage	
5 (G/R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	
6 (L/B)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0	
7 (L/R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0	
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/Y)	2	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
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	

POWER WINDOW MAIN SWITCH [LH&RH FRONT ANTI-PINCH-COUPE]

< ECU DIAGNOSIS >

Termina	al No.	Description			Voltage [V]
+	_	Signal name	Input/ Output	Condition	(Approx.)
12 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
13 (G/W)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
14 (W/B)	Ground	Encoder ground	_	_	0
15 (B)	Ground	Ground	_	_	0

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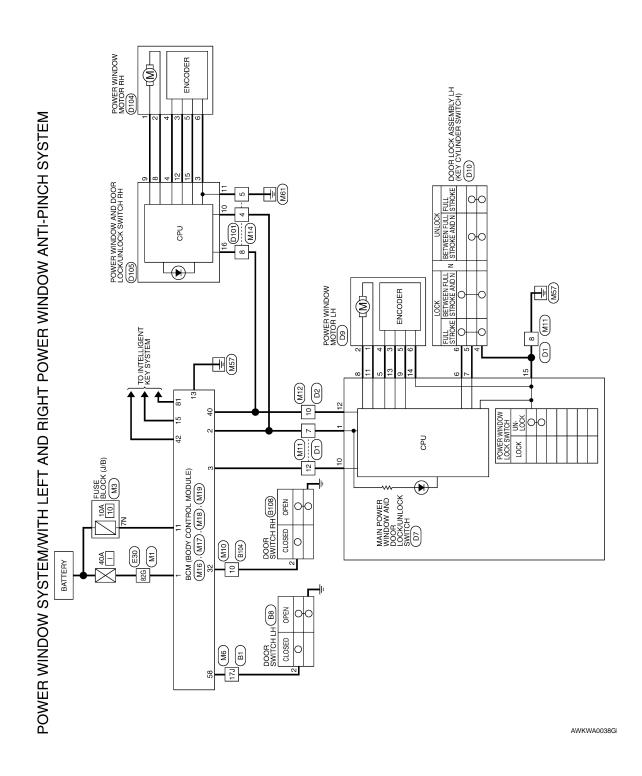
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Wiring Diagram



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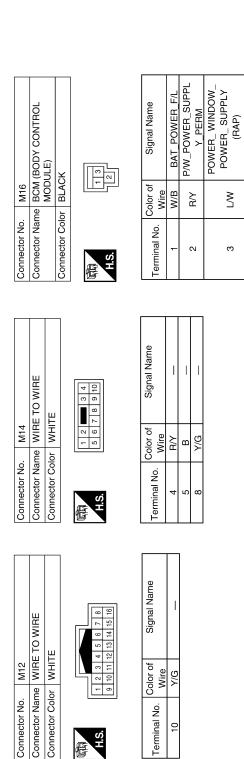
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POWER WINDOW SYSTEM/WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM CONNECTORS Signal Name 25.0 24.0 25.0 22.0 35.0 25.0 25.0 25.0 25.0 15.0 18.0 55J 54J 53J 52J 51J 50J 49J 63J 62J 61J 60J 59J 58J 57J 56J 48J 47J 37.1 36.1 35.1 34.1 33.1 32.1 31.1 46.1 45.1 44.1 42.1 42.1 40.1 39.1 38.1 99J 98J 97J 96J 95J 94J 93J WIRE TO WIRE 71) 70) 69) 68) 67) 66) 65) 79) 78) 76) 75) 74) 73) 73) Connector Color WHITE Color of Wire M6 SB Connector Name Connector No. Terminal No. 17 Signal Name Signal Name FUSE BLOCK (J/B) Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Connector No. M11 Color of Wire Y/R Color of Wire ₹ Ϋ́ Ш Connector Name Connector No. Terminal No. Terminal No. K 7 E Signal Name Signal Name 9G 8G 7G 6G 5G 4G 3G 17G 16G 15G 14G 13G 11G 10G 2G 1G 586 576 566 566 606 606 616 606 596 546 536 526 516 Connector Name WIRE TO WIRE 5 4 3 2 1 12 11 10 9 8 7 6 Connector Name WIRE TO WIRE 816 826 Connector Color BROWN Connector Color | WHITE Color of Wire M10 Color of Ξ 88 W/B 8/B Connector No. Connector No. Terminal No. Terminal No. 82G 10 H.S. AWKIA0179GB

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Terminal No.

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Signal Name	Color of Wire LG	Terminal No. 81		Signal Name AS_DOOR_SW	Color of Wire R/B
				PW K-LINE	Y/G
				PW K-LINE	Y/G
IGN ON LED	ГG	81		AS_DOOR_SW	R/B
	Wire	2			Wire
Signal Name	Color of	Terminal No			Color of
66 65 64 86 85 84]		
[76 75 74 73 72 71 96 95 94 93 92 91	79 78 77 76 75 74 73 72 71 70 69 68 67 67 69 89 89 89 97 96 98 97 98 98 98 98 97 98 98 98 98 98 98 98 98 98 98 98 98 98	21 20 41 40	39 38 37 36 35 34 33 32 31 30 29 28 27 28 25 24 23 22 27 17 20 38 32 37 38 32 31 30 49 48 47 46 45 44 43 42 41 40	34 33 32 31 54 53 52 51
	74 73 72 71 94 93 92 91	79 78 77 76 75 99 98 97 96 95	21 20 41 40	1 30 29 28 27 26 25 24 23 22 150 49 48 47 46 45 44 43 42	54 53 32 31 7 52 52 51
×	74 73 72 71	H.S. H.S. 179 78 77 77 77 78 75 75 75 75 75 75 75 75 75 75 75 75 75	21 20 41 40	1 30 29 28 27 28 25 24 23 22 12 50 49 48 47 46 45 44 44 49 42	34 53 32 31
	More BLAC	Connector Color BLACK H.S. 173 78 77 76 75 74 73 72 71 77 79 99 98 97 96 98 94 99 92 91 99	21 20 41 40	1 30 29 28 27 28 25 24 23 22 15 0 49 48 47 46 45 44 43 42	Connector Color GREEN H.S. (190) 89 87 98 85 194 85 125 150 180
Connector Name BCM (BODY CONTROL MODULE)	MOD MOD BLAC	Connector Na Connector Co Lis To 78 77 78 75 75 75 75 75 75 75 75 75 75 75 75 75	21 20 41 40	Connector Name BCM (BODY CONTROL MODULE) Connector Color GREEN H.S. ##S ##S ##S ##S ##S ##S ##	MOD Or GRE

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BAT_BCM_FUSE

Y/R ٨/L

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ACC LED GND1

Signal Name

Color of Wire

Terminal No.

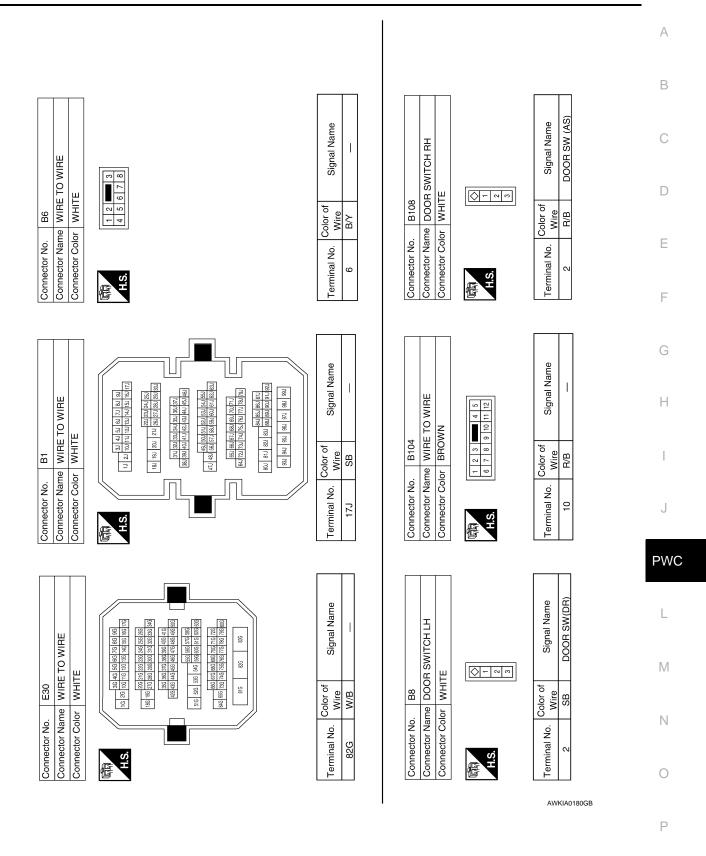
Connector Name | BCM (BODY CONTROL | MODULE)

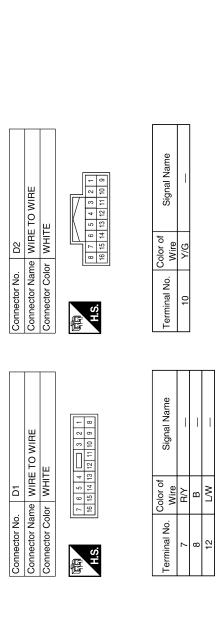
M17

Connector No.

WHITE

Connector Color





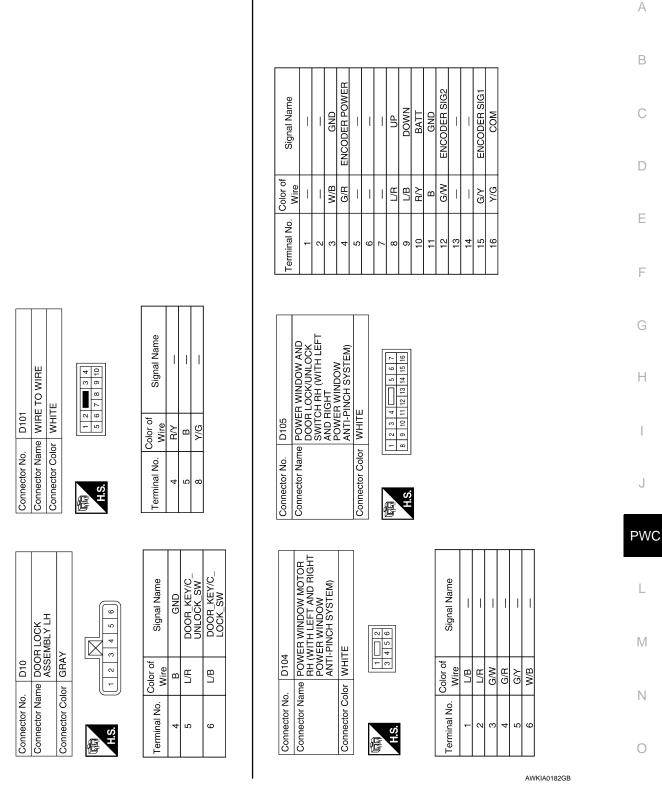
	POWER WINDOW MOTOR LH	E	6 2 4 5 6 8	Signal Name	1	I	1	1	1	1
60		r WHITE	[-[E]]	Color of Wire	L/B	L/R	G/W	G/R	G/Y	W/B
Connector No.	Connector Name	Connector Color	赋 H.S.	Terminal No.	1	2	3	4	5	9

Terminal No.	Color of Wire	Signal Name
1	R/Y	BAT
2	ı	I
3	ı	1
4	ı	1
5	G/R	ENCODER_POWER
9	8/1	LOCK
7	L/R	UNLOCK
8	L/R	UP
6	G/Y	ENCODER_SIG1
10	L/W	IGN
11	L/B	DOWN
12	J//G	COM
13	G/W	ENCODER_SIG2
14	M/B	ENCODER_GND
15	В	GND
16	ı	1

Connector No.	D7
Connector Name	Connector Name MAIN POWER WINDOW AND LOCK/UNIOCK SWITCH (WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	WHITE
S. H	1 2 3 4



AWKIA0181GB



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.

POWER WINDOW MAIN SWITCH

[LH&RH FRONT ANTI-PINCH-COUPE]

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 mal- function	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 up- dated 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.

FRONT POWER WINDOW SWITCH

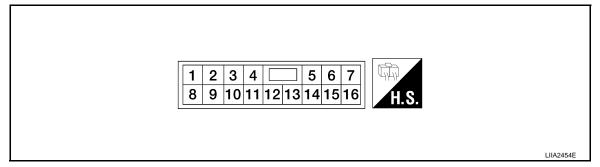
< ECU DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage IVI
+	_	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)
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/W)	3	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

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FRONT POWER WINDOW SWITCH [LH&RH FRONT ANTI-PINCH-COUPE]

< ECU DIAGNOSIS >

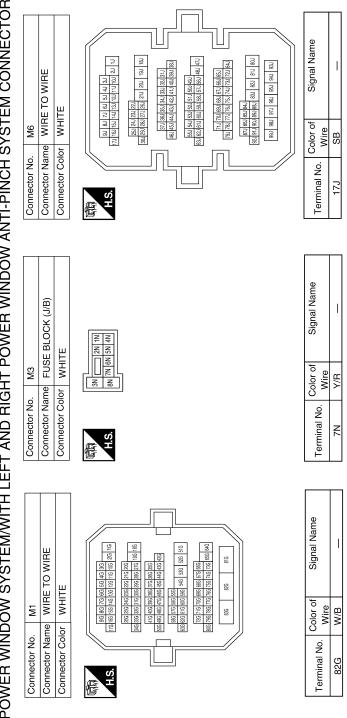
Termi	nal No.	Description			Voltage [V]
+	_	Signal name	Input/ Output	Condition	(Approx.)
15 (G/Y)	3	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
16 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

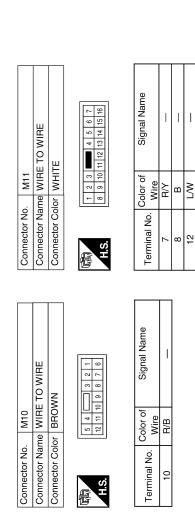
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Wiring Diagram INFOID:0000000001717100 Α В C POWER WINDOW MOTOR RH (D104) ENCODER \$ D DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) POWER WINDOW SYSTEM/WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM Е F POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (D105) W61 CPU G M57 POWER WINDOW MOTOR LH Н ENCODER E I TO INTELLIGENT KEY SYSTEM W57 1 M12 02 J POWER WINDOW LOCK SWITCH LOCK UN: ±ŠOO CPU PWC FUSE BLOCK (J/B) (M3) BCM (BODY CONTROL MODULE)
(M16), (M17), (M18), (M19) \bigcirc MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH L DOOR SWITCH RH (B108) OPEN 10A CLOSED 10 M10 B104 82G M1 M BATTERY Ν SWITCH LH B8 OPEN CLOSED 0

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





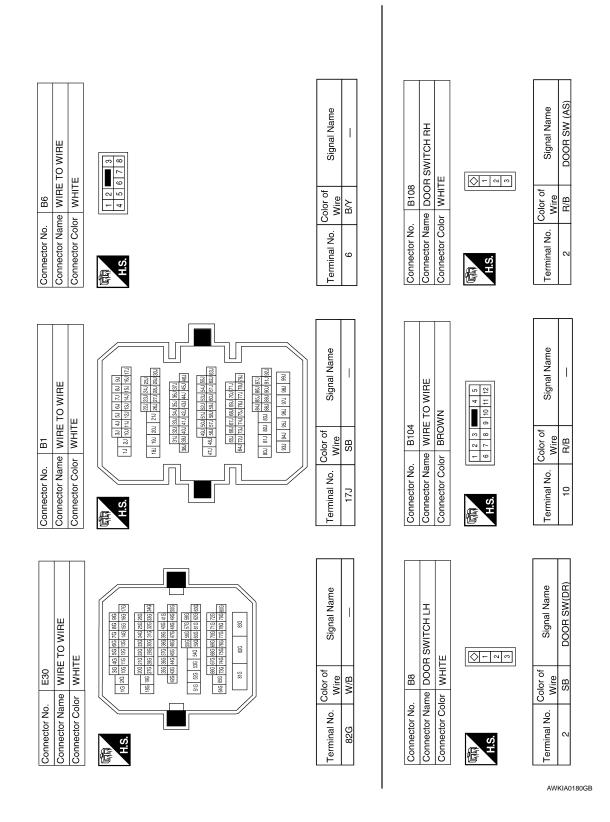
FRONT POWER WINDOW SWITCH

[LH&RH FRONT ANTI-PINCH-COUPE]

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	Signal Name BAT POWER F/L P/W_POWER_SUPPL Y_PERM POWER_WINDOW_ POWER_SUPPLY (RAP)	ODY CONTROL E) B B B F B B B B B B B B B B B B B B B	C
ctor No.	Terminal No. Color of Wire 1 W/B 2 R/Y P 3 L/W	or Name or Color No. Col	E
Conne Conne H.S.	Term	Connecte Connecte Terminal Terminal	F
	ше	BODY CONTROL SIN S	G
#E TO \	Signal Name	M18 BCM (BODY CONTROL MODULE) GREEN GREEN Or of Signal Name NB AS DOOR SW SAL LOCK LED SB DR DOOR SW	Н
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT ANTI-PINCH-COUPE]

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ne POWER WINDOW MOTOR LH or WHITE Color of 3456 L/B L/B L/B L/B G/N G/N -	D
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	Terminal No. Color of Signal Name 1
Connector No. D101	Connector No. D105 Connector Name POWER WINDOW AND DOOR LOCKUNLOCK SWITCH RH (WITH LEFT POWER WINDOW ANTI-PINCH SYSTEM) Connector Color WHITE To some statement of the system of the sy
Connector No. D10 Connector Name BSSEMBLY LH Connector Color GRAY H.S. Terminal No. Color of Signal Name 4 B GND 5 L/R DOOR KEY/C 1 L/B DOOR KEY/C 6 L/B DOOR KEY/C 6 L/B DOOR KEY/C	Connector No. D104 Connector Name POWER WINDOW MOTOR RH (WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM) Connector Color WHITE Terminal No. Wire Signal Name 1 L/B — 2 L/R — 2 L/R — 3 G/W — 4 G/R — 4 G/R — 5 G/W — 6 W/B — 6 W/B —

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.

FRONT POWER WINDOW SWITCH [LH&RH FRONT ANTI-PINCH-COUPE]

< 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 mal- function	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 up- dated 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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NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH [LH&RH FRONT ANTI-PINCH-COUPE]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH**

Diagnosis Procedure

INFOID:0000000001717102

$oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-36, "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-119, "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-119, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace the malfunctioning parts.

$oldsymbol{4}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-119, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000001717103 1. CHECK POWER WINDOW MOTOR LH В Check power window motor LH. Refer to PWC-123, "DRIVER SIDE: Component Function Check". C Is the inspection result normal? YES >> Inspection End. NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". D Е F Н J L

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PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000001717104

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

Check power window and door lock/unlock switch RH.

Refer to PWC-121, "PASSENGER SIDE: 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-139, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the malfunctioning parts.

3. CHECK POWER WINDOW MOTOR RH CIRCUIT

Check power window motor RH circuit.

Refer to PWC-125, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH&RH FRONT ANTI-PINCH-COUPE]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-112, "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-127, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

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

Diagnosis Procedure

INFOID:0000000001717108

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-112, "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-129, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000001717109

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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-127, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (PASSENGER SIDE)

Diagnosis Procedure

INFOID:0000000001717110

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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-129, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

INFOID:0000000001717111

Diagnosis Procedure

1. CHECK DOOR SWITCH

Check door switch.

Refer to PWC-133, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000001717112

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-112</u>, "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 LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check door lock assembly LH (key cylinder switch).

Refer to PWC-135, "Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

[LH&RH FRONT ANTI-PINCH-COUPE] < SYMPTOM DIAGNOSIS > KEYLESS POWER WINDOW DOWN DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000001717113 1. CHECK INTELLIGENT KEY FUNCTION В Check Intelligent Key function. Refer to SEC-12, "System Description". C Is the inspection result normal? >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". YES NO >> Replace BCM. Refer to BCS-88, "Removal and Installation". D Е F Н

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-COUPE]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000001717114

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

Replace main power window and door lock/unlock switch.

Refer to <u>PWC-175</u>, "Removal and Installation". After that, <u>PWC-120</u>, "POWER WINDOW MAIN SWITCH: <u>Special Repair Requirement"</u>.

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PRECAUTION

PRECAUTIONS

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

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 SR 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 SR 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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PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH&RH FRONT ANTI-PINCH-COUPE]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

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 ANTI-PINCH-COUPE]

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

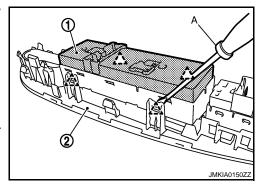
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

Do not bend the pawl of power window main switch finisher. NOTE:

The same procedure is also performed for passenger side power window switch.



INSTALLATION

Installation is in the reverse order of removal.

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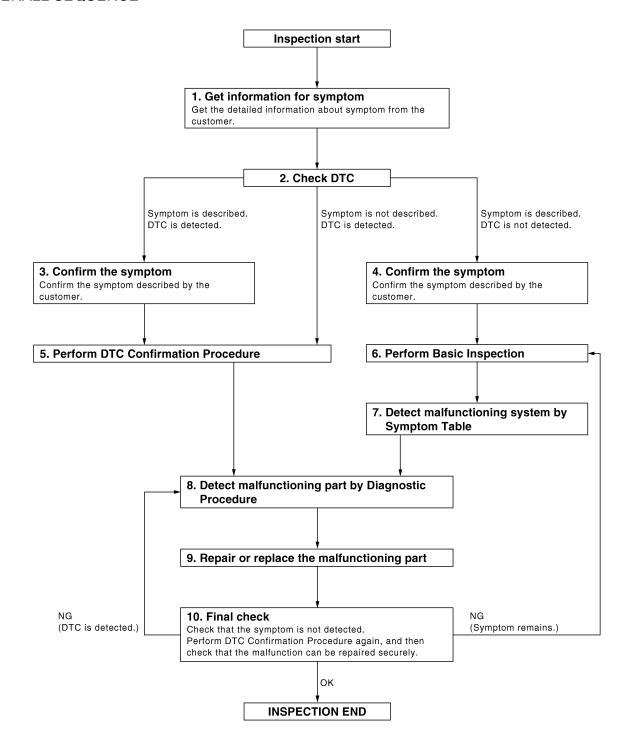
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT ANTI-PINCH-SEDAN]

1. GET INFORMATION FOR SYMPTOM

Get the detailed information from the customer about the symptom (the condition and the environment when the incident/malfunction occurred).

>> GO TO 2

2. CHECK DTC

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

Is any symptom described and any DTC detected?

Symptom is described, DTC is displayed>>GO TO 3

Symptom is described, DTC is not displayed>>GO TO 4

Symptom is not described, DTC is displayed>>GO TO 5

$3.\,$ CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 5

4. CONFIRM THE SYMPTOM

Confirm the symptom described by the customer.

Connect CONSULT-III to the vehicle in "DATA MONITOR" mode and check real time diagnosis results.

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

>> GO TO 6

${f 5.}$ PERFORM DTC CONFIRMATION PROCEDURE

Perform DTC Confirmation Procedure for the displayed DTC, and then check that DTC is detected again. At this time, always connect CONSULT-III to the vehicle, and check diagnostic results in real time. If two or more DTCs are detected, refer to BCS-83, "DTC Inspection Priority Chart" and determine trouble diagnosis order.

NOTE:

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

Is DTC detected?

YES >> GO TO 8

NO >> Refer to GI-42, "Intermittent Incident".

6. PERFORM BASIC INSPECTION

Perform PWC-176, "Work Flow".

Inspection End>>GO TO 7

. DETECT MALFUNCTIONING SYSTEM BY SYMPTOM TABLE

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

PWC-177

>> GO TO 8

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DIAGNOSIS AND REPAIR WORKFLOW

[LH&RH FRONT ANTI-PINCH-SEDAN]

8. DETECT MALFUNCTIONING PART BY DIAGNOSTIC PROCEDURE

Inspect according to Diagnostic Procedure of the system.

NOTE:

The Diagnostic Procedure described based on open circuit inspection. A short circuit inspection is also required for the circuit check in the Diagnostic Procedure.

<u>Is malfunctioning part detected?</u>

YES >> GO TO 9

< BASIC INSPECTION >

NO >> Check voltage of related BCM terminals using CONSULT-III.

9. REPAIR OR REPLACE THE MALFUNCTIONING PART

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

>> GO TO 10

10. FINAL CHECK

When DTC was detected in step 2, perform DTC Confirmation Procedure or Component Function Check again, and then check that the malfunction have been repaired securely.

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

Does the symptom reappear?

YES (DTC is detected)>>GO TO 8

YES (Symptom remains)>>GO TO 6

NO >> Inspection End.

INSPECTION AND ADJUSTMENT

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[LH&RH FRONT ANTI-PINCH-SEDAN] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-В scription INFOID:0000000003220469 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 D Retained power operation ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Spe-Е cial Repair Requirement INFOID:00000000003220470 INITIALIZATION PROCEDURE Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more. 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 4 seconds or more. Н 5. Inspect anti-pinch function. CHECK ANTI-PINCH FUNCTION 1. Fully open the door window. 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. **PWC** It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-228, "Fail Safe". Perform initial setting when auto-up operation or anti-pinch function does not operate normally. L • Finish initial setting. Otherwise, next operation cannot be done. 1. Auto-up operation 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 Ν INFOID:000000000322047 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:0000000003220472

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 ANTI-PINCH-SEDAN]

- 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 4 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:

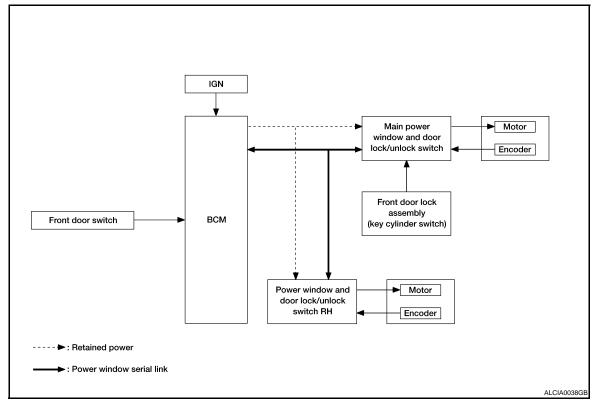
- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-228, "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.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000003220474

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 seconds over)			
Encoder	Encoder pulse signal			
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal	Power window control	Front power window motor	
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	r ower window control		
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

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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 more than 1 second 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 more than 1 second to perform CLOSE operation of the door glass.

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

 Hold door key cylinder to UNLOCK position for more than 1 second 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^(NOTE) 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.

NOTE:

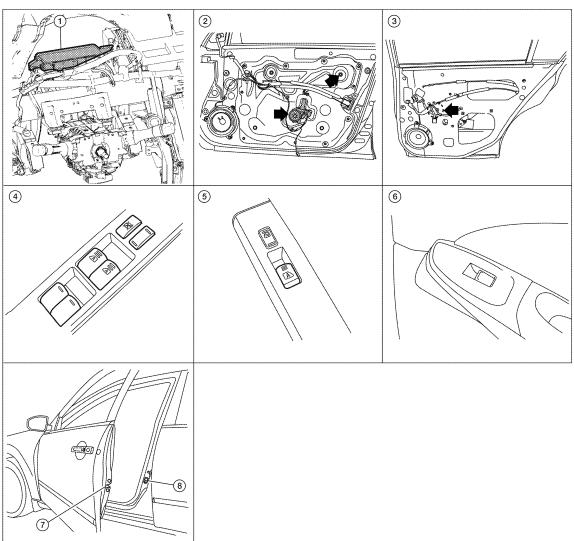
Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to SEC-202, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

NOTE:

Use CONSULT-III to change settings.

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

Component Parts Location



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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

- 1. BCM M16, M17, M18, M19 (view with instrument panel removed)
- 4. Main power window and door lock/ unlock switch D7, D8
- 7. Front door lock assembly LH (key cylinder switch) D10
- 2. Front power window motor LH D9, RH D104
- 5. Power window and door lock/unlock 6. switch RH D105
- 8. Front door switch LH B8, RH B108
- 3. Rear power window motor LH D204, RH D304
- Rear power window switch LH D203, RH D303

Component Description

INFOID:0000000003220476

FRONT WINDOW ANTI-PINCH SYSTEM

Component	Function
BCM	Supplies power supply to power window switch.Controls retained power.
Main power window and door lock/unlock switch	 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	 Controls front power window motor RH. Controls anti-pinch operation of front power window RH.
Rear power window switch	Controls rear power window motors LH and RH.
Front power window motor LH	 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.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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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-85, "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	Diagnosis mode	
System	Sub system selection item WORK		DATA MONITOR	ACTIVE TEST	
BCM	BCM	×			
RAP system	RETAINED PWR		×		

RETAIND PWR

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

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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.

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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

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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? <u>Is the inspection result normal?</u>

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

NO >> Refer to PWC-186, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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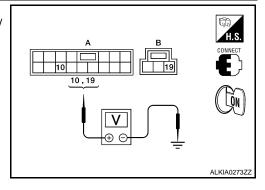
Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.

2. Check voltage between main power window and door lock/ unlock switch connectors (A and B) and ground.

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



Is the measurement value within the specification?

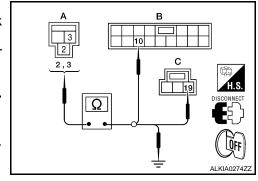
YES >> GO TO 3 NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

- 2. Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connectors (B and C).

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
WTO (A)	2	D8 (C)	19	163



4. Check continuity between BCM connector (A) and ground.

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

BCM connector	Terminal		Continuity
M16 (A)	3	Ground	No
WITO (A)	2	INO	INO

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- 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-255, "Removal and Installation"

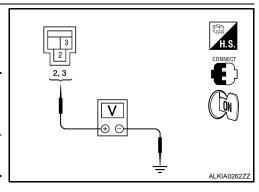
After that, refer to PWC-179, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> Repair or replace harness.

CHECK BCM OUTPUT SIGNAL

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

	Voltage (V) (Approx.)			
(+)				
BCM connector	Terminal	(-)	(11 -)	
M16	3	Ground	Battery voltage	
INITO	2	Ground	Dattery Voltage	



Is the measurement value within the specification?

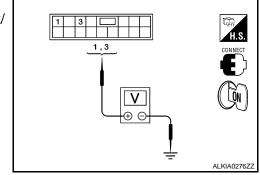
>> Check main power window and door lock/unlock switch output signal (rear power window switch YES LH) GO TO 5

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-88, "Removal and Installation".

${f 5.}$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-ER WINDOW SWITCH LH)

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



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Te	erminal				
(+)		Window	Voltage (V)		
Main power window and door lock/unlock switch connector		(–)	condition	(Approx.)	
	1		UP	Battery voltage	
D7	'	Ground	DOWN	0	
DI	3	Giodila	UP	0	
	3		DOWN	Battery voltage	

Is the measurement value within the specification?

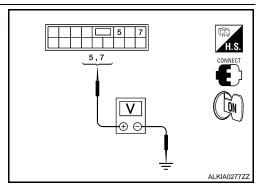
YES >> GO TO 7

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-255, "Removal and <a href="Installation". After that, refer to PWC-179, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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 connector and ground.

Terminal				
(+)				
Main power win- dow and door lock/unlock switch connector	Terminal	(–)	Window condition	Voltage (V) (Approx.)
	7		UP	Battery voltage
D7	,	Ground	DOWN	0
Di .	5	Giodila	UP	0
	3	-	DOWN	Battery voltage



Is the measurement value within the specification?

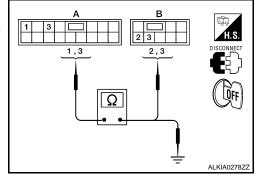
YES >> GO TO 8

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-255, "Removal and Installation".

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

- 1. Turn ignition switch OFF.
- 2. Disconnect 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 (A)	1	D203 (B)	2	Yes
DI (A)	3	D203 (B)	3	162



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

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	1	Ground	No
DT (A)	3		NO

Is the inspection result normal?

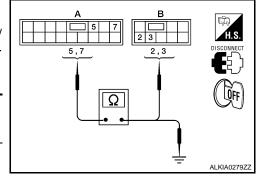
YES >> GO TO 9

NO >> Repair or replace harness.

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

- Turn ignition switch OFF.
- Disconnect rear power window switch RH.
- 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 (A)	5	D303 (B)	3	Yes
D7 (A)	7	Б303 (В)	2	162



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

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	5	Ground	No
DI (A)	7		NO

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair or replace harness.

$oldsymbol{9}.$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-189, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident". YES

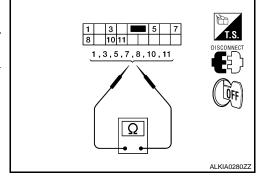
NO >> Replace main power window and door lock/unlock switch. After that, refer to PWC-179, "ADDI-TIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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

Check main power window and door lock/unlock switch.

Terr	minal	Main power window and door lock/un- lock switch condition		Continuity
10	1	Rear LH	UP	
10	7	Rear RH	OF .	
1	3	Rear LH	NEUTRAL	Yes
5	7	Rear RH	NEOTRAL	165
10	3	Rear LH	DOWN	
10	5	Rear RH	DOWN	



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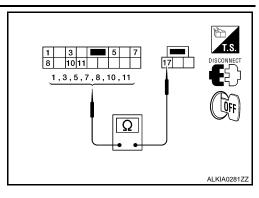
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[LH&RH FRONT ANTI-PINCH-SEDAN]

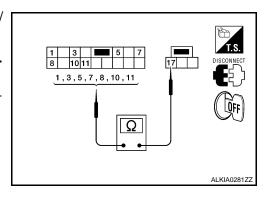
Check continuity between main power window and door lock/ unlock switch (power window lock switch). (Lock operation).

Tern	ninal	Main power window and door lock/unlock switch condition				Continuity
3		Rear LH	Rear LH UP			
5		Rear RH	O1			
1		Rear LH				
3	17		NEUTRAL	No		
5	17	Rear RH				
7		Near Kir				
1		Rear LH	DOWN			
7		Rear RH	DOWN			



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

Terr	minal	Main power window and door lock/unlock switch condition		I		Continuity
3		Rear LH	Rear LH UP			
5		Rear RH	OF .			
1		Rear I H	Rear LH NEUTRAL	Rear I H		
3	17	Real Ln		Yes		
5	17	Rear RH	NEOTIVE			
7		rtour tit				
1		Rear LH	DOWN			
7		Rear RH	BOWN			



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-108, "Removal and <a href="Installation". After that, refer to PWC-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "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-42, "Intermittent Incident".

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-179</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-203, "DRIVER SIDE : Component Function Check"

FRONT POWER WINDOW SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

FRONT POWER WINDOW SWITCH: Description

 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

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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-191, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

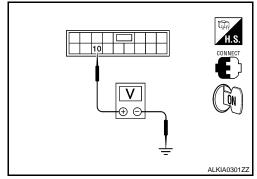
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

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.

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



Is the measurement value within the specification?

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

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect BCM and power window and door lock/unlock switch
- Check continuity between BCM connector (A) and power window and door lock/unlock switch RH connector (B).

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

Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	2	Ground	No

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Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace harness.

 $3.\,$ CHECK GROUND CIRCUIT

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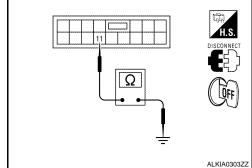
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< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

- 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-108, "Removal and Installation". After

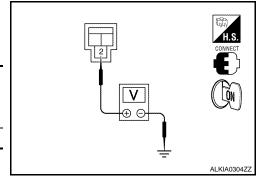
that, refer to PWC-192, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

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.

	V I 00		
(+)		(-)	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	, , ,
M16	2	Ground	Battery voltage



Is the measurement value within the specification?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-108</u>, "Removal and Installation". After that, refer to <u>PWC-192</u>, "FRONT <u>POWER WINDOW SWITCH</u>: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "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-42, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-179</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-205, "PASSENGER SIDE : Component Function Check".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

BCM supplies power.

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

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

REAR POWER WINDOW SWITCH: Component Function Check

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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-193, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

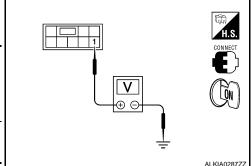
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Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

	Terminal					
	(+)			Condition	Voltage (V)	
•	ver window connector	Terminal	(-)		(Approx.)	
LH	D203	1	Ground	Ignition switch	Battery voltage	
RH	D303	I	Giodila	ON	battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2 (Rear power window switch LH)

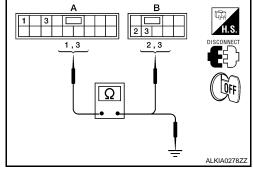
YES >> GO TO 3 (Rear power window switch RH)

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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and rear power window switch LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D7 (A)	1	D203 (B)	2	Yes
DI (A)	3	D203 (D)	3	163



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

Main power window and door lock/un- lock switch connector	Terminal		Continuity
D7 (A)	1	Ground	No
Dr (A)	3		NO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

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

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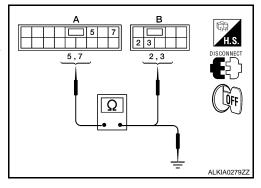
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< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

- 1. 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 switch connector (A) and rear power window switch RH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D7 (A)	5	D303 (B)	3	Yes
DI (A)	7	D303 (B)	2	163



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

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	5	Ground	No
Dr (A)	7		NO

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace harness.

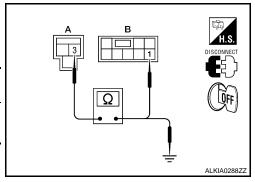
4. CHECK HARNESS CONTINUITY

- 1. Disconnect BCM and rear power window switch.
- 2. Check continuity between BCM connector (A) and rear power window switch connector (B).

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16 (A)	3	LH	D203 (B)	1	Yes
WHO (A)	3	RH	D303 (B)		165

3. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	3	Giodila	No



INFOID:0000000003220491

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-194, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to PWC-108, "Removal and Installation".

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

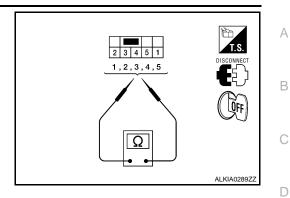
 ${f 1}$.CHECK REAR POWER WINDOW SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

Check rear power window switch.

Terr	Terminal Power window switch condition		Continuity
1	5	UP	
3	4	OF .	
3	4	NEUTRAL	Yes
5	2	NEOTIVAL	163
1	4	DOWN	
5	2	DOWN	



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-108. "Removal and Installation".

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POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000003220492

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

DRIVER SIDE : Component Function Check

INFOID:0000000003220493

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-196, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

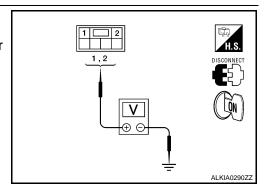
INFOID:0000000003220494

Front Power Window Motor LH Circuit Check

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

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

Т	erminal		Maria		
(+)	(+)		Main power win- dow and door lock/	Voltage (V)	
Power window motor LH con- nector	Terminal	(–)	unlock switch con- dition	(Approx.)	
	2		UP	Battery voltage	
D9	2	Ground	DOWN	0	
D9	1	Giodila	UP	0	
	'		DOWN	Battery voltage	



Is the measurement value within the specification?

YES >> GO TO 2

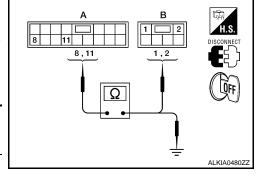
NO

>> Replace main power window and door lock/unlock switch. Refer to PWC-108, "Removal and <a href="Installation". After that, refer to PWC-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH con- nector	Terminal	Continuity
D7 (A)	8	D9 (B)	2	Yes
<i>DT</i> (A)	11	D9 (D)	1	163



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

[LH&RH FRONT ANTI-PINCH-SEDAN]

INFOID:0000000003220497

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Main power window and door lock/unlock switch connector	Terminal		Continuity		
D7 (A)	8	Ground	No		
D7 (A)	11		No		
s the inspection result norr	nal?		<u> </u>		
YES >> GO TO 3 NO >> Repair or repla	ce harness				
CHECK POWER WIND		·			
Check front power window		`			
Refer to PWC-197, "DRIVE		mponent Insp	ection".		
s the inspection result norr					
YES >> Check intermitt NO >> Replace power	tent incident.	Refer to GI-4	2, "Intermittent Inci	dent".	<u>n"</u> . After that, refer to
			<u>ir Requirement"</u> .	<u>ai ariu iristaliatioi</u>	T. Alter that, refer to
ORIVER SIDE : Com	ponent Ins	spection			INFOID:0000000003220495
	•	•			
COMPONENT INSPECT					
. CHECK FRONT POWE	R WINDOW	MOTOR LH			
Does motor operate by con	necting the b	oattery voltage	directly to power	window motor?	
	Term	inal			_
	(+)	(-)	Mo	otor condition	
	1	2		DOWN	<u> </u>
	2	1		UP	
s the inspection result norr	nal?				_
YES >> Front power wi			D-f t- 0\\ 40	Damas and Inc	And the state of t
			Refer to <u>GW-19, "</u> ial Repair Requirer		stallation". After that,
ORIVER SIDE : Spec		•			INFOID:000000003220496
•	•	•	5110		INFOID.000000003220490 -
. PERFORM INITIALIZA	TION PROCE	EDURE			
Perform initialization proced			DEDLACING CON	TDOLUNIT : Co.	sial Danais Danvisa
Refer to <u>PWC-179, "ADDIT</u> <u>ment"</u> .	IONAL SER	VICE WHEN I	REPLACING CON	IROL UNIT : Spe	eciai Repair Require-
s the inspection result norr	nal?				
YES >> GO TO 2					
_		Refer to GI-4	2, "Intermittent Inci	<u>dent"</u> .	
2. CHECK ANTI-PINCH C	PERATION				
Check anti-pinch operation Refer to <u>PWC-179, "ADDIT</u>				TDOL LINIT : Soc	ocial Panair Poquiro
Refer to <u>PWC-179, "ADDIT</u> <u>ment"</u> .	IONAL SEK	VICE WITEIN I	ALFLACING CON	TRUL UNIT: 506	zciai repaii require-
ls the inspection result norr	mal?				
YES >> Inspection End		DOIDE C		N	
NO >> Refer to PWC-	<u> 203, "DRIVE</u>	R SIDE : Com	ponent Function C	<u>ineck"</u> .	

PASSENGER SIDE

PASSENGER SIDE : Description

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:0000000003220498

${f 1}$. CHECK POWER WINDOW MOTOR CIRCIUT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-198, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

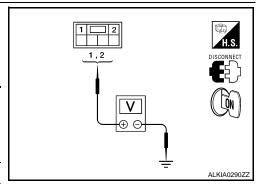
INFOID:0000000003220499

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



Is the measurement value within the specification?

YES >> GO TO 2

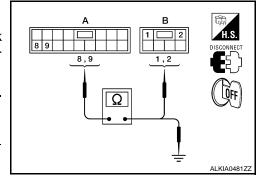
NO

>> Replace power window and door lock/unlock switch RH. Refer to PWC-108, "Removal and Installation". After that, refer to PWC-192, "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.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	8	D104 (B)	2	Yes
D105 (A)	9	D104 (B)	1	162



Check continuity between power window and door lock/unlock switch RH connector (A) and ground.

Power window and door lock/unlock switch RH con- nector	Terminal	Ground	Continuity
D105 (A)	8		No
D105 (A)	9		NO

Is the inspection result normal?

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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-199, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

COMPONENT INSPECTION

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

>> Replace front power window motor RH. Refer to GW-19, "Removal and Installation". After that, NO refer to PWC-199, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE : 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	
(+)	(–)	Wolor condition	
1	2	DOWN	
2	1	UP	

Is the inspection result normal?

YES >> Front power window motor RH is OK.

>> Replace front power window motor RH. Refer to GW-19, "Removal and Installation". After that, NO refer to PWC-199, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2

>> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-205, "PASSENGER SIDE: Component Function Check".

REAR LH

REAR LH: Description

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

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?

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PWC-199

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< COMPONENT DIAGNOSIS >

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-200, "REAR LH: Diagnosis Procedure"

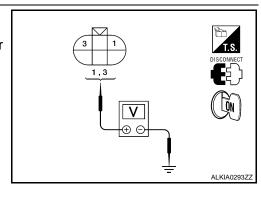
REAR LH: Diagnosis Procedure

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch LH. Refer to PWC-194, "REAR POWER WINDOW SWITCH: Component Inspection".

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- 3. Check continuity between rear power window switch LH connector (A) and rear power window motor LH connector (B).

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203 (A)	5	D204 (B)	1	Yes
D203 (A)	4	D204 (D)	3	163

Check continuity between rear power window switch LH connector (A) and ground.

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Rear power window switch LH connector	Terminal		Continuity
D203 (A)	5	Ground	No
	4		INO

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-201, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to <u>GW-14</u>, "<u>Removal and Installation</u>".

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INFOID:0000000003220506

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REAR LH: Component Inspection

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	
(+)	(–)	Wotor 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 <u>GW-14, "Removal and Installation"</u>.

REAR RH

REAR RH: Description

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

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-201, "REAR RH: Diagnosis Procedure".

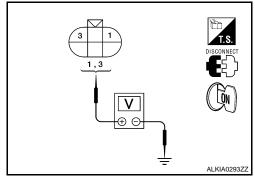
REAR RH: Diagnosis Procedure

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.
- Check voltage between rear power window motor RH connector and ground.

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



Is the measurement value within the specification?

YES >> GO TO 2

NO >> Check rear power window switch RH. Refer to PWC-194, "REAR POWER WINDOW SWITCH: Component Inspection".

2. CHECK HARNESS CONTINUITY

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- 3. Check continuity between rear power window switch RH connector (A) and rear power window motor RH connector (B).

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D303 (A)	5	D304 (B)	1	Yes
D303 (A)	4	D304 (B)	3	163

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

A	B 3 1	H.S. T.S. DISCONNECT OFF
	=	ALKIA0294ZZ

Rear power window switch RH connector	Terminal	01	Continuity
D303 (A)	5	Ground	No
D303 (A)	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-202, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-14</u>, "<u>Removal and Installation</u>".

REAR RH : Component Inspection

INFOID:0000000003220509

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
(+)	(-)	Wotor 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 <u>GW-14</u>, "Removal and Installation".

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ENCODER

DRIVER SIDE

DRIVER SIDE: Description

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

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-203, "DRIVER SIDE : Diagnosis Procedure"

DRIVER SIDE: Diagnosis Procedure

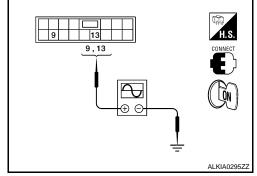
Encoder Circuit Check

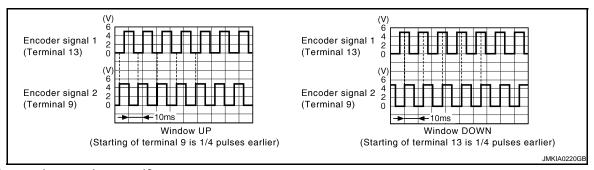
1. CHECK ENCODER OPERATION

1. Turn ignition switch ON.

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

Terminals				
(+)			Signal	
Main power window and door lock/unlock switch connector	Terminal	(–)	(Reference value)	
D7	9	Ground	Refer to following signal	
D1	13	Ground	Refer to following signal	





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

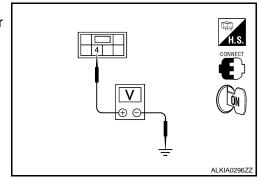
NO >> GO TO 2

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

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

Terminal			
(+)			Voltage (V)
Front power win- dow motor LH con- nector	Terminal	(-)	(Approx.)
D9	4	Ground	10



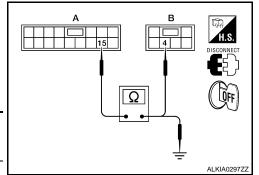
Is the measurement value within the specification?

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.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

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



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

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

Is the inspection result normal?

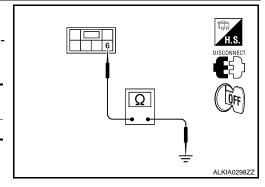
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-255, "Removal and <a href="Installation". After that, refer to PWC-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 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?

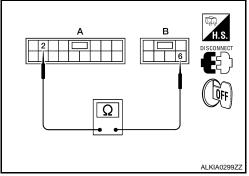
YES >> GO TO 6 NO >> GO TO 5

5. CHECK HARNESS CONTINUITY 2

[LH&RH FRONT ANTI-PINCH-SEDAN]

- Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/ unlock switch connector (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power win- dow motor LH con- nector	Terminal	Continuity
D7 (A)	2	D9 (B)	6	Yes



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-255, "Removal and Installation". After that, refer to PWC-190, "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 (A) and front power window motor LH connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	3	Yes
DT (A)	13	D9 (B)	5	165

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Check continuity between main power window and door lock/ unlock switch connector (A) and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	9	Ground	No
D7 (A)	13		110

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to PWC-255, "Removal and Installation". After that, refer to PWC-197, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE: Description

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

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-206, "PASSENGER SIDE: Diagnosis Procedure". **PWC**

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PWC-205

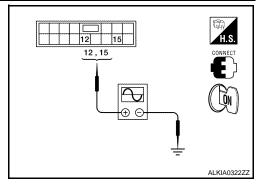
PASSENGER SIDE: Diagnosis Procedure

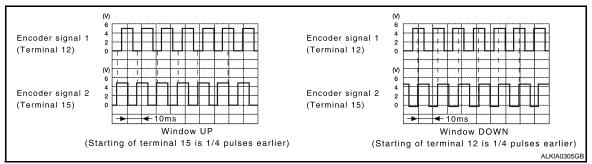
INFOID:0000000003220515

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.

(+)			Signal
Power window and door lock/unlock switch RH connector	Terminal	(-)	(Reference value)
D105	12	Ground	Refer to following
D103	15	Ground	signal





Is the inspection result normal?

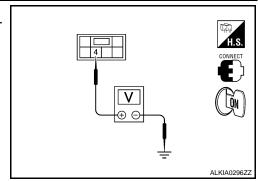
YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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.

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

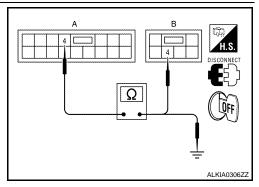


Is the measurement value within the specification?

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.
- Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).



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

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

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

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-255, "Removal and Installation". After that, refer to PWC-192, "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.
- Check continuity between front power window motor RH connector and ground.

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

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Is the inspection result normal?

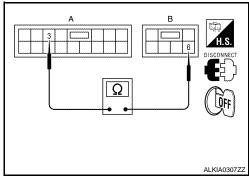
YES >> GO TO 6 NO >> GO TO 5

CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH.

Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

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



Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH.

Refer to <u>PWC-255</u>, "Removal and Installation". After that, refer to <u>PWC-192</u>, "FRONT <u>POWER WINDOW SWITCH</u>: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

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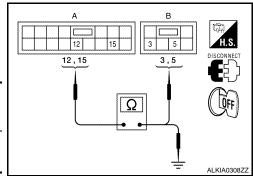
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[LH&RH FRONT ANTI-PINCH-SEDAN]

- 1. Disconnect power window and door lock/unlock switch RH.
- 2. Check continuity between power window and door lock/unlock switch RH connector (A) and front power window motor RH connector (B).

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	5	Yes
D100 (A)	15	D 104 (B)	3	163



Check continuity between power window and door lock/unlock switch RH connector (A) and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	12		No
D 103 (A)	15		INO

Is the inspection result normal?

- YES >> Replace front power window motor RH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>". After that, refer to <u>PWC-199</u>, "<u>PASSENGER SIDE</u>: <u>Special Repair Requirement</u>".
- NO >> Repair or replace harness.

DOOR SWITCH

Description

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

Component Function Check

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-185, "RETAIND PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

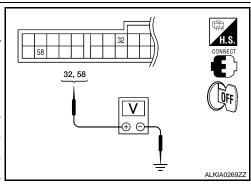
NO >> Refer to PWC-209, "Diagnosis Procedure".

Diagnosis Procedure

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

	Terminals				
(+)			Door condition		Voltage (V) (Approx.)
BCM connector	Terminal	(-)			
	32		Front door	OPEN	0
M18	32	Ground	RH	CLOSE	Battery voltage
	Giodila	Front door	OPEN	0	
	56	58		CLOSE	Battery voltage



Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-88, "Removal and Installation".

NO >> GO TO 2

2. CHECK HARNESS CONTINUITY

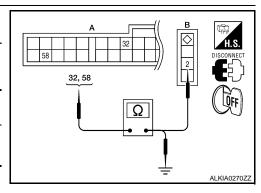
1. Turn ignition switch OFF.

Disconnect BCM and front door switch.

Check continuity between BCM connector (A) and front door switch connector (B).

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M18 (A)	32	RH: B108 (B)	2	Yes
WTO (A)	58	LH: B8 (B)	2	163

4. Check continuity between BCM connector (A) and ground.



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BCM connector	Terminal		Continuity
M18 (A)	32	Ground	No
WTO (A)	58		INO

Is the inspection result normal?

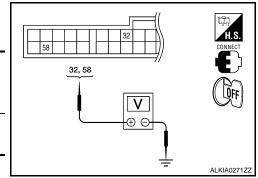
YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

	Terminal		Malkana (M)
(-	+)	(-)	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	(11 /
M18	32	Ground	Battery voltage
IVITO	58	Giodila	Dattery Voltage



Is the measurement value within the specification?

YES >> GO TO 4

NO >> Replace BCM. Refer to BCS-88, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-210, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door switch.

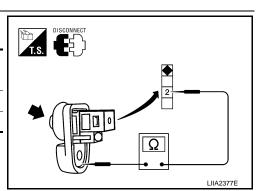
Component Inspection

INFOID:0000000003220519

1. CHECK FRONT DOOR SWITCH

Check front door switches.

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



Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

DOOR KEY CYLINDER SWITCH

Description

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

Component Function Check

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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-201, "COMMON ITEM: CONSULT-III Function".

Monitor item	Cond	dition
KEY CYL LK-SW	Lock	: ON
RET GTL ER-SW	Neutral / Unlock	: OFF
KEY CYL UN-SW	Unlock	: ON
RET CTL UN-SW	Neutral / Lock	: OFF

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-211, "Diagnosis Procedure".

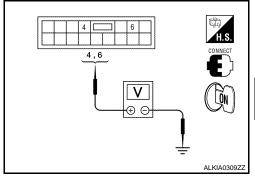
Diagnosis Procedure

INFOID:0000000003220522

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Terminals					
(+)				Voltage (V)	
Main power window and door lock/unlock switch connector	Terminal	(–)	Key position	(Approx.)	
	4		Lock	0	
D7	07 6	Ground	Neutral/Unlock	5	
DI.		Giodila	Unlock	0	
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-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

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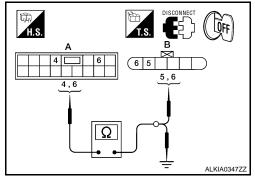
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

- 1. Turn ignition switch OFF.
- 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 (A) and front door lock assembly LH (key cylinder switch) connector (B).

Main power window and door lock/unlock switch connector	Terminal	Front door lock as- sembly LH (key cylin- der switch) connector	Terminal	Continuity
D7 (A)		D10 (B)	6	Yes
D7 (A)	6	Б10 (В)	5	162



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

Main power window and door lock/unlock switch connector	Terminal		Continuity
D7 (A)	4	Ground	No
DI (A)	6		140

Is the inspection result normal?

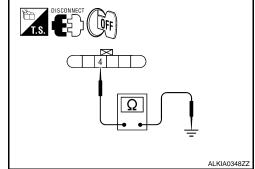
YES >> GO TO 3

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		Yes



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-212, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

NO >> Replace front door lock assembly LH (door key cylinder switch). After that, refer to PWC-213. "Special Repair Requirement".

Component Inspection

INFOID:0000000003220523

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

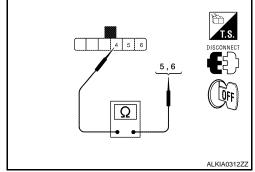
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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

Term	inal			
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity	
5	4	Unlock	Yes	
3		Neutral/Lock	No	
6	6	Lock	Yes	
6		Neutral/Unlock	No	



Is the inspection result normal?

YES >> Key cylinder switch is OK.

>> Replace front door lock assembly LH (key cylinder switch). After that, refer to PWC-213, "Special NO Repair Requirement".

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000003220525

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:0000000003220526

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-201, "COMMON ITEM: CONSULT-III Function".

Monitor item		Condition	
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDL UNLOCK 3W	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-214, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

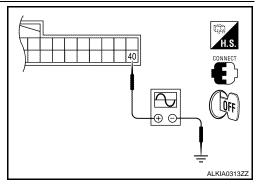
POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000003220527

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 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			0: 1
(+)		()	Signal (Reference value)
BCM connector	Terminal	(–)	,
M18	40	Ground	(V) 15 10 5 0

Is the inspection result normal?

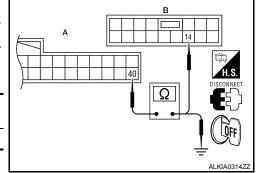
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM and main power window and door lock/unlock switch.
- 3. Check continuity between BCM connector (A) and main power window and door lock/unlock switch connector (B).

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



4. Check continuity between BCM connector (A) and ground.

BCM connector	Terminal	Ground	Continuity
M18 (A)	40	Giodila	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-255, "Removal and <a href="Installation". After that, refer to PWC-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

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

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

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to SEC-201, "COMMON ITEM: CONSULT-III Function".

Monitor item	(Condition	
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
ODE UNLOCK 3VV	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-216, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

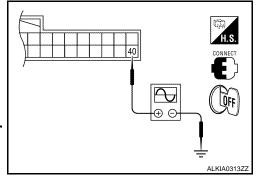
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

Power Window Serial Link Check

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

- 1. Remove Intelligent Key, and close the front door LH and RH.
- 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	(V) 15 10 5 0 10 ms



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Is the inspection result normal?

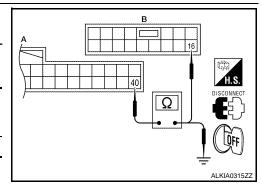
YES >> Power window serial link is OK.

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 (A) and power window and door lock/unlock switch RH connector (B).

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



4. Check continuity between BCM connector (A) and ground.

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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ВС	M connector	Terminal	Ground	Continuity	• -	Α
	M18 (A)	40	Ground	No	_	
Is the in	nspection resu					В
YES	>> Replace Installation Requirer	main power wir on". After that, renent".	ndow and door efer to <u>PWC-19</u>	r lock/unlock s 90, "POWER V	witch. Refer to <u>PWC-255, "Removal</u> /INDOW MAIN SWITCH: Special R	<u>and</u> epair
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PWC-217

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

POWER WINDOW LOCK SWITCH

Description INFOID:0000000003220531

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:0000000003220532

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-255, "Removal and Installation". After that, refer to PWC-218, "Special Repair Requirement".

NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:0000000003220533

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittenrt incident. Refer to GI-42, "Intermittent Incident".

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status	<u>.</u>
DOOD CW DD	Front door LH closed	OFF	
DOOR SW-DR	Front door LH opened	ON	
DOOD CW AC	Front door RH closed	OFF	
DOOR SW-AS	Front door RH opened	ON	
KEY CYLLK CM	Other than front door key cylinder LH LOCK position	OFF	
KEY CYL LK-SW	Front door key cylinder LH LOCK position	ON	
KEY OVELEN OW	Other than front door key cylinder LH UNLOCK position	OFF	
KEY CYL UN-SW	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-45, "Terminal Layout".

PHYSICAL VALUES

Refer to BCS-45, "Physical Values".

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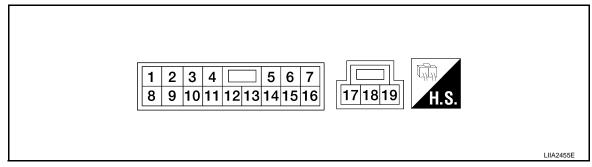
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POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Termina	al No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
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.	(V) 6 4 2 0 10 ms

POWER WINDOW MAIN SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

< ECU DIAGNOSIS >

Termina	al No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
				IGN SW ON	Battery voltage
10 (L/W)	Ground	RAP signal	Input	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.	(V) 6 4 2 0 10 ms
14 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
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

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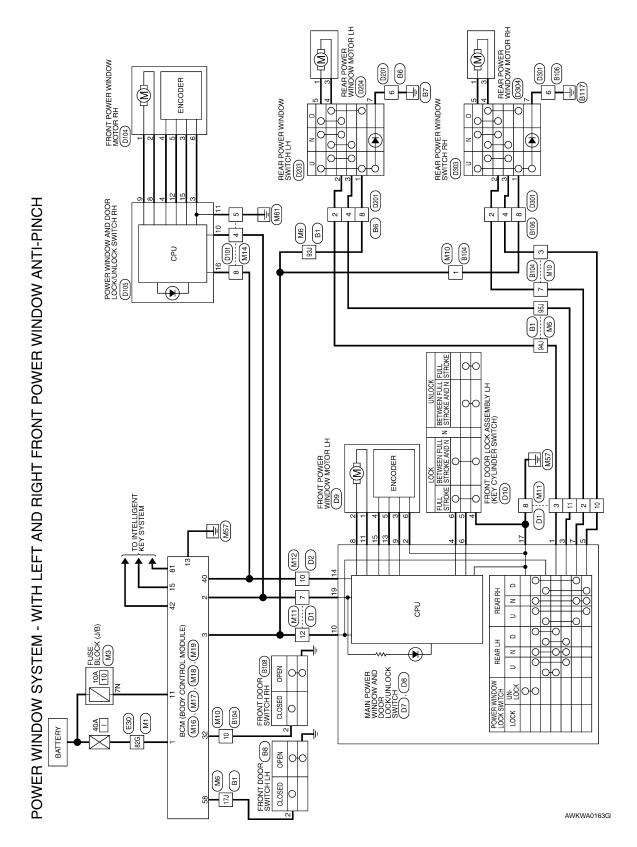
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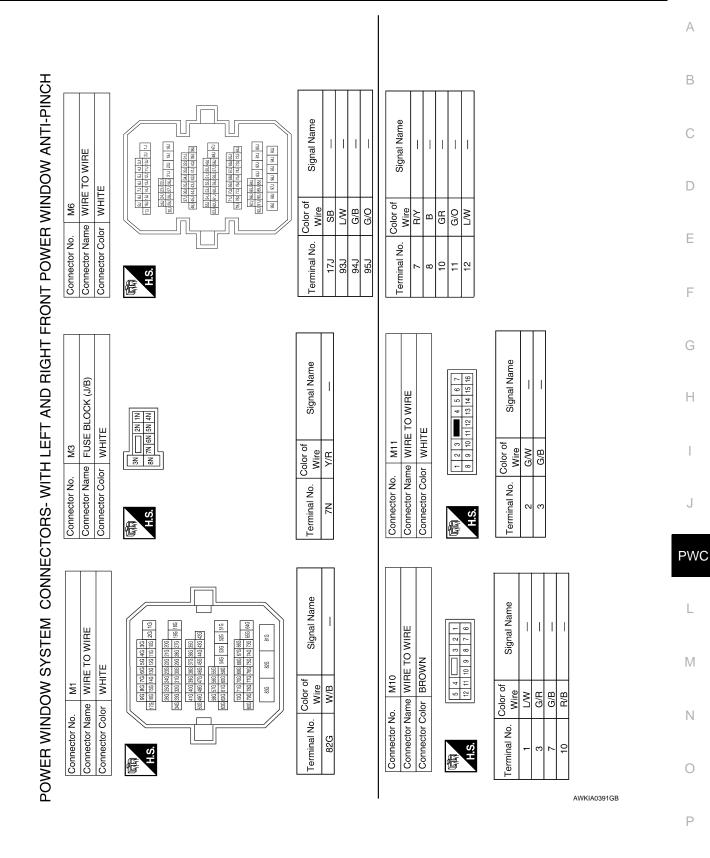
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Wiring Diagram





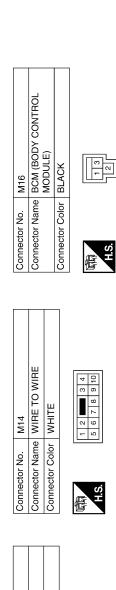
IGN_ON_LED Signal Name

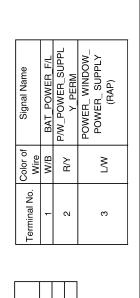
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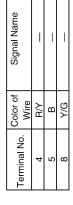
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Color of Wire

Terminal No.





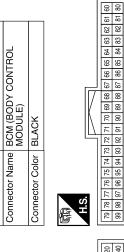


Signal Name	I	
Color of Wire	Y/G	
Terminal No.	10	

Connector Name | WIRE TO WIRE Connector Color WHITE

Connector No. M12

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



52 33
Color of Wire
-

Connector No.	M17
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE
H.S.	4 5 6 7 8 9 10 1112 1314 15 16 17 18 19

Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

GREEN

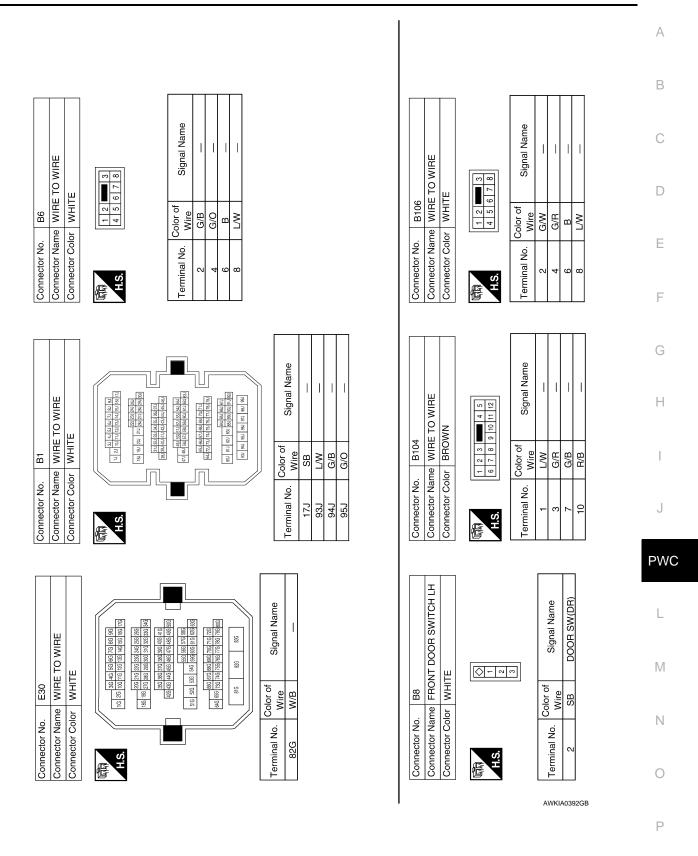
Connector Color

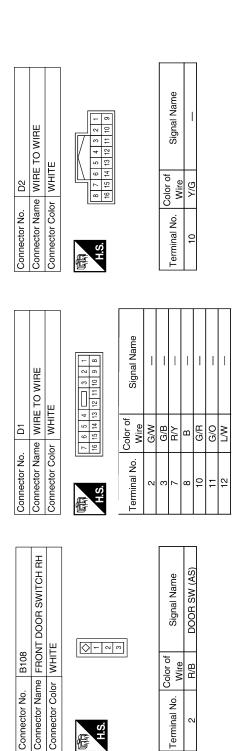
Signal Name	BAT_BCM_FUSE	GND1	ACC_LED
Color of Wire	Y/R	В	Y/L
Terminal No.	11	13	15

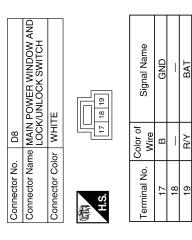
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POWER WINDOW MAIN SWITCH

[LH&RH FRONT ANTI-PINCH-SEDAN]







D7	Connector Name MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH	WHITE	1 2 3 4 7 5 6 7	8 9 10 11 12 13 14 15 16
Connector No.	Connector Name	Connector Color WHITE	匠	917



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POWER WINDOW MAIN SWITCH

[LH&RH FRONT ANTI-PINCH-SEDAN]

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Connector Name FRONT DOOR LOCK ASSEMBLY LH Connector Color WHITE	Connector No. D10	o. D10	Connector No. D101	D101
	Connector N	ame FRONT DOOR LOCK	Connector Name	WIRE TO WIRE
		ASSEMBLY LH	Connector Color	WHITE
	Connector	GBAV		

			3
Connector No.	80		
Connector Name		FRONT POWER WINDOW MOTOR LH	Connecto
tor Col	Connector Color WHITE	IE	Connecto
	<u>-</u> 8	4 B B B	H.S.
Terminal No.	Color of Wire	Signal Name	Terminal
	L/B	1	4
2	L/R		5
3	G/W	ſ	
			•

Signal Name	I	_	_	
Color of Wire	R/Y	В	5/A	
Ferminal No.	4	5	8	

Signal Name	GND	DOOR_KEY/C_ UNLOCK_SW	DOOR_KEY/C_ LOCK_SW
Color of Wire	В	В/Л	B/1
erminal No.	4	5	9

Terminal N	4	2		9		
Signal Name	-			1		ı
Solor of Wire	I/B	L/R	G/W	G/R	G/Y	W/B

•			
	Terminal No.	Color of Wire	Signal Name
	-	١	1
	2	-	1
	3	M/B	GND
	4	G/R	ENCODER POWER
	2	-	1
	9	1	1
	7	1	1
	8	L/R	UP
	6	I/B	DOWN
	10	R/Y	BATT
	11	В	GND
	12	G/Y	ENCODER SIG1
	13	ı	I
	14	1	I
	15	G/W	ENCODER SIG2
	16	۷/۲	MOO

	ı	ı	ı	ı		ı	ı	ı		
Connector No.		D105	05							
Connector Name POWER WINDOW ANI Connector Name SWITCH RH	Φ,	888	<u> </u>	띥꼭?	POWER WIN DOOR LOCK SWITCH RH	불옷ㅜ	25	≥₹	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH	_
Connector Color WHITE	_	W	l∓ I	ш						
恒	-	2	3	4	Ш	П	5 6	9	7	
Ų.	8	6	10	11	8 9 10 11 12 13 14 15 16	13	14	15	16	



Connector Name FRONT POWER WINDOW MOTOR RH	WHITE	1
Connector Name	Connector Color WHITE	管



Color of	Wire	8/П	Ы/Л
oly Icuim		1	2

Signal Name			1	I	-	_	
Color of Wire	B/T	L/R	G/W	G/R	G/Y	M/B	
erminal No.	1	2	3	4	5	9	

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Connector No.

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PEAR POWER WINDOW MOTOR LH GRAY GRAY for of Signal Name AR DOWN AB DOWN The Dow	Bank Motor RH Motor RH Motor RH GRAY GRAY Or of Signal Name JR UP LAB DOWN AB DOWN	
or No. D204 or Name REAR P MOTOR Or Color GRAY No. Wire L/B L/B		
Connector No. Connector Color Terminal No. W W A 4 4 4 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Connector No. Connector Color Terminal No. 2 2 2 4 4 6 6	
New Park	P303 REAR POWER WINDOW SWITCH RH WHITE Or of Signal Name IGN W UP WR DOWN))
		ا د
Connector No. Connector Name Connector Color Terminal No. W W A L L L L L L L L L L L L L L L L L	Connector No. Connector Name Connector Color H.S. Terminal No. No. 1 1 L. 2 6 6 6 6 6 6 6 6 7	8
Connector No. D201	Connector No. D301	

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.

POWER WINDOW MAIN SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

< 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 mal- function	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 up- dated 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 failsafe 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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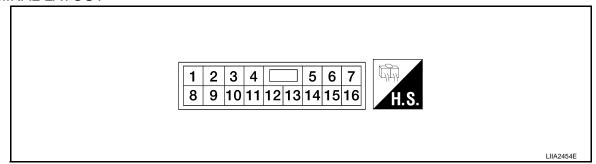
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FRONT POWER WINDOW SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
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.	(V) 6 4 2 0 10 ms JMKIA0070GB

FRONT POWER WINDOW SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

< ECU DIAGNOSIS >

Termi	nal No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
15 (G/W)	3	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
16 (Y/G)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms

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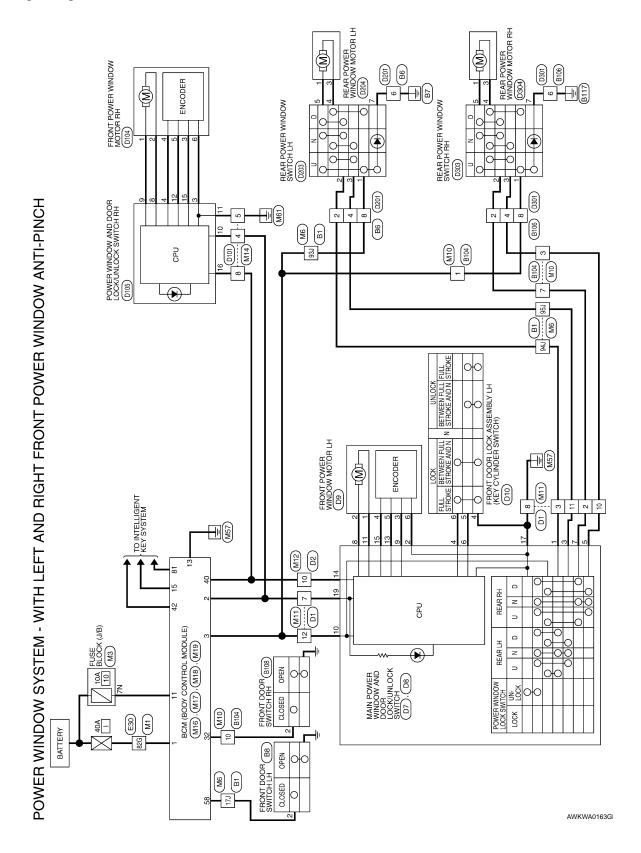
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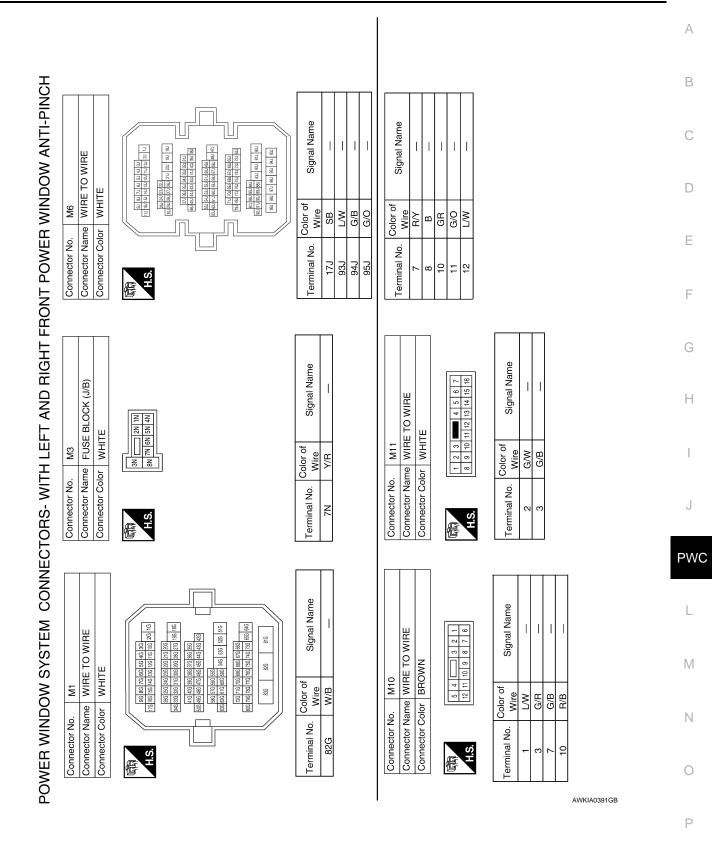
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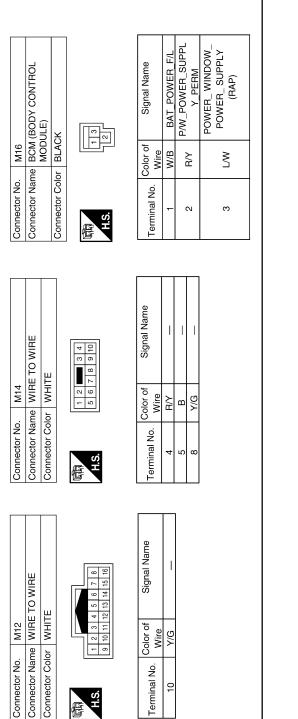
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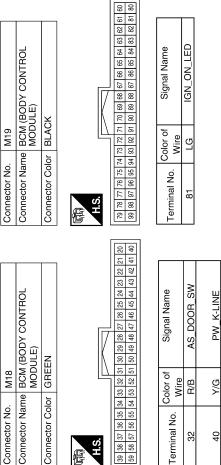
Wiring Diagram INFOID:000000003222257







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Connector Name Connector Color

Connector Name | BCM (BODY CONTROL | MODULE)

M17

Connector No.

WHITE

Connector Color

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Connector No.

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

Terminal No. 32

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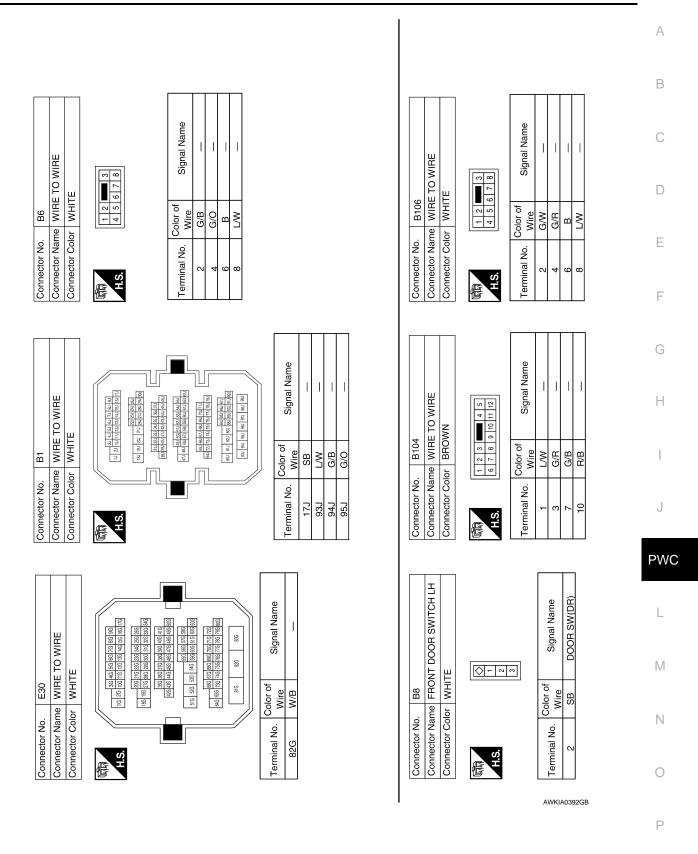
S/L LOCK LED DR_DOOR_SW

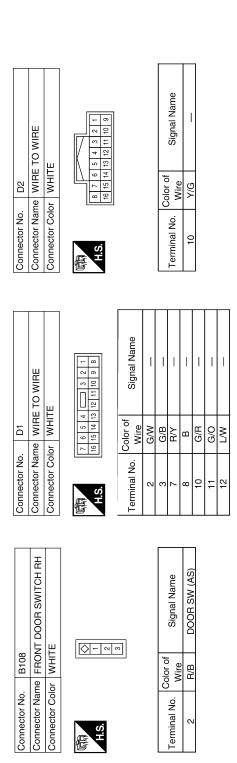
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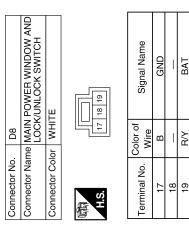
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FRONT POWER WINDOW SWITCH

[LH&RH FRONT ANTI-PINCH-SEDAN]







Terminal No.	Color of Wire	Signal Name
1	G/B	RL_UP
2	M/B	ENCODER GND
3	0/9	RL_DOWN
4	I/B	LOCK
5	G/R	RR_DOWN
9	L/R	UNLOCK
7	G/W	RR_UP
8	L/R	AS_UP
6	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.	Ľ	D7								
Connector Name AND LOCK/UNLOCK SWITCH	240	MAIN PC AND LOC SWITCH		SSX	ŠĶ	#5	×⊒	ΞQ	MAIN POWER WINDOW AND LOCK/UNLOCK SWITCH	N
Connector Color WHITE	_	Į	ΙĒ	ш						
E	-	2 3 4	3	4	Ш	П	2	9	7	
SΗ	8	6	10	11	12	8 9 10 11 12 13 14 15 16	14	15	9	



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FRONT POWER WINDOW SWITCH

[LH&RH FRONT ANTI-PINCH-SEDAN]

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onnector No. D10	D10	Connector No. D101	D101
nnector Name	Connector Name FRONT DOOR LOCK	Connector Name	Sonnector Name WIRE TO WIRE
	ASSEMBLY LH	Connector Color WHITE	WHITE
Sonnector Color GRAY	GRAY		

Connec	Connec	Connec	H.S.	Termina	4	5		9		
	FRONT POWER WINDOW MOTOR LH	世	4 5 6 2	Signal Name			1			
60		r WHITE	03	Color of Wire	I/B	L/R	G/W	G/R	G/Y	a/w
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	1	2	8	4	2	ď

Signal Name	-	1	
Color of Wire	R/Y	В	Y/G
Terminal No.	4	5	8

Signal Name	GND	DOOR_KEY/C_ UNLOCK_SW	DOOR_KEY/C_ LOCK_SW	
Color of Wire	В	ИЛ	8/1	
minal No.	4	2	9	

Termi						
Signal Name		I	1	1	I	1
Color of	NIE L/B	LΆ	G/W	G/R	G/Y	M/B
al No.						

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

Connector No.	H	D105	3	1 18		Z	⊱		D105 POWER WINDOW AND	⊆
Connector Name DOOR LOCK/UNLOCK	<u>e</u>	208	ğΈ	뜻	DOOR LOCK SWITCH RH	옷ㅜ	₹5	:∋	Ö	7×
Connector Color WHITE		×	l∓ I	ш						
										_
暨	-	2	က	4	2 3 4		5 6	9	7	
Ť	8	6	10	11	8 9 10 11 12 13 14 15 16	13	14	15	16	



Connector Na	Connector Co	
Connector Name FRONT POWER WINDOW MOTOR RH	WHITE	3 4 5 6
Connector Name	Connector Color WHITE	是 S'H

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	2	9	
	П	5	
	Ш	4	
	-	3	
_			_

D104

Connector No.

Color of	Wire	8/П	И/П
oly logical	IIIIIai NO.	1	2

Signal Name			1	ı	1	1	
Color of Wire	B/T	L/R	W/9	G/R	G/Y	M/B	
Ferminal No.	1	2	3	4	5	9	

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REAR POWER WINDOW MOTOR LH	GRAY	- 4 0 0 0 0	color of Signal Name	UR	1	L/B DOWN		1			D304	REAR POWER WINDOW MOTOR RH	GRAY	(E (O)	Color of Signal Name Wire	L/R UP		L/B DOWN			
Connector Name F	Connector Color C	H.S.	Terminal No. Wire	1	- 2				9		Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	-	- 2		4		9
REAR POWER WINDOW SWITCH LH	Щ	4 5 1	Signal Name	IGN	UP	DOWN	DOWN	₽ P	- GNS			Connector Name REAR POWER WINDOW SWITCH RH	В	4 5 1	Signal Name	IGN	UP	DOWN	DOWN	UP	1
	olor WHITE	2 3 4	Color of Wire	M	G/B	G/0	87	5	@	1	o. D303	ame REAR SWIT	olor WHITE	23 4	Color of Wire	N/I	G/W	G/R	L/B	L'A	1
Connector Name	Connector Color	是 H.S.	Terminal No.	-	2	က	4	ر د	9 2	. &	Connector No.	Connector Na	Connector Color	H.S.	Terminal No.	-	2	က	4	5	9
TO WIRE		5 2 1	Signal Name	1	1							TO WIRE	Ш	6 1 5 2 2 4 1	Signal Name	ı	1	ı			
WIRE T		8 7	Color of Wire	g/B	G/O	В	<u>~</u>). D301	-	Connector Color WHITI	8 3 7	Color of Wire	2 M	G/R	В	M		
Connector Name WIRE TO W	<u> </u>						- 1				Connector No.	ا څر	ΚΙ.		Terminal No.	1	1	ı		l	

Fail Safe INFOID:0000000003220540

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.

FRONT POWER WINDOW SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

< 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 mal- function	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 up- dated 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 failsafe 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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NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH [LH&RH FRONT ANTI-PINCH-SEDAN]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH**

Diagnosis Procedure

INFOID:0000000003220541

$oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-36, "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-186, "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-186, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace the malfunctioning parts.

$oldsymbol{4}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Check main power window and door lock/unlock switch.

Refer to PWC-186, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003220542 1. CHECK FRONT POWER WINDOW MOTOR LH В Check front power window motor LH. Refer to PWC-196, "DRIVER SIDE: Component Function Check". C Is the inspection result normal? YES >> Inspection end. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO D Е F Н J

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003220543

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

Check power window and door lock/unlock switch RH.

Refer to PWC-191, "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-215, "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-198, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003220544 1. CHECK REAR POWER WINDOW SWITCH LH В Check rear power window switch LH. Refer to PWC-193, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2 NO >> Repair or replace the malfunctioning parts. D 2. CHECK REAR POWER WINDOW MOTOR LH Check rear power window motor LH. Refer to PWC-199, "REAR LH: Component Function Check". Е Is the inspection result normal? YES >> Inspection end. >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". NO F Н J **PWC** L M Ν

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003220545

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power winodw switch RH.

Refer to PWC-193, "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-201, "REAR RH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH&RH FRONT ANTI-PINCH-SEDAN]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-179, "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-203, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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PWC-245

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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

Diagnosis Procedure

INFOID:0000000003220547

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "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-205, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000003220548

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "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-203, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42. "Intermittent Incident".

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY (PASSENGER SIDE)

Diagnosis Procedure

INFOID:0000000003220549

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "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-205, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000003220550

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-209, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

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DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000003220551

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-179</u>, "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-211, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000003220552 1. CHECK INTELLIGENT KEY FUNCTION В Check Intelligent Key function. Refer to DLK-315, "Component Function Check". C Is the inspection result normal? >> Check intermittent incident. Refer to GI-42, "Intermittent Incident". YES NO >> Replace BCM. Refer to BCS-88, "Removal and Installation". D Е F Н J **PWC** L M

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT ANTI-PINCH-SEDAN]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000003220553

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

Replace main power window and door lock/unlock switch.

Refer to PWC-255, "Removal and Installation". After that, PWC-190, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".

PRECAUTION

PRECAUTIONS

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

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 SR 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 SR 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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PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH&RH FRONT ANTI-PINCH-SEDAN]

ON-VEHICLE MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

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 ANTI-PINCH-SEDAN]

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

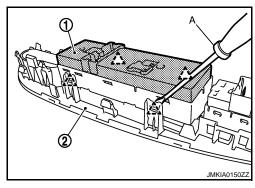
- Remove the power window main switch finisher (2).
 Refer to <u>INT-31</u>, "Exploded View".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



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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