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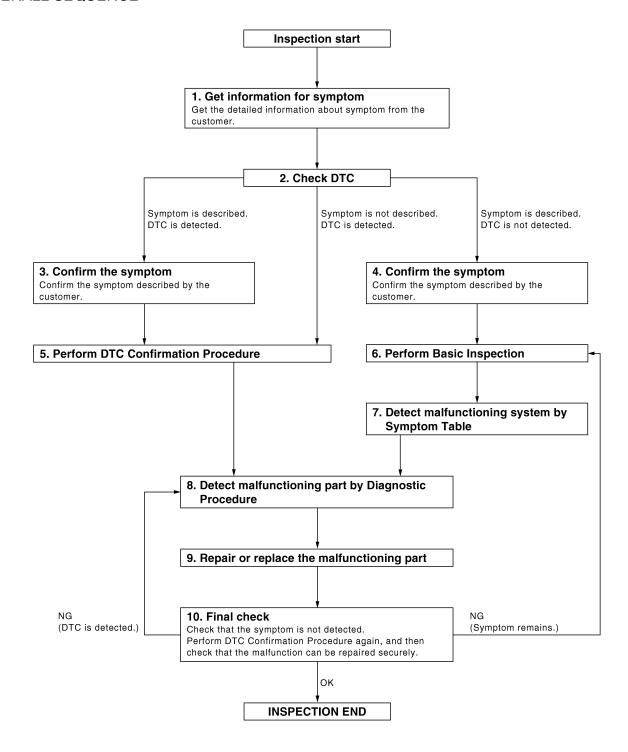
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

${f 1}$. 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-81, "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-39, "Intermittent Incident".

$oldsymbol{6}$. PERFORM BASIC INSPECTION

Perform PWC-6, "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.

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

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 has 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&RH FRONT WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000003898165

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:0000000003898166

INITIALIZATION PROCEDURE

- 1. Disconnect battery negative terminal or power window main switch connector. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 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.
- Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm (5.91 in) 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 parts of the 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-85, "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:0000000003898167

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:0000000003898168

INITIALIZATION PROCEDURE

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Disconnect battery negative terminal or power window main switch connector. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 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 (5.91 in) 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.

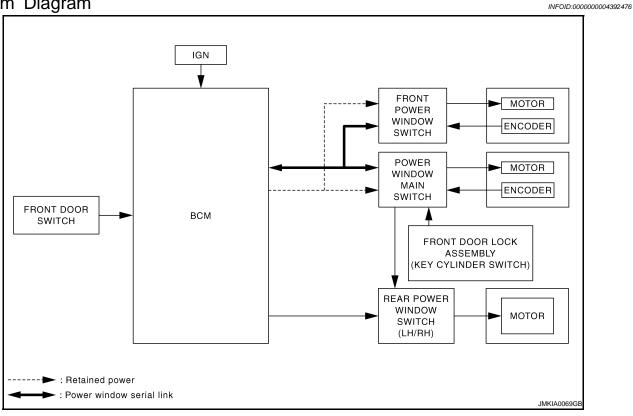
CAUTION:

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- Check that AUTO-UP operates before inspection when system initialization is performed.
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- 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



System Description

BCM

switch

Rear power window

POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator
Key cylinder switch	LOCK/UNLOCK signal (more than 1.5 seconds over)		
Encoder	Encoder pulse signal		
Power window main switch	Front power window motor (driver side) UP/DOWN signal		Front power window motor
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	

FRONT POWER WINDOW SWITCH INPUT/OUTPUT SIGNAL CHART

RAP signal

signal

Rear power window motor UP/DOWN

PWC

INFOID:0000000004392477

Rear power window motor

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Item	Input signal to front power window switch	Front power window switch function	Actuator	
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	Front power window motor	
Encoder	Encoder pulse signal		(passenger side)	
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 DRIVER SIDE & PASSENGER SIDE)

- AUTO UP/DOWN operation can be performed when power window main switch & front power window switch (passenger side) 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 DRIVER SIDE & PASSENGER SIDE)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.91 in) or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch
 as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

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

OPERATION CONDITION

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

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

 Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass. Α KEYLESS POWER WINDOW DOWN OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE) All power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than В 3 seconds NOTE 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. C When the ignition switch is turned ON while the power window opening is operated. When the unlock button is released. While retained power operation is active, keyless power window down function cannot be operated. D Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-50, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)". NOTE: Е Use CONSULT-III to change settings. MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec) Н **PWC** M Ν

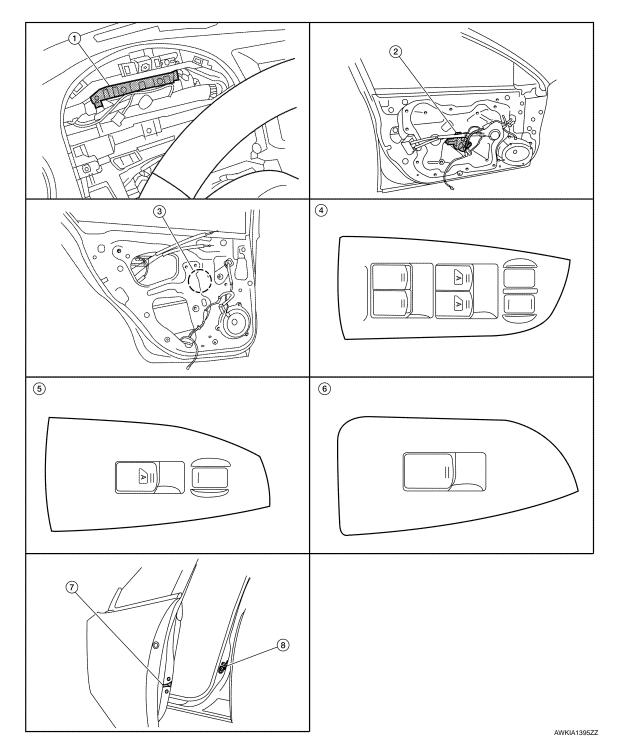
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Component Parts Location

INFOID:0000000004392478



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

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Component Description

INFOID:0000000004392479

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Component	Function
BCM	Supplies power supply to power window switch.Controls retained power.
Power window main switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window.
Front power window switch	 Controls power window motor of passenger door. Controls anti-pinch operation of power window.
Rear power window switch	Controls power window motor of rear right and left doors.
Front power window motor	 Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from power window main switch & front power window switch (passenger side). Transmits power window motor rotation as a pulse signal to power window switch.
Rear power window motor	Starts operating with signals from power window main switch & rear power window switch.
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch	Detects door open/close condition and transmits to BCM.

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DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: Diagnosis Description

INFOID:0000000004363686

BCM CONSULT-III FUNCTION

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.
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
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM: CONSULT-III Function

INFOID:0000000004363687

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT

Refer to BCS-82, "DTC Index".

RETAINED PWR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

INFOID:0000000004363688

Data monitor

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

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM: Diagnosis Procedure

INFOID:0000000004364410

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1		Н
11	Battery power supply	10
24		7

Is the fuse or fusible link blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

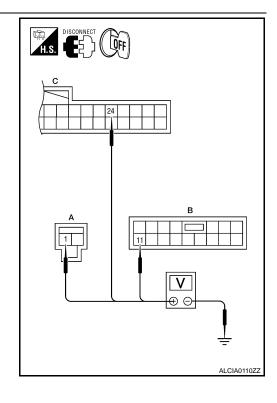
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 3. Check voltage between BCM harness connector and ground.

(+)	(–)	Voltage
BCM			(Approx.)
Connector	Terminal		
M16 (A)	1	Ground	
M17 (B)	11		Battery voltage
M18 (C)	24		

Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.



3. CHECK GROUND CIRCUIT

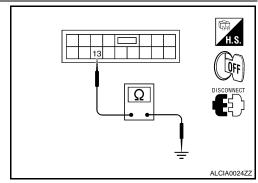
Check continuity between BCM harness connector and ground.

В	ВСМ		Continuity
Connector	Terminal	Ground	Continuity
M17	13		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

INFOID:000000000437579:

INFOID:0000000003898177

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BCM: Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM): Special Repair Requirement".

>> Work End.

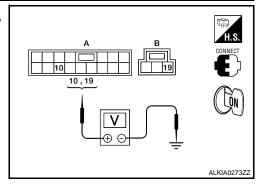
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/ unlock switch connectors D7 (A) terminal 10 and D8 (B) terminal 19 and ground.

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



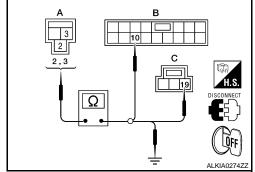
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect BCM connector M16 and main power window and door lock/unlock switch connectors.
- 3. Check continuity between BCM connector M16 (A) terminals 2 and 3 and main power window and door lock/unlock switch connectors D7 (B) terminal 10 and D8 (C) terminal 19.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
W110 (A)	2	D8 (C)	19	165



4. Check continuity between BCM connector M16 (A) terminals 2 and 3 and ground.

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connectors.

$3.\,$ CHECK GROUND CIRCUIT

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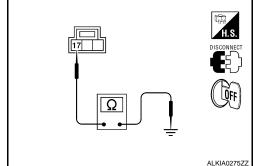
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< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch connector D8.
- Check continuity between main power window and door lock/ unlock switch connector D8 terminal 17 and ground.

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



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000004375764

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

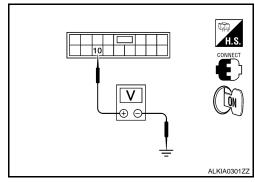
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000003898182

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and ground.

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



Is the inspection result normal?

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

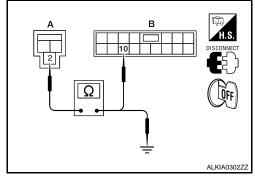
2. CHECK HARNESS CONTINUITY

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- Disconnect BCM connector M16 and power window and door lock/unlock switch RH connector.
- 3. Check continuity between BCM connector M16 (A) terminal 2 and power window and door lock/unlock switch RH connector D105 (B) terminal 10.

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 M16 (A) terminal 2 and ground.

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

Is the inspection result normal?

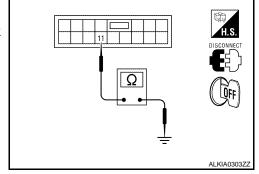
>> Replace BCM. Refer to BCS-87, "Removal and Installation". YES

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

- 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 D105 terminal 11 and ground.

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



Is the inspection result normal?

YES >> Inspection End.

>> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGA-TIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Diagnosis Procedure

 ${f 1}$. CHECK POWER SUPPLY CIRCUIT

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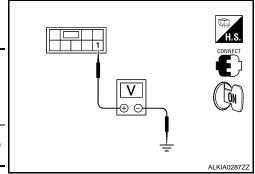
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< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Check voltage between rear power window switch connector terminal 1 and ground.

Terminal					
	(+)			Condition	Voltage (V)
•	ver window connector	Terminal	(–)		(Approx.)
LH	D203	1	Ground	Ignition switch	Battery voltage
RH	D303	1	Ground	ON	Dattery Voltage



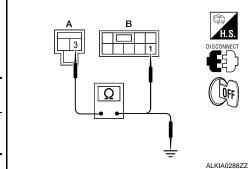
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

- 1. Disconnect BCM connector M16 and rear power window switch connector.
- 2. Check continuity between BCM connector M16 (A) terminal 3 and rear power window switch connector (B) terminal 1.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M16 (A)	2	LH	D203 (B)	1	Yes
WHO (A)	3 R	RH	D303 (B)	_ '	res



3. Check continuity between BCM connector M16 (A) terminal 3 and ground.

BCM connector	Terminal	Ground	Continuity
M16 (A)	3	Giodila	No

Is the inspection result normal?

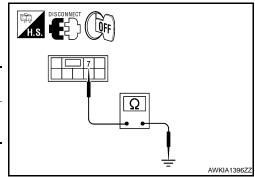
YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

- Disconnect rear power window switch connector.
- 2. Check continuity between rear power window switch connector terminal 7 and ground.

Rear power window switch connector	Terminal		Continuity
D203	7	Ground	No
D303	7		INO



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

REAR POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000004375783

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: Special Repair Requirement" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

>> End.

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REAR POWER WINDOW SWITCH

Description INFOID:000000004375769

- BCM supplies power.
- Rear power window motor operates when rear power window switch is activated.

Component Function Check

INFOID:0000000004375770

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

Check that rear power window motor operates from rear power window switch.

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Refer to PWC-24, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004375771

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch. Refer to PWC-25, "Component Inspection".

Is the inspection result normal?

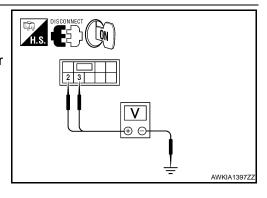
YES >> GO TO 2

NO >> Replace rear power window switch. Refer to PWC-115, "Removal and Installation".

2. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

Rear power window switch			Condition		Voltage (V) (Approx.)	
Connector	Terminal					
	2			UP	Battery voltage	
D203	2		_	Power window	DOWN	0V
D203	3	Ground	main switch : LH	UP	0V	
				DOWN	Battery voltage	
	2			UP	Battery voltage	
D303	2	_		Power window	DOWN	0V
D303	3		main switch : RH	UP	0V	
	3			DOWN	Battery voltage	



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> • For rear power window switch LH, GO TO 3

For rear power window switch RH, GO TO 4

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

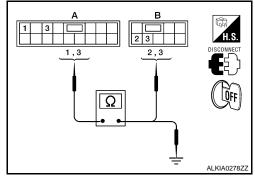
REAR POWER WINDOW SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector D7 and rear power window switch LH connector.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 1, 3 and rear power window switch LH connector D203 (B) terminals 2, 3.

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
D7 (A)	3	D203 (B)	3	163



4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 1, 3 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?

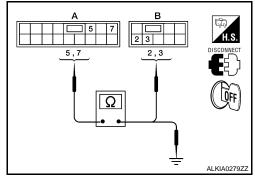
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector D7 and rear power window switch RH connector.
- 3. Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 5, 7 and rear power window switch RH connector D303 (B) terminals 2, 3.

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 D7 (A) terminals 5, 7 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 >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

Component Inspection

INFOID:0000000004375772

COMPONENT INSPECTION

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REAR POWER WINDOW SWITCH

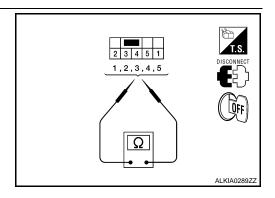
< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Terr	ninal	Power window switch condition	Continuity
1	5	DOWN	
3	4	DOWN	
3	4	NEUTRAL	Yes
5	2	NEOTIVAL	163
1	4	UP	
5	2	OF .	



Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-115, "Removal and Installation".

Special Repair Requirement

INFOID:0000000004375781

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

>> End.

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:0000000003898189

1. CHECK POWER WINDOW MOTOR

Check that front power window motor LH operates with 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-27, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000003898190

1. CHECK POWER WINDOW MOTOR

Check front power window motor LH. Refer to PWC-28, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

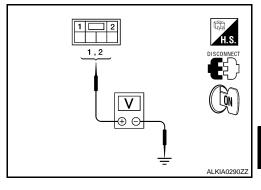
YES >> GO TO 2

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

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

- 1. Disconnect front power window motor LH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor LH connector D9 terminals 1, 2 and ground.

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



Is the inspection result normal?

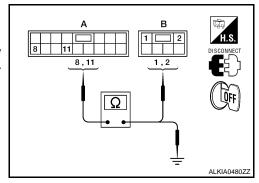
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect main power window and door lock/unlock switch connector D7.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 8, 11 and front power window motor connector LH D9 (B) terminals 1, 2.



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< COMPONENT DIAGNOSIS >

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
D7 (A)	11	D9 (B)	1	163

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and ground.

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

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE: Component Inspection

INFOID:0000000003898191

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

- Disconnect front power window motor LH.
- 2. Check motor operation by connecting battery voltage directly to front power window motor LH.

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

Is the inspection result normal?

YES >> Inspection End.

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

DRIVER SIDE: Special Repair Requirement

INFOID:0000000004375784

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: Special Repair Requirement" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

>> End.
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

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that front power window motor RH operates with 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-29, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

1. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH. Refer to PWC-30, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

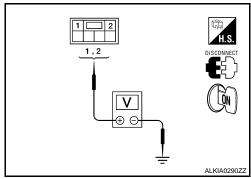
YES >> GO TO 2

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

2. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Disconnect front power window motor RH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor RH connector D104 terminals 1, 2 and ground.

Terminal				
(+)			Front power window motor	Voltage (V)
Front power window motor RH connector	Terminal	(-)	RH condition	(Approx.)
	2 Ground		UP	Battery voltage
D104		-	Ground	DOWN
D104	4	Giodila	UP	0
	1		DOWN	Battery voltage



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

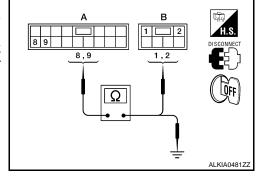
NO >> GO TO 3

${f 3}.$ CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and front power window motor RH connector D104 (B) terminals 1, 2.

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
D100 (A)	9	D 104 (B)	1	163



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INFOID:0000000003898193

INFOID:0000000003898194

INFOID:0000000003898195

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

 Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105 (A)	8		No
D100 (A)	9		140

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE: Component Inspection

INFOID:0000000003898196

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

- Disconnect front power window motor RH.
- 2. Check motor operation by connecting battery voltage directly to front power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End.

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

PASSENGER SIDE: Special Repair Requirement

INFOID:0000000004375785

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement</u>".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

>> End.

REAR LH

REAR LH: Description

INFOID:0000000003898198

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

REAR LH: Component Function Check

INFOID:0000000003898199

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Check that rear power window motor LH operates with main power window and door lock/unlock switch or rear power window switch LH.

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-31, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-32, "REAR LH: Component Inspection".

Is the inspection result normal?

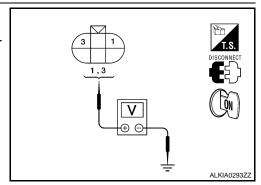
YES >> GO TO 2

NO >> Replace rear power window motor LH. Refer to <u>GW-24, "Rear Door Glass Regulator"</u>.

2. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

- Disconnect rear power window motor LH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear power window motor LH connector D204 terminal 1, 3 and ground.

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



Is the inspection result normal?

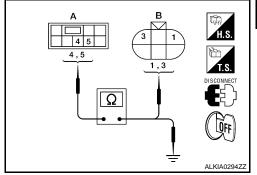
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH connector.
- Check continuity between rear power window switch LH connector D203 (A) terminals 4, 5 and rear power window motor LH connector D204 (B) terminals 1, 3.

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



4. Check continuity between rear power window switch LH connector D203 (A) terminals 4, 5 and ground.

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

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-24, "Diagnosis Procedure".

NO >> Repair or replace harness or connectors.

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REAR LH: Component Inspection

INFOID:0000000003898201

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

- 1. Disconnect rear power window motor LH.
- 2. Check motor operation by connecting battery voltage directly to rear power window motor LH.

Teri	minal	Motor condition	
(+)	(-)	iviolor condition	
3	1	UP	
1	3	DOWN	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace rear power window motor LH. Refer to <u>GW-24, "Rear Door Glass Regulator"</u>.

REAR RH

REAR RH: Description

INFOID:0000000003898202

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

REAR RH: Component Function Check

INFOID:0000000003898203

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Check that rear power window motor RH operates with 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-32, "REAR RH : Diagnosis Procedure".

REAR RH: Diagnosis Procedure

INFOID:0000000003898204

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to PWC-33, "REAR RH: Component Inspection".

Is the inspection result normal?

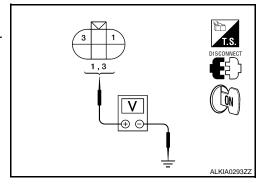
YES >> GO TO 2

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

2. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

- Disconnect rear power window motor RH connector.
- Turn ignition switch ON.
- 3. Check voltage between rear power window motor RH connector D304 terminal 1, 3 and ground.

Terminal			_		
(+)	(+)		Rear power window switch	Voltage (V)	
Rear power window motor RH connector	Terminal	(–)	RH condition	(Approx.)	
	3	2	UP	Battery voltage	
D304		Ground	DOWN	0	
D304		4	Giodila	UP	0
			DOWN	Battery voltage	



Is the inspection result normal?

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

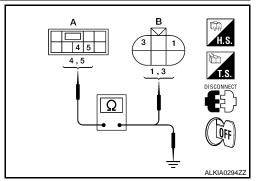
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH connector.
- 3. Check continuity between rear power window switch RH connector D303 (A) terminals 4, 5 and rear power window motor RH connector D304 (B) terminals 1, 3.

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	165



4. Check continuity between rear power window switch RH connector D303 (A) terminals 4, 5 and ground.

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

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-24, "Diagnosis Procedure".

NO >> Repair or replace harness or connectors.

REAR RH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

- 1. Disconnect rear power window motor RH.
- 2. Check motor operation by connecting battery voltage directly to rear power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End. NO >> Replace rear po

>> Replace rear power window motor RH. Refer to GW-24, "Rear Door Glass Regulator".

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ENCODER

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000003898206

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:0000000003898207

1. CHECK ENCODER OPERATION

Check that front door glass LH performs 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-34, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

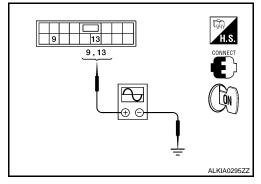
INFOID:0000000003898208

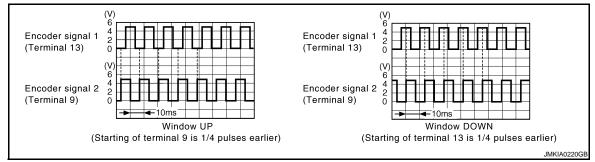
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- Check signal between main power window and door lock/unlock switch connector D7 terminals 9, 13 and ground with oscilloscope.

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





Is the inspection result normal?

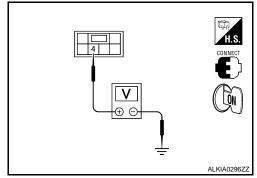
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor LH connector D9 terminal 4 and ground.

(+)			Voltage (V)
Front power win- dow motor LH con- nector	Terminal	(–)	(Approx.)
D9	4	Ground	10



Is the inspection result normal?

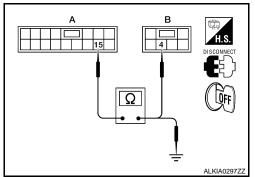
YES >> GO TO 4 NO >> GO TO 3

CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.

- 2. Disconnect main power window and door lock/unlock switch connector D7 and front power window motor LH connector.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminal 15 and front power window motor LH connector D9 (B) terminal 4.

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 D7 (A) terminal 15 and ground.

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

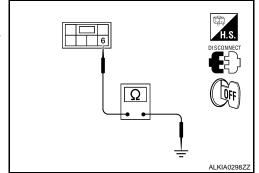
Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".
- NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH connector.
- Check continuity between front power window motor LH connector D9 terminal 6 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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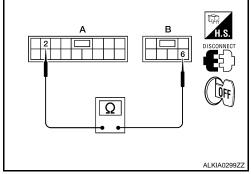
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[LH&RH FRONT WINDOW ANTI-PINCH]

- Disconnect main power window and door lock/unlock switch connector D7.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminal 2 and front power window motor LH connector D9 (B) terminal 6.

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?

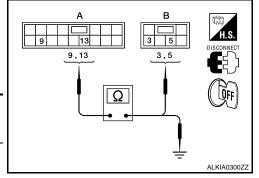
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch connector D7.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 9, 13 and front power window motor LH connector D9 (B) terminals 3, 5.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	5	Yes
Dr (A)	13	D9 (D)	3	165



3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and ground.

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

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-19</u>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE : Special Repair Requirement

INFOID:0000000004375786

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and <u>PWC-9</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement</u>".

>> End.
PASSENGER SIDE

INFOID:0000000003898209

INFOID:0000000003898210

INFOID:0000000003898211

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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

Check that front door glass RH performs 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.

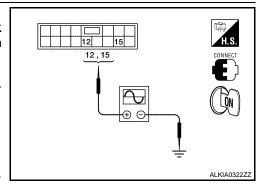
NO >> Refer to PWC-37, "PASSENGER SIDE : Diagnosis Procedure".

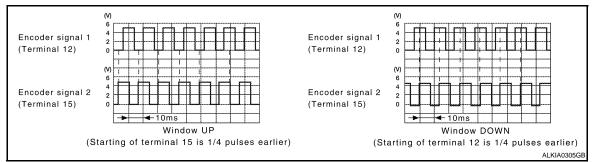
PASSENGER SIDE: Diagnosis Procedure

1. CHECK ENCODER SIGNAL

- 1. Turn ignition switch ON.
- Check signal between power window and door lock/unlock switch RH connector D105 terminal 12, 15 and ground with oscilloscope.

-			
(+)			Signal
Power window and door lock/unlock switch RH connector	Terminal	(–)	(Reference value)
D105	12	Ground	Refer to following
2100	15	Ground	signal





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

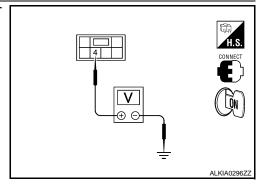
2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor RH connector D104 terminal 4 and ground.

(+)			Voltage (V)	
Front power window motor RH connector	Terminal	(–)	(Approx.)	
D104	4	Ground	10	

Is the inspection result normal?

YES >> GO TO 4



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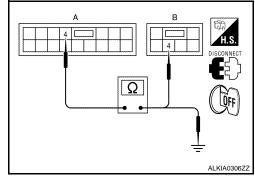
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NO >> GO TO 3

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 connectors.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and front power window motor RH connector D104 (B) terminal 4.

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 D105 (A) terminal 4 and ground.

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

Is the inspection result normal?

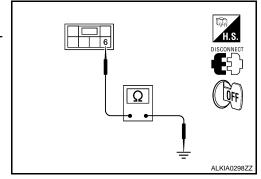
YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect front power window motor RH connector.
- 3. Check continuity between front power window motor RH connector D104 terminal 6 and ground.

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



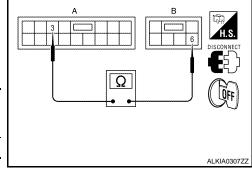
Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 3 and front power window motor RH connector D104 (B) terminal 6.

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 PWC-114, "Removal and Installation".

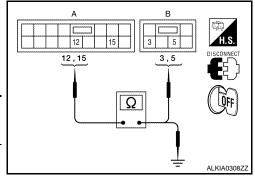
NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

[LH&RH FRONT WINDOW ANTI-PINCH]

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and front power window motor RH connector D104 (B) terminals 3, 5.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	3	Yes
D103 (A)	15	D104 (b)	5	103



 Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 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>".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: Special Repair Requirement" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

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INFOID:0000000004375787

DOOR SWITCH

Description INFOID:0000000004391468

Detects door open/close condition.

Component Function Check

INFOID:0000000004391469

1. CHECK FUNCTION

(III) With CONSULT-III

Check door switches DOOR SW-DR, DOOR SW-AS, DOOR SW-RL, DOOR SW-RR in Data Monitor mode with CONSULT-III.

Monitor item	Condition
DOOR SW-DR	CLOSE o OPEN: $OFF o ON$
DOOR SW-AS	GLOGE - OF EN. OFF - ON

Is the inspection result normal?

YES >> Door switch is OK.

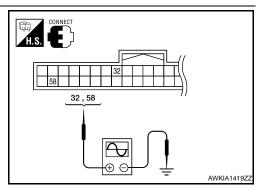
NO >> Refer to PWC-40, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004391470

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.



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	Terminals					
(+)		Door condition		Voltage (V)		
BCM connector	Terminal	(-)			(Approx.)	
				OPEN	0	
A: M18	58	Ground	Driver side	CLOSE	(V) 15 10 5 0 JPMIA0011GB	
A. IVITO		Giodila		OPEN	0	
	32		Passenger side	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 2

2. CHECK DOOR SWITCH CIRCUIT

- 1. Disconnect BCM connector.
- Check continuity between BCM connector and door switch connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
M18	58	B8 (Driver side)	2	Yes
IVITO	32	B108 (Passenger side)	۷	165

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
M18	58	Ground	No
IVI18	32		INO

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and door switch.

3. CHECK DOOR SWITCH

Refer to PWC-42, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace malfunctioning door switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

PWC-41

[LH&RH FRONT WINDOW ANTI-PINCH]

>> Inspection End.

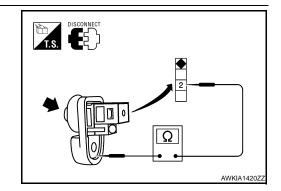
Component Inspection

INFOID:0000000004391471

1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal		Door switch condition	Continuity	
Door switch		Bool Switch Condition		
2	Ground part of	Pressed	No	
2	door switch	Released	Yes	



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch.

DOOR KEY CYLINDER SWITCH

Description INFOID:000000004394071

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

Component Function Check

INFOID:0000000004394072

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1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to DLK-50, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

Monitor item	Cor	ndition
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-157, "Diagnosis Procedure".

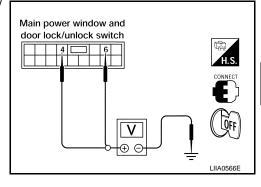
Diagnosis Procedure

INFOID:0000000004394073

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and <a href="Installation". After that, refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> GO TO 2

2.check door key cylinder signal circuit

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

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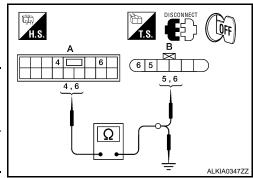
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

 Check continuity between main power window and door lock/ unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

Main power win- dow and door lock/unlock switch connector	Terminal	Front door lock assem- bly LH (key cylinder switch) connector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
A. DI	6	В. 010	5	162



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

Power window main switch connector	Terminal	_	Continuity	
A: D7	4	Ground	No	
A. D1	6		INO	

Is the inspection result normal?

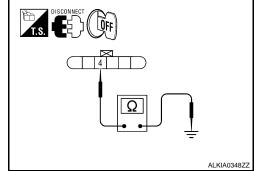
YES >> GO TO 3

NO >> Repair or replace harness.

3.check door key cylinder switch ground circuit

Check continuity between front door lock assembly LH connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes



Is the inspection result normal?

YES >> GO TO 4

NO

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-158, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-224, "FRONT DOOR LOCK: Removal and Installation". After that, Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Component Inspection

INFOID:0000000004394074

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

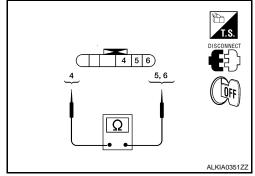
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

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



Is the inspection result normal?

NO

YES >> Key cylinder switch is OK.

>> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-224, "FRONT DOOR</u> LOCK: Removal and Installation". After that, refer to PWC-159, "Special Repair Requirement".

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to DLK-8, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000003898221

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:
- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000003898222

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 DLK-50, "DOOR LOCK: CONSULT-III Function (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-46, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

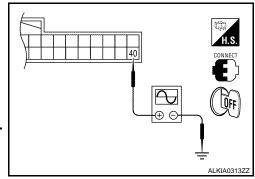
INFOID:0000000003898223

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- 2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".

Terminal			Cienel	
(+)		()	Signal (Reference value)	
BCM connector	Terminal	(-)	,	
M18	40	Ground	(V) 15 10 5 0	



POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Is the inspection result normal?

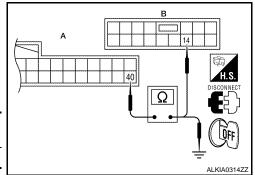
>> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM connector M18 and main power window and 2. door lock/unlock switch connector D7.
- 3. Check continuity between BCM connector M18 (A) terminal 40 and main power window and door lock/unlock switch connector D7 (B) terminal 14.

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 M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:00000000004375788

INFOID:0000000004391472

${f 1}$. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGA-TIVE TERMINAL: Special Repair Requirement and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

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

- communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/ unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:
- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

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FRONT POWER WINDOW SWITCH: Diagnosis Procedure

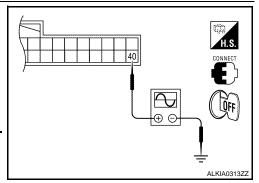
INFOID:0000000003898226

Power Window Serial Link Check

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

- Remove Intelligent Key, and close the front door LH and RH.
- Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".

	Terminal	Signal (Reference value)	
(+)			
BCM connector	Terminal	(-)	(
M18	40	Ground	(V) 15 10 5 0



Is the inspection result normal?

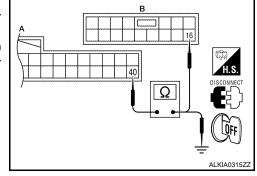
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and power window and door lock/unlock switch RH connector.
- Check continuity between BCM connector M18 (A) terminal 40 and power window and door lock/unlock switch RH connector D105 (B) terminal 16.

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 M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000004375789

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

POWER WINDOW SERIAL LINK

COMPONENT DIAGNOSIS >

COMPONENT DIAGNOSIS	
>> GO TO 2	,
2. CHECK ANTI-PINCH OPERATION	
Check anti-pinch operation. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGA- FIVE TERMINAL: Special Repair Requirement" and PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".	[
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INFOID:0000000004375763

POWER WINDOW LOCK SWITCH

Component Function Check

1. CHECK POWER WINDOW LOCK

Activate the power window lock switch and verify that the front power window RH, rear power window LH and rear power window RH are inoperative.

Is the inspection result normal?

YES >> Power window lock switch is OK.

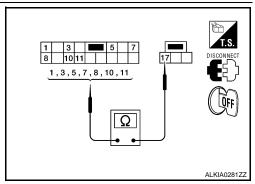
NO >> Refer to <u>PWC-50</u>, "Component Inspection".

Component Inspection

1. CHECK POWER WINDOW LOCK SWITCH

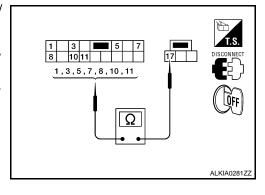
- Disconnect main power window and door lock/unlock switch connectors.
- 2. Check continuity between main power window and door lock/ unlock switch (lock operation).

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



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

Terminal		Main power window and door lock/unlock switch condition		Continuity
3		Rear LH	UP	
5		Rear RH	OF .	
1	17	Rear LH		
3		Near Err	NEUTRAL	Yes
5	17	Rear RH	NEOTRAL	
7		iteal Itil		
1	1	Rear LH	DOWN	
7		Rear RH	BOWN	



Is the inspection result normal?

YES >> Inspection End.

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

Special Repair Requirement

INFOID:0000000004375790

1. PERFORM INITIALIZATION PROCEDURE

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Perform initialization procedure. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

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>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement</u>" and <u>PWC-9</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement</u>".

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ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ED WIDED HI	Other than front wiper switch HI	OFF
FR WIPER HI	Front wiper switch HI	ON
ED WIDED LOW	Other than front wiper switch LO	OFF
FR WIPER LOW	Front wiper switch LO	ON
FR WIPER HI FR WIPER LOW FR WASHER SW FR WIPER INT FR WIPER STOP INT VOLUME TURN SIGNAL R TURN SIGNAL L TAIL LAMP SW HI BEAM SW HEAD LAMP SW 1 HEAD LAMP SW 2 PASSING SW AUTO LIGHT SW FR FOG SW DOOR SW-DR	Front washer switch OFF	OFF
	Front washer switch ON	ON
ED WIDED INT	Other than front wiper switch INT	OFF
	Front wiper switch INT	ON
ED WIDED STOD	Front wiper is not in STOP position	OFF
FR WIPER STOP	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TUDNI CICNIAL D	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TUDNI SICNAL I	Other than turn signal switch LH	OFF
TURIN SIGNAL L	Turn signal switch LH	ON
	Other than lighting switch 1ST and 2ND	OFF
	Lighting switch 1ST or 2ND	ON
	Other than lighting switch HI	OFF
	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
HEAD LAWF SW T	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
FILAD LAWF SW 2	Lighting switch 2ND	ON
DASSING SW	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
ALITO LIGHT SW	Other than lighting switch AUTO	OFF
AOTO LIGITI SW	Lighting switch AUTO	ON
ED EOG SW	Front fog lamp switch OFF	OFF
1 K 1 OG 3W	Front fog lamp switch ON	ON
DOOD SWIDD	Driver door closed	OFF
DOOK SW-DK	Driver door opened	ON
DOOR SWAS	Passenger door closed	OFF
DOOK SW-AS	Passenger door opened	ON
DOOR SW-RR	Rear door RH closed	OFF
DOOK GW-KK	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
	Rear door LH opened	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF	,
201.10014.0144	Other than power door lock switch LOCK	OFF	_
CDL LOCK SW CDL UNLOCK SW KEY CYL LK-SW KEY CYL UN-SW KEY CYL SW-TR HAZARD SW TR CANCEL SW TR/BD OPEN SW TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK RKE-TR/BD RKE-PANIC RKE-P/W OPEN RKE-MODE CHG	Power door lock switch LOCK	ON	<u> </u>
DOOR SW-BK This item is displayed, but cannot be monitored. Other than power door lock switch LOCK Power door lock switch LOCK Other than power door lock switch UNLOCK Power door lock switch UNLOCK Other than power door lock switch UNLOCK Power door lock switch UNLOCK Other than driver door key cylinder LOCK position Driver door key cylinder LOCK position Other than driver door key cylinder UNLOCK pressed (driver side) When IncockfunloCK button of Intelligent Key is not pressed and held when LockfunloCK button of Intelligent Key is not pressed and held simultaneously Other Earl CockfunloCK button of Intelligent Key is not pressed and	OFF		
	Power door lock switch UNLOCK	ON	
COOR SW-BK CDL LOCK SW CDL UNLOCK SW CEY CYL LK-SW CEY CYL UN-SW CEY CYL SW-TR HAZARD SW CEAR DEF SW CR CANCEL SW CR/BD OPEN SW CRNK/HAT MNTR CRKE-LOCK CRKE-UNLOCK CRKE-PANIC CRKE-PANIC CRKE-PANIC CRKE-PANIC CRKE-POW OPEN CRKE-MODE CHG COPTICAL SENSOR CREQ SW-AS CREQ SW-AS CREQ SW-RL	Other than driver door key cylinder LOCK position	OFF	
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON	
45) (0) (1 LIN 0) M	Other than driver door key cylinder UNLOCK position	OFF	
KEY CYL UN-SVV	Driver door key cylinder UNLOCK position	ON	
KEY CYL SW-TR		OFF	
11474DD 0144	When hazard switch is not pressed	OFF	
HAZARD SW	When hazard switch is pressed	ON	
REAR DEF SW	When rear window defogger switch is pressed	ON	
DOOR SW-BK CDL LOCK SW CDL UNLOCK SW KEY CYL LK-SW KEY CYL UN-SW KEY CYL SW-TR HAZARD SW TRACANCEL SW TROBD OPEN SW TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK RKE-TR/BD RKE-PANIC	Trunk lid opener cancel switch OFF	OFF	
	Trunk lid opener cancel switch ON	ON	
TD/DD 005N 0W	Trunk lid opener switch OFF	OFF	
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON	
TD11/// IAT 14/ITD	Trunk lid closed	OFF	
RNK/HAT MNTR RKE-LOCK RKE-UNLOCK	Trunk lid opened	ON	
	This item is displayed, but cannot be monitored. We SW Other than power door lock switch LOCK OFF Power door lock switch LOCK OCK SW Other than power door lock switch UNLOCK OCK SW Other than power door lock switch UNLOCK ON OCK SW Other than power door lock switch UNLOCK ON OTHER Dewer door lock switch UNLOCK ON OTHER OTHER	OFF	
TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK	When LOCK button of Intelligent Key is pressed	ON	
	When UNLOCK button of Intelligent Key is not pressed	OFF	
TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK RKE-TR/BD	When UNLOCK button of Intelligent Key is pressed	ON	
REAR DEF SW TR CANCEL SW TR/BD OPEN SW TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK RKE-TR/BD RKE-PANIC RKE-PANIC RKE-P/W OPEN	When TRUNK OPEN button of Intelligent Key is not pressed	OFF	
	When TRUNK OPEN button of Intelligent Key is pressed	ON	P
	When PANIC button of Intelligent Key is not pressed	OFF	
RKE-PANIC		ON	
CDL LOCK SW CDL UNLOCK SW KEY CYL LK-SW KEY CYL UN-SW KEY CYL SW-TR HAZARD SW REAR DEF SW TR CANCEL SW TR/BD OPEN SW TRNK/HAT MNTR RKE-LOCK RKE-UNLOCK RKE-TR/BD RKE-PANIC RKE-PANIC RKE-PANIC RKE-MODE CHG OPTICAL SENSOR REQ SW-AS	When UNLOCK button of Intelligent Key is not pressed and held	OFF	
RKE-P/W OPEN	<u> </u>	ON	
	When LOCK/UNLOCK button of Intelligent Key is not pressed and	OFF	
RKE-MODE CHG		ON	
ODTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V	
OF HUAL SENSUK	When outside of the vehicle is dark	Close to 0 V	
DEO CW DD	When front door request switch is not pressed (driver side)	OFF	
KEU 200-DK	When front door request switch is pressed (driver side)	ON	
DEC 0W 40	When front door request switch is not pressed (passenger side)	OFF	
KEQ SW-AS	When front door request switch is pressed (passenger side)	ON	<u></u>
	When rear door request switch is not pressed (driver side)	OFF	
REQ SW-RL		ON	
		OFF	
REQ SW-RR	When rear door request switch is pressed (passenger side)	ON	

BCM (BODY CONTROL MODULE) [LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
REO SW-BD/TP	When trunk request switch is not pressed	OFF
REQ SW-DD/TR	When trunk request switch is pressed	ON
DI ICH C/W	When engine switch (push switch) is not pressed	OFF
REQ SW-BD/TR PUSH SW IGN RLY 2-F/B ACC RLY-F/B	When engine switch (push switch) is pressed	ON
REQ SW-BD/TR PUSH SW GN RLY 2-F/B ACC RLY-F/B CLUTCH SW BRAKE SW 1 DETE/CANCL SW SFT PN/N SW S/L-LOCK S/L-UNLOCK S/L-UNLOCK S/L RELAY-F/B JNLK SEN-DR PUSH SW-IPDM GN RLY1 F/B DETE SW -IPDM SFT PN -IPDM SFT P-MET	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
ACC DIVE/D	Ignition switch OFF	OFF
ACC RLY-F/B	Ignition switch ACC or ON	ON
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.	OFF
DDAKE CWA	When the brake pedal is not depressed	ON
BRAKE SW 1	When the brake pedal is depressed	OFF
DETE (OANOL OW	When selector lever is in P position	OFF
DETE/CANCL SW	When selector lever is in any position other than P	ON
OFT DN/ALCVA	When selector lever is in any position other than P or N	OFF
SEL PN/N SW	When selector lever is in P or N position	ON
0.11.1.0014	Electronic steering column lock LOCK status	OFF
S/L-LOCK	Electronic steering column lock UNLOCK status	ON
0/1.1011.0017	Electronic steering column lock UNLOCK status	OFF
/L-UNLOCK /L RELAY-F/B INLK SEN-DR	Electronic steering column lock LOCK status	ON
S/L-LOCK S/L-UNLOCK S/L RELAY-F/B JNLK SEN-DR PUSH SW-IPDM GN RLY1 F/B	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
S/L-UNLOCK S/L RELAY-F/B UNLK SEN-DR PUSH SW-IPDM	Driver door UNLOCK status	OFF
	Driver door LOCK status	ON
DUGU OW IDDM	When engine switch (push switch) is not pressed	OFF
PUSH SW-IPDM	When engine switch (push switch) is pressed	ON
1011 011/4 5/0	Ignition switch OFF or ACC	OFF
IGN RLY1 F/B	Ignition switch ON	ON
DETE OW IDDA	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
OFT DIV IDDIA	When selector lever is in any position other than P or N	OFF
SET PN -IPDM	When selector lever is in P or N position	ON
057.0.4457	When selector lever is in any position other than P	OFF
SFI P-MET	When selector lever is in P position	ON
057.11.1157	When selector lever is in any position other than N	OFF
SELN-MET	When selector lever is in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
0/1.1.00://	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L UNLCK-IPDM	Electronic steering column lock LOCK status	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
S/I RELAY-PEO	Ignition switch OFF or ACC	OFF
3/L RELAT-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door LOCK status	LOCK
EALAY-REQ WEH SPEED 1 WEH SPEED 2 DOOR STAT-DR DOOR STAT-AS DOOK FLAG PRMT ENG STAT PRMT RKE STAT RKE OPE COUN1 RKE OPE COUN2 CONFRM ID ALL CONFIRM ID4	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
D OK ELAC	Ignition switch ACC or ON	RESET
D OK FLAG	Ignition switch OFF	SET
D OK FLAG PRMT ENG STAT PRMT RKE STAT KEY SW -SLOT RKE OPE COUN1	When the engine start is prohibited	RESET
TRIVITEING STAT	When the engine start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
/F.V. O.W. O.L O.T.	When Intelligent Key is not inserted into key slot	OFF
KEY SW -SLOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
CONERM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
JONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIDM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
JONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIDM ID2	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
JONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
JONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
	The ID of fourth key is not registered to BCM	YET
IF 4	The ID of fourth key is registered to BCM	DONE
	The ID of third key is not registered to BCM	YET
173	The ID of third key is registered to BCM	DONE
	The ID of second key is not registered to BCM	YET
TP 2	The ID of second key is registered to BCM	DONE

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TP 1	The ID of first key is not registered to BCM	YET
IF I	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE
ID REGST FL1	When ID of front LH tire transmitter is not registered	YET
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
ID REGGI FRI	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
ID REGST RRT	When ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
ID REGST RLT	When ID of rear LH tire transmitter is not registered	YET
MARNING LAMP	Tire pressure indicator OFF	OFF
WARNING LAMP	Tire pressure indicator ON	ON
DUZZED	Tire pressure warning alarm is not sounding	OFF
BUZZER	Tire pressure warning alarm is sounding	ON

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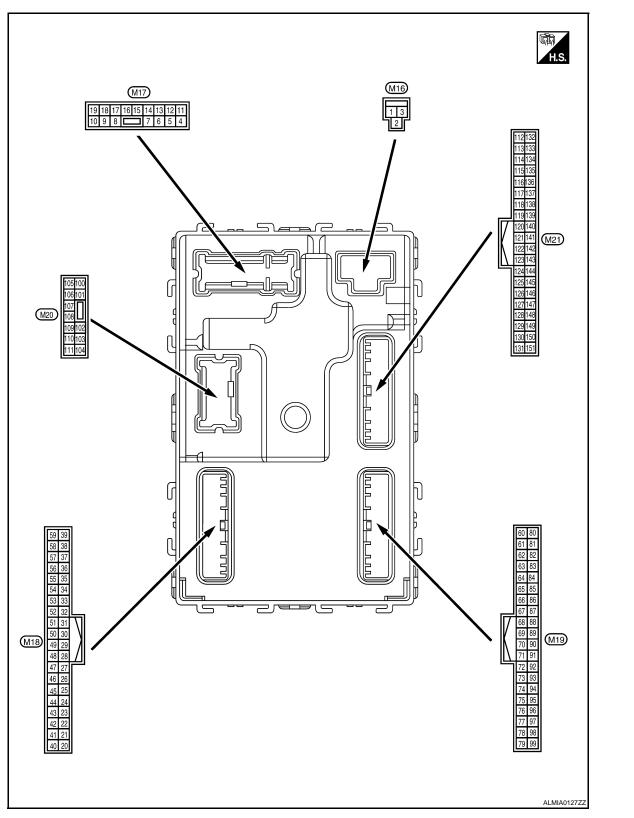
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Terminal Layout



Physical Values

BCM (BODY CONTROL MODULE) [LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

To 1100	inal Na	Description				
	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Output	After passing the in er operation time	nterior room lamp battery sav-	0V
(P/W)	Cround	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage
5	Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	TION GOOT KIT	Other than UNLOCK (actuator is not activated)	OV
7	Craund	Cton lown	Outrout	Cton lower	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
(V)	Ground	All doors LOCK	Output	All doors	Other than LOCK (actuator is not activated)	0V
9	Ground	Front door LH UN-	Output	Front door LH	UNLOCK (actuator is activated)	Battery voltage
(L)	Cround	LOCK	Output	TION GOOF ETT	Other than UNLOCK (actuator is not activated)	0V
10	Ground	Rear door RH and rear door LH UN-	Output	Rear door RH	UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	OV
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		ov
14 (GR/ W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 2 ms JSNIA0010GB
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF ACC or ON	Battery voltage 0V

< ECU DIAGNOSIS >

	inal No.	Description				Value	А
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	Α
					Turn signal switch OFF	0V	В
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E	C
					Turn signal switch OFF	6.5 V	E
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	F
19	Cround	Room lamp timer	Out to ut	Interior room	OFF	Battery voltage	Н
(Y)	Ground	control	Output	lamp	ON	0V	
21	Ground	Optical sensor signal	Input	Ignition switch	When outside of the vehi- cle is bright	Close to 5V	I
(P/B)		.,	,	ON	When outside of the vehi- cle is dark	Close to 0V	
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage	J
26	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed)	0V	PWC
(O/L)	Ground	Stop lamp Switch 2	прис	Stop lamp switch	ON (brake pedal is depressed)	Battery voltage	
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB	M N
					UNLOCK status	0V	
29	Ground	Koy slot quitch	Innut	When Intelligent K	Ley is inserted into key slot	Battery voltage	0
(Y)	Ground	Key slot switch	Input	When Intelligent K	ey is not inserted into key slot	OV	
30	Ground	ACC feedback signal	Input	Ignition switch	OFF	0	Р
(V/Y)			,	_	ACC or ON	Battery voltage	
31	Ground	Rear window defog- ger feedback signal	Input	Rear window de- fogger switch	OFF ON	0V Battery voltage	

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (when front door RH opens)	OV
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB
					ON	OV
38 (GR/ W)	Ground	Rear window defog- ger ON signal	Input	Rear window de- fogger switch	OFF ON	5V 0V
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB
				Ignition switch OF	F or ACC	0V
41		Engine switch (push		Engine switch	ON	5.5V
(W)	Ground	switch) illumination	Output	(push switch) illu- mination	OFF	0V
42				LOCK indicator	ON	0V
(R)	Ground	LOCK indicator lamp	Output	lamp	OFF	Battery voltage
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		ov
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V
(V/W)	Ground	power supply output	Output	igilition switch	ACC or ON	5.0V

< ECU DIAGNOSIS >

	inal No. e color)	Description	I			Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					Standby state	(V) 6 4 2 0 ••• 0.2s
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s OCC3880D
48	0	Selector lever P/N	1	0.1	P or N position	12.0V
(R/G)	Ground	position signal	Input	Selector lever	Except P and N positions	OV
			Output	Security indicator	ON	OV
49 (L/O)	49 (L/O) Ground Se nat	Security indicator signal			Blinking	(V) 15 10 5 0 11.3V
					OFF	Battery voltage
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND	0V (V) 15 10 5 0
					Turn signal switch RH	JPMIA0031GB
					All switch OFF (Wiper intermittent dial 4) Front wiper switch HI	10.7V 0V
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	(Wiper intermittent dial 4) Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0032GB

< ECU DIAGNOSIS >

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
			-		All switch OFF (Wiper intermittent dial 4)	0V
50		Combination avitab		Combination	Front washer switch ON (Wiper intermittent dial 4)	(V) 15
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	10 5 0 2 ms JPMIA0033GB 10.7V
					All switch OFF	0V
					Front wiper switch INT	0.0
52		und Combination switch OUTPUT 3		Combination	Front wiper switch LO	(V) 15
53 (LG/ R)	Ground		Output	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB
					All switch OFF	10.7V
		Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Front fog lamp switch ON	0V
					Lighting switch 2ND	(V)
54 (G/Y)	Ground				Lighting switch flash-to- pass	15 10 5 0
					Turn signal switch LH	2 ms JPMIA0035GB
57 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5V
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms 11.8V
					ON (front door LH OPEN)	0V
59	Ground	Rear window defog-	Output	Rear window de-	Active	Battery voltage
(G/R)		ger relay		fogger	Not activated	0V

< ECU DIAGNOSIS >

	ninal No.	Description				Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
60	Occupation	Front console anten-	0.4.4	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(B/R)	Ground	na 2 (-)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
61	Center console an-		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 JMKIA0062GB	
61 (W/R)	Ground	tenna 2 (+)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
62 (V) Groun	Ground	Front outside handle RH antenna (-)	Output	When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

	Terminal No. Description (Wire color)		One distan		Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
63	Ground	Front outside handle	Output	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(P)	Clound	RH antenna (+)	Сири	ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
64	Ground	Front outside handle	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(V)	Ground	LH antenna (-)			When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
65	Ground		door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(P)	Ground		Caipui		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

	inal No. e color)	Description			O a selfer a	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
66	66 (R) Ground Instrument panel antenna (-)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
			Output	Output OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
67	7 Instrument o	Instrument panel an-	Outout	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(G)	Ground	tenna (+)	Output		When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC	0V
(IVD)		II OI			ON	Battery voltage

PWC-65

	inal No. e color)	Description			Con dition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
71	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		(V) 15 10 5 0 1 ms
(L/O)	Cround			When operating either button on Intelligent Key		(V) 15 10 5 0 1 ms JMKIA0065GB
	Ground	Combination switch INPUT 5	Input		All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
75 (R/Y)				Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 2 ms JPMIA0037GB
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB

< ECU DIAGNOSIS >

Terminal No. (Wire color) Description		Condition		Value		
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
76 (R/G) G		Combination switch INPUT 3	Input	Combination switch	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
	Ground				Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V
78 (P)	Ground	CAN-L	Input/ Output	(Pagin ownor)	Not pressed	Battery voltage —
79 (L)	Ground	CAN-H	Input/ Output		_	_
<u> </u>					OFF	OV
80 (R/L) Grou	Ground	Key slot illumination Output	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s
						6.5V
					ON	Battery voltage

BCM (BODY CONTROL MODULE) [LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

	inal No.	Description				Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
81	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	0V
(Y/L)		·	•		ON	Battery voltage
83	Ground	ACC relay control	Output	Ignition switch	OFF	OV
(L)		, , , , , , , , , , , , , , , , , , , ,			ACC or ON	Battery voltage
84 (Y/R)	Ground	A/T device	Output		_	Battery voltage
85		Electronic steering	_	Electronic steer-	Lock status	OV
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage
86	0	Electronic steering	1	Electronic steer-	Lock status	Battery voltage
(G/R)	Ground	column lock condition No. 2	Input	ing column lock	Unlock status	0V
87	Ground	Selector lever P posi-	Input	Selector lever	P position	0V
(G/B)	Ground	tion switch	Прис	Ocicciói icvei	Any position other than P	Battery voltage
					ON (pressed)	OV
88 (R) Ground	Front door RH request switch	Input	Front door RH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	
					ON (pressed)	OV
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V
(Y)	Giouria	lay control	Output	Igililion switch	ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage
94	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage
(G/Y)	Giouria	unit power supply	Output	igililion switch	ON	OV

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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Terminal No. (Wire color) Description			0		Value	
(+) (-)	Signal name	Input/ Output		Condition	(Approx.)	
				All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	
				Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB	
95 (R/W) Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermittent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB	
				Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	
				Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB	

< ECU DIAGNOSIS >

	inal No. e color)	Description	1		0	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
96	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V
(P/B)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB

< ECU DIAGNOSIS >

	Terminal No. Description (Wire color)				Value	А	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	A
		Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
97 (R/B)	Ground				Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB	G H
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB	PWC
					Front wiper switch HI	(V) 15 10 2 ms JPMIA0040GB	M
					Pressed	1.3V	0
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB	Р

< ECU DIAGNOSIS >

Terminal No.		Description				Value
(VVire	e color)	Signal name	Input/ Output	Condition		(Approx.)
99 (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output	Electronic steer- ing column lock	LOCK status	Battery voltage
					LOCK or UNLOCK	(V) 15 10 50 ms JMKIA0066GB
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0V
103 (V)	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
					Close (trunk lid opener actuator is not activated)	0V
110	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V
(V/W)					OFF	Battery voltage
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

	inal No.	Description				Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
115	Outside	Trunk room antenna	0.4.4	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(W)	Ground	1 (+)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
118	Ground	Rear bumper anten-	Output	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(L/O)	Ground	na (-)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
119 (BR/	Ground	Rear bumper anten-	Outout	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(BR/ W)	Ground	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

	inal No.	Description				Value
	e color)	Signal name	Input/		Condition	Value (Approx.)
(+) 127	(-)	-	Output		OFF or ACC	Battery voltage
(BR/	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch		
W)		L/K) control			ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB
 					ON (trunk is open)	0V
				Ignition switch OFF (M/T vehi-	When the clutch pedal is depressed	Battery voltage
				cle)	When the clutch pedal is not depressed	0V
132 (R)	Ground	Starter motor relay control	Output	Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage
				ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is not depressed	0V
					ON (pressed)	OV
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
144	Craund	Request switch buzz-	Outnut	Request switch	Sounding	0V
(GR)	Ground	er	Output	buzzer	Not sounding	Battery voltage
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V
(L/R)	2.34.14	switch		switch	Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (when rear door RH opens)	ov

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

	inal No.	Description				Value
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes) ON (when rear door LH opens)	(V) 15 10 5 0 10 ms JPMIA0011GB

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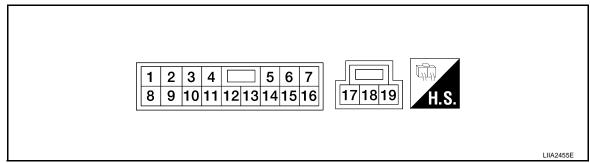
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POWER WINDOW MAIN SWITCH

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 (W)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage
2 (GR)	Ground	Encoder ground		_	0
3 (Y)	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)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5 (SB)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage
6 (R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (P)	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)	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 (Y)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Termina	al No.	Description			V-lt D/I
+	-	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)
				IGN SW ON	Battery voltage
10 (V)	Ground	RAP signal	Input	Within 45 seconds after ignition switch is turned to OFF.	Battery voltage
				When front LH or RH door is opened during retained power operation.	0
11 (LG)	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)	2	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
14 (O)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
15 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
17 (B)	Ground	Ground	_	_	0
19 (R)		Battery power supply	Input	_	Battery voltage

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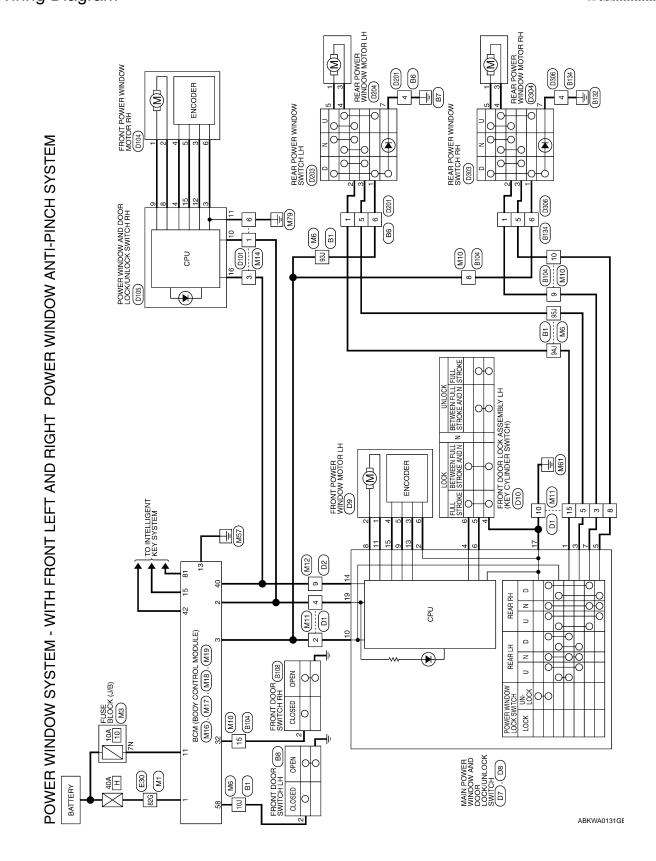
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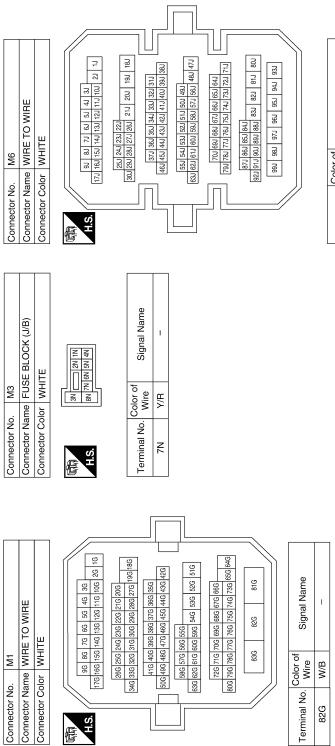
Wiring Diagram

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

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Signal Name	1	– (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	I	-	
Color of Wire	SB	Γ/W	BR	Y/G	
erminal No.	101	93J	94J	95J	

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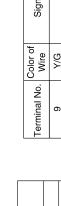
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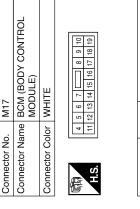


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	12	24		Ĕ	
	Ţ.	23		۲	
	9 10 11 12	22		Signal Name	
	6	21		Ü	
7	8	20		Š	
/	7	6			
١	9	8			
١	5	17		5	
Ξ	4	16		E C	0,77
	2 3	13 14 15 16 17 18 19 20 21 22 23 24		Color of Wire	>
	2	14			H
	-	13		Š.	
	٥	ó	-	rminal No.	ď





Signal Name	-	_	-	-	-	_	ı
Color of Wire	M	В	R/Υ	Y/G	Y/G	В	BR
erminal No.	2	3	4	5	8	10	15



Signal Name	BAT BCM FUSE	GND1	ACC LED
Color of Wire	Y/R	В	J/A
Terminal No.	11	13	15

Connector Name	BCM (BODY CONTROL MODULE) BLACK
H.S.	1 3

M16

Connector No.



Signal Name	BAT POWER F/L	P/W POWER SUPPLY PERM	P/W POWER SUPPLY IGN
Color of Wire	M/B	R/Y	L/W
Terminal No.	-	2	3

Connector No.	_	M10	_						
Connector Name WIRE TO WIRE	2	₩	Ш	0	∣≥	置	l		
Connector Color WHITE	>	¥							
	9 2	S	4	Ш	П	m	7	-	
- C	16 15 14 13 12 11	14	13	12	=	9	6	8	
5.5						l	l	l	

Connector Color WHITE

Connector No. M11

Signal Name	– (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	1	1	1
Color of Wire	N A S	ŋ	Y/G	B/B
Terminal No. Wire	8	6	10	15

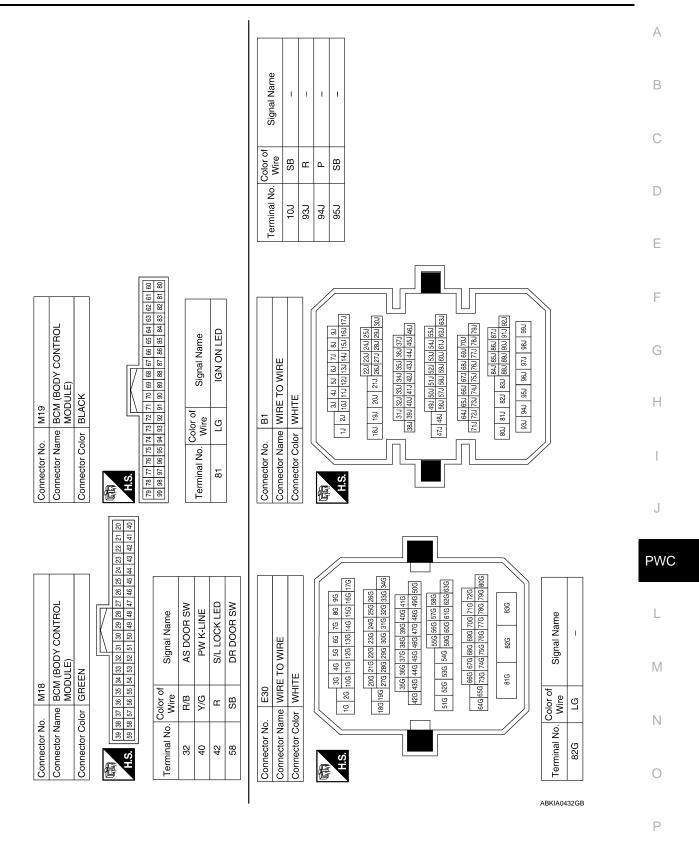
	MIRE		3 4	10
	TO			
4	IRE	Ë	2	2 7 2
M14	>	≶	-	u
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	E	





Signal Name	_	-	_
Color of Wire	R/Υ	Y/G	В
Terminal No.	-	က	9

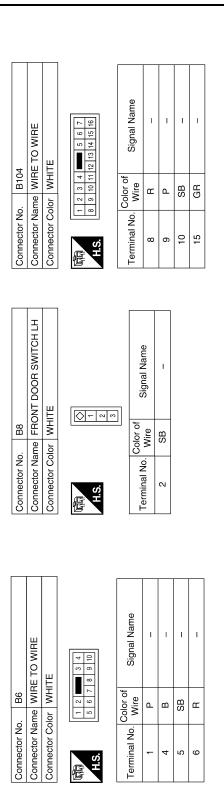
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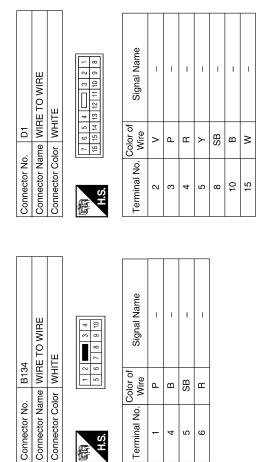


POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >





Color of

Wire

Terminal No.

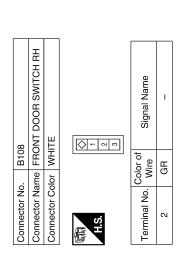
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Connector Color

Connector No.

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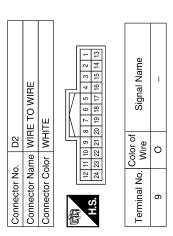
POWER WINDOW MAIN SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Signal Name	RR DOWN	UNLOCK	RR UP	AS UP	ENCODER SIG1	IGN	AS DOWN	ENCODER SIG2	COM	ENCODER POWER
Color of Wire	SB	Œ	۵	٦	>	>	ГG	В	0	BR
Terminal No.	5	9	7	8	6	10	11	13	14	15

	Connector Name AND DOOR LOCK/UNLOCK SWITCH	ITE		3 4 5 6 7	Signal Name	ar up	ENCODER GND	RL DOWN	LOCK	
. 07	me ANI SW	lor WH	ı ı⊢	8 9 10	Color of Wire	×	GR	>	_	
Connector No.	Connector Na	Connector Color WHITE	d d	山山 H.S.	Terminal No.	1	2	က	4	



Connector No.		D10	
Connector Name		FROM	FRONT DOOR LOCK ASSEMBLY LH
Connector Color		GRAY	γ
H.S.		3	8 9 9
Terminal No.	Color of Wire	or of re	Signal Name
4	ш	В	1
5	_	ш	-
9			ı

Connector No.	D3	
Connector Name		FRONT POWER WINDOW MOTOR LH
Connector Color	_	WHITE
H.S.		3 4 5 6
Terminal No.	Color of Wire	Signal Name
-	ГG	ı
2	_	ı
ဇ	U	I
4	BR	I
5	Υ	-
9	GR	1

	×					
	Connector Name MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH	ТЕ	77	Signal Name	QNĐ	BAT
. D8	me AN SW	lor WH		Color of Wire	В	Ж
Connector No.	Connector Na	Connector Color WHITE	(S)H	Terminal No.	17	19

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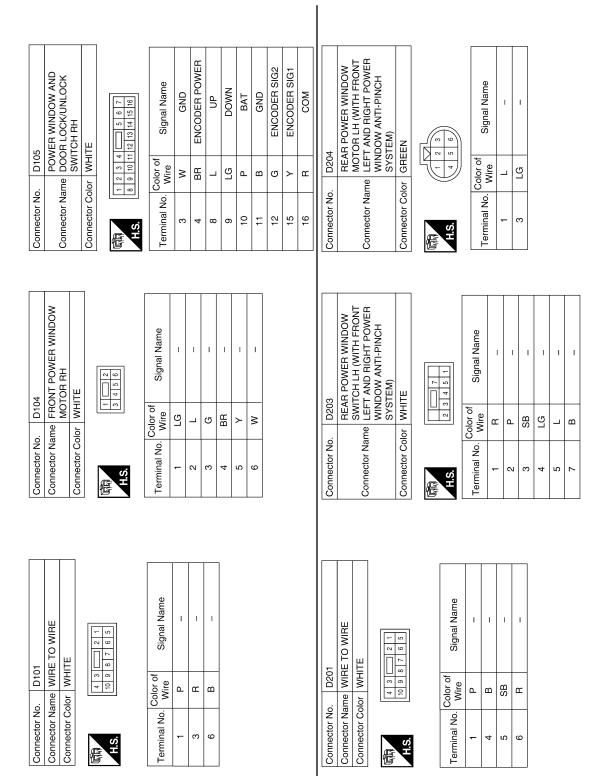
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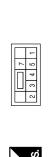
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				ne			
TO WIRE	Э	10 9 8 7 6 5 1		Signal Name	1	1 1	1
D306 ame WIRE	olor WHITE	10 9 8		ုပ္ပ >	م م	n 87	3 &
Connector No. D306 Connector Name WIRE TO WIRE	Connector Color			Terminal No.	-	4 ι	9
]				
WINDOW	MOTOR RH (WITH FRONT LEFT AND RIGHT POWER	HONIA-I				Signal Name	1
D304 REAR POWER WINDOW	TOR RH (W	WINDOW ANTI- SYSTEM) GREEN		2 2			
	MO Name LEF	SY:	\f	- 7	Color of		_ _
Connector No.	Connector Name	Connector Color		H.S.		lerminal No.	- «
MOON	H FRONT POWER	NCH				allie	

D303	REAR POWER WINDOW SWITCH RH (WITH FRONT Connector Name LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	WHITE	
Connector No.	Connector Name L	Connector Color WHITE	



Signal Name	ı	1	I	ı	-	1
Color of Wire	Œ	Ь	SB	LG	٦	В
Terminal No. Wire	-	2	3	4	5	2

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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&RH FRONT WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors 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

< ECU DIAGNOSIS >

- 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

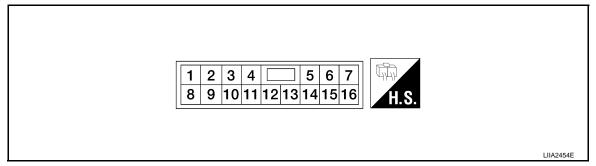
< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage IV/I
+	-	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)
3 (W)	Ground	Encoder ground	_	_	0
4 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
8 (L)	9	Power window motor UP signal	Output	When power window motor is operated UP.	Battery voltage
9 (L/G)	8	Power window motor DOWN signal	Output	When power window motor is operated DOWN.	Battery voltage
10 (P)	Ground	Battery power supply	Input	_	Battery voltage
11 (B)	Ground	Ground	_	_	0
12 (G)	3	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

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FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

Te	erminal No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
15 (Y)	٠, ٦	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
16 (R)		d Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

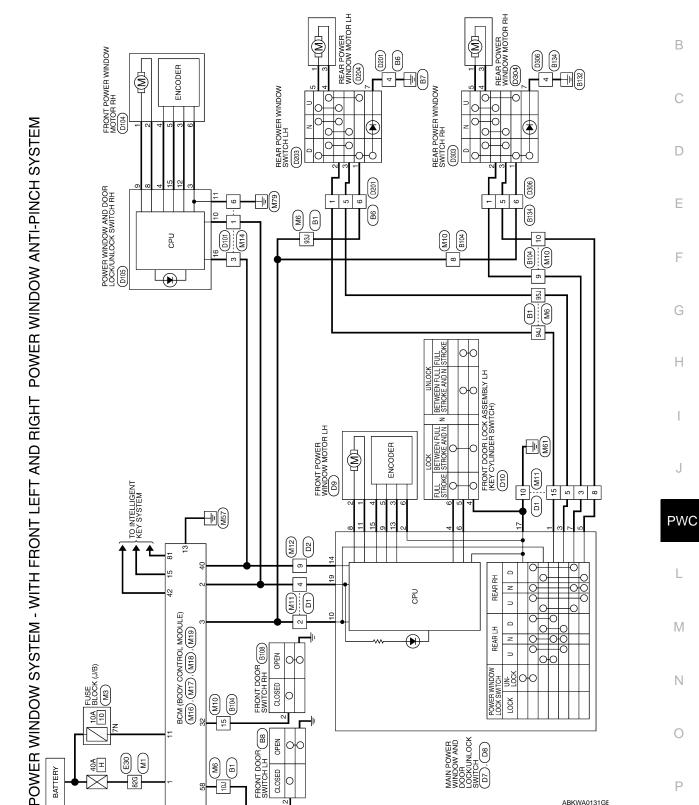
FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS > [LH&RH FRONT WINDOW ANTI-PINCH]

Wiring Diagram

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- (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)

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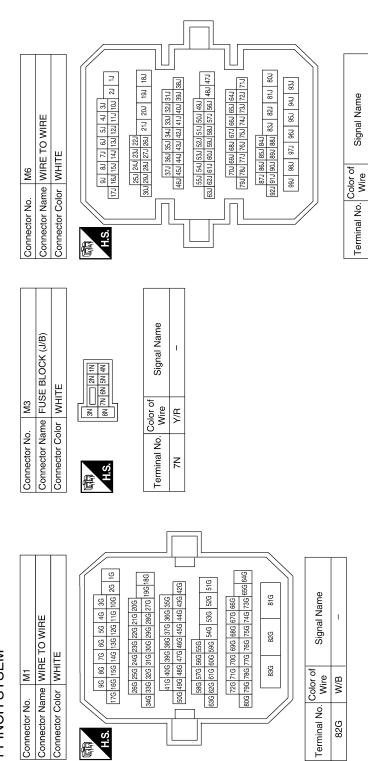
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Y/G

BH

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



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FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Connector No. M11	. M1	1	Connector No. M12	. M1	5
Connector Name WIRE TO WIRE	ame WIF	RE TO WIRE	Connector Na	ame WIF	Connector Name WIRE TO WIRE
Connector Color WHITE	olor WH	IITE	Connector Color WHITE	olor WH	ITE
H.S.	8 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1	2 3 mm 4 5 6 7 9 10 11 12 13 14 15 16	H.S.	2 3 4 5 14 15 16 17	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 22 24 24
	30,200				
Terminal No. Wire	Wire	Signal Name	Terminal No. Wire	Color of	Signal Name
c	144			> •	
7	\ \ \	_	0	٧/ك	ı
	,		•	5	

								rrol			ame	FUSE		<u> </u>	
							7	Connector Name BCM (BODY CONTROL MODULE)	IITE	7 8 9 10	Signal Name	BAT BCM FUSE	GND1	ACC LED	
). M17	ame BC MC	olor WF	4 5 6 11 12 13	Color of Wire	Y/R	В	Y/L	
							Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	7	13	15	
					1										
	1	1	ı	1			9	BCM (BODY CONTROL MODULE)	BLACK	5	Signal Name	BAT POWER F/L	P/W POWER	SUPPLY PERM	P/W POWER SUPPLY IGN
	Y/G	Y/G	В	BR			Jo. M16	lame BC MC	Color BL		Color of Wire	W/B	Β/Y		Γ/M
Ī						ı	ı≃	1	1 22 1	I				T	

Connector Name Connector Color

Connector Name WIRE TO WIRE

Connector No. M14

Connector No.

Connector Name WIRE TO WIRE Connector Color WHITE T 6 5 4 1 1 10 9 8 1 1 16 15 14 13 12 11 10 9 8	Connector No.	M10
Connector Color WHITE	Connector Name	WIRE TO WIRE
7 6 5 4 0 3 2 1 16 15 14 13 12 11 10 9 8	Connector Color	WHITE
7 6 5 4 () 3 2 1 16 15 14 13 12 11 10 9 8		
16 15 14 13 12 11 10 9 8		6 5 4 3 2 1
	16	15 14 13 12 11 10 9 8

Signal Name	– (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	_	_	_
Color of Wire	M	Э	Y/G	B/B
Terminal No. Wire	8	6	10	15

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Ш			7	
WHITE		2	9	
≥		-	2	
Connector Color		恒) <u>-</u>	11:0: C-11:1



Signal Name	ı	1	ı	
Color of Wire	R/Υ	Y/G	В	
Ferminal No.	-	3	9	

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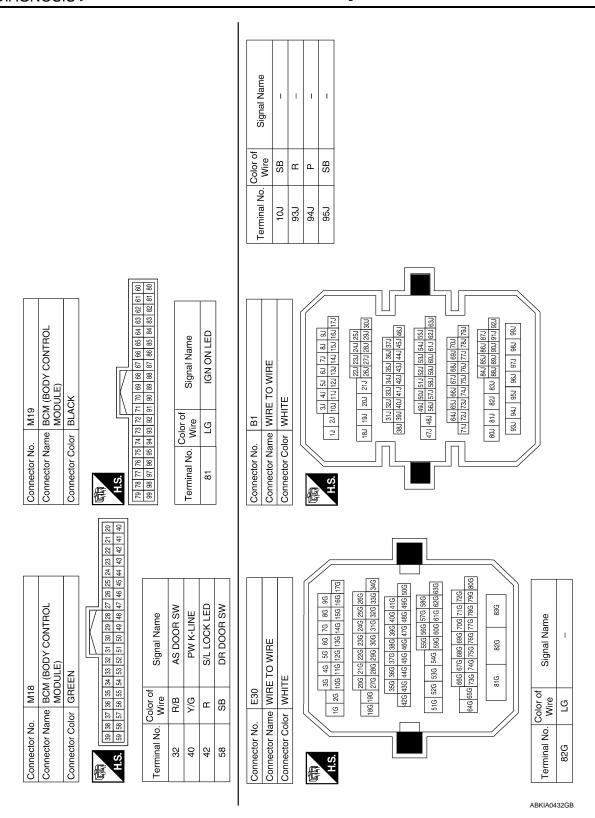
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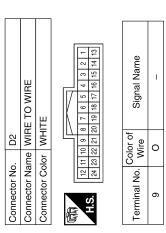
FRONT POWER WINDOW SWITCH

[LH&RH FRONT WINDOW ANTI-PINCH]

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			[6]	Signal Name	1	1	1					2 8 8	Signal Name	1	ı	ı	1	ı	1	1			В
B104	Connector Name WIRE TO WIRE	WHITE	1 2 3 4							Connector Name WIRE TO WIRE	WHITE	13 12 11 10											С
	Name N		1 2 3 8 9 10	Color of Wire	<u>ac</u>	۵	SB	GB GB	No.	Name V	Color	7 6 5 14 14 14	Color of Wire	>	_	Œ	>	SB	В	>			D
Connector No.	Connector	Connector Color	H.S.	Terminal No.	80	6	10	15	Connector No.	Connector	Connector Color	H.S.	Terminal No.	2	ო	4	5	80	10	15			Е
						_				<u> </u>				1	I			1					F
	FRONT DOOR SWITCH LH			:	Signal Name	ı				O WIRE		7 8 9 10	Signal Name	1	1	1	1						G H
B8		WHITE	←	or of	Wire	SB			B134	WIRET	WHITE	5 6 7	Color of Wire	<u>_</u>	В	SB	æ						11
or No.	r Name	r Color				-			or No.	or Name	or Color					0)							I
Connector No.	Connector Name	Connector Color	H.S.		l erminal No.	7			Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.	Terminal No.	-	4	2	9						J
																							PW
	뮖			Signal Name	1	1	1	1		OR SWITCH RH				Signal Name	I								L
	R TO W	≝│	7 8 9 10						8	OO TNC	<u> </u>	Q-00	ภ										M
o. B6	ame WIF	olor WHITE	5 6 7	Color of Wire	Ь	В	SB	Œ	o. B108	ame FR(olor WHITE		Color of		GR								N
Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.	Terminal No.	-	4	5	9	Connector No.	Connector Name FRONT DOOR SWI	Connector Color	Ä.S.		Terminal No.	2								
ပြိ	<u></u>	ర _్	優	Te					ပြ	ŏ	ၓ			<u> </u>						^	BKIA0433	sgr.	0
																				۸			Р

Signal Name	RR DOWN	NNLOCK	AN NP	AS UP	ENCODER SIG1	NOI	AS DOWN	ENCODER SIG2	COM	ENCODER POWER
Color of Wire	SB	æ	۵	٦	>	>	Ы	В	0	BR
Terminal No.	5	9	7	8	6	10	11	13	14	15

Connector No.). D7	
Connector Na	me ANE SWI	Connector Name AND DOOR LOCK/UNLOCK SWITCH
Connector Color	olor WHITE	TE
H.S.	1 2 3 8 9 10	3 4
Terminal No.	Color of Wire	Signal Name
-	M	RL UP
2	GR	ENCODER GND
3	Υ	RL DOWN
4	٦	LOCK



ſ								
		FRONT DOOR LOCK ASSEMBLY LH	4	3 4 5 6	Signal Name	1	-	ı
	. D10	me FRC ASS	lor GRAY	2	Color of Wire	В	В	_
	Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	4	5	9

	FRONT POWER WINDOW MOTOR LH	ш	3 4 5 6	Signal Name	-	-	1	ı	ı	1
D		lor WH		Color of Wire	ГG	_	9	BB	>	GR
Connector No.	Connector Name	Connector Color WHITE	同 H.S.	Terminal No.	1	2	3	4	2	9

Connector No.	. D8	
Connector Name		MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	lor WHI	TE
是 E.S.		61 81
Terminal No.	Color of Wire	Signal Name
17	В	GND
19	æ	BAT

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FRONT POWER WINDOW SWITCH

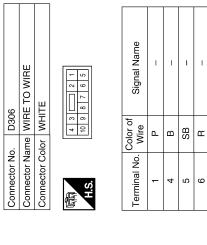
[LH&RH FRONT WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Connector No.	D101		Connector No.	lo. D104	74	[Ŏ	Connector No.	. D105		
<u>e</u>	VIRE TO WIRE		Connector Name	e	FRONT POWER WINDOW			1	POWER WINDOW AND	•••
Connector Color WHITE	VHITE		Connector Color	_	MOTOR RH WHITE	Ŏ —	Connector Name		DOOR LOCK/UNLOCK SWITCH RH	OIC.
				-		J J	Connector Color	lor WHITE	111111111111111111111111111111111111111	
H.S.	4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		H.S.	[كات]	3 1 4 5 6			1 2 3 4 8 9 10 11	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	
						J	2			
Terminal No. Wire	of Signal Name	<u>—</u>	Terminal No.	Color of Wire	Signal Name	F	Terminal No.	Color of Wire	Signal Name	
-	ı		-	re	ı		8	>	GND	
В.	ı		2	T	1		4	BB	ENCODER POWER	
9 9	1		ო	σ	ı	1	8		UP	
	-		4	BR	1		6	re	DOWN	
			2	>	1	<u> </u>	10	۵	BAT	
			9	>	ı		1	В	GND	
							12	Ø	ENCODER SIG2	
							15	>	ENCODER SIG1	
							16	В	COM	
Connector No. D	D201		Connector No.	o. D203	3	l L	Connector No.	. D204		
Connector Name WIRE TO WIRE	VIRE TO WIRE			RE,	REAR POWER WINDOW			REA	REAR POWER WINDOW	
Connector Color M	WHITE		Connector Name		SWITCH LH (WITH FRONT LEFT AND RIGHT POWER	ŏ	Connector Name		MOTOR LH (WITH FRONT LEFT AND RIGHT POWER	<u>- </u>
4 3	2			SYS	WINDOW ANTI-PINCH SYSTEM)			SYS	WINDOW AN II-PINCH SYSTEM)	
H.S.	9 8 7 6 5		Connector Color	olor WHITE	ITE	ŏ]	Connector Color	lor GREEN	EN	
							, C	4		
Color of			SH	2 3	1 4	÷ \	Ś	4	5 8	
>	Olyliai Ivalile	שַ		30,00			1		⊣ I	
-	ı		Terminal No.		Signal Name	_ !		Color of		
4 B	1		-	<u> </u>	1	-	i erminai No.	Wire	Signal Name	
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Connector No. D	D304
Connector Name L N	REAR POWER WINDOW MOTOR RH (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color GREEN	REEN





//	Color
	Terminal No.

Signal Name

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Connector No.		D303	3
Connector Name	ame	SWI LEF WIN SYS	REAR POWER WINDOW SWITCH RH (WITH FRONT LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	jo	WHITE	TE
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Terminal No.	Color of Wire	r of	Signal Name
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Fail Safe INFOID:0000000003898236

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 WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors 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 WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

Diagnosis Procedure

INFOID:0000000003898237

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to PWC-18, "BCM: 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-19. "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003898238

1. CHECK FRONT POWER WINDOW MOTOR LH

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Check front power window motor LH. Refer to <u>PWC-27</u>, "<u>DRIVER SIDE</u>: <u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Inspection End.
NO >> Check intermitte

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-ATE

Diagnosis Procedure

INFOID:0000000003898239

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit. Refer to PWC-29, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to <u>PWC-30</u>, "<u>REAR LH</u>: <u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003898241

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to <u>PWC-32</u>, "<u>REAR RH</u>: <u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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

[LH&RH FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) Α Diagnosis Procedure INFOID:0000000003898242 1. PERFORM INITIALIZATION PROCEDURE В Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". C Is the inspection result normal? YES >> Inspection End. NO >> GO TO 2 2. CHECK ENCODER CIRCUIT D Check encoder circuit. Refer to PWC-34, "DRIVER SIDE: Component Function Check". Is the inspection result normal? Е YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO >> Repair or replace malfunctioning parts. Н

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000003898243

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to <u>PWC-37</u>, "<u>PASSENGER SIDE</u>: <u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY (DRIVER SIDE) [LH&RH FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-Α MALLY (DRIVER SIDE) Diagnosis Procedure INFOID:0000000003898244 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? YES >> Inspection End. D NO >> GO TO 2 2. CHECK ENCODER Е Check encoder. Refer to PWC-34, "DRIVER SIDE: Component Function Check". Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". F NO >> Repair or replace the malfunctioning parts. Н J L

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

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000003898245

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-37, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to PWC-40, "Component Function Check". Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

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DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000003898247

 $1. \ \mathsf{CHECK} \ \mathsf{FRONT} \ \mathsf{DOOR} \ \mathsf{LOCK} \ \mathsf{ASSEMBLY} \ \mathsf{LH} \ (\mathsf{KEY} \ \mathsf{CYLINDER} \ \mathsf{SWITCH})$

Check front door lock assembly LH (key cylinder switch). Refer to PWC-43, "Diagnosis Procedure". Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000003898248

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function. Refer to <u>DLK-112, "Component Function Check"</u>. <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-87, "Removal and Installation".

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH&RH FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000003898249

1. CHECK POWER WINDOW LOCK SWITCH

Check power window lock switch. Refer to <u>PWC-50</u>, "Component Function Check". <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

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.

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000004394044

NOTE:

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

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

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

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PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[LH&RH FRONT WINDOW ANTI-PINCH]

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

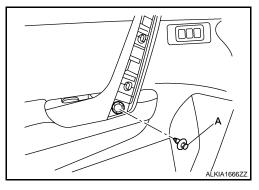
Removal and Installation

REMOVAL

- 1. Disconnect the negative battery terminal.
- 2. Using a suitable tool, remove the front door grip cover. Refer to INT-18, "Exploded View". **CAUTION:**

Wrap a cloth around suitable tools to protect components from damage.

3. Remove the power window main switch locking clip (A).



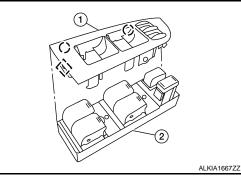
4. Release the metal clip, then lift the power window main switch and finisher as an assembly upward to remove it from the front door finisher.



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- Disconnect the harness connector.
- 6. Release the tabs on each side, then separate the switch finisher (1) from the power window main switch (2) and remove. **CAUTION:**

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



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-9. "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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FRONT POWER WINDOW SWITCH

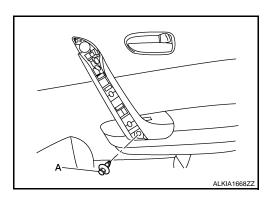
Removal and Installation

REMOVAL

- 1. Disconnect the negative battery terminal.
- Using a suitable tool, remove the front door grip cover. Refer to <u>INT-18</u>, "<u>Exploded View</u>".
 CAUTION:

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

3. Remove the front power window switch locking clip (A).



4. Release the metal clip, then lift the front power window switch and finisher as an assembly upward to remove it from the front door finisher.

[]: Metal clip

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CAUTION:

Wrap a cloth around suitable tools to protect components from damage.

- 5. Disconnect the harness connector.
- 6. Release the tabs on each side, then separate the switch finisher (1) from the front power window switch (2) and remove.

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INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initalization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

REAR POWER WINDOW SWITCH

< ON-VEHICLE REPAIR >

[LH&RH FRONT WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH

Removal and Installation

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REMOVAL

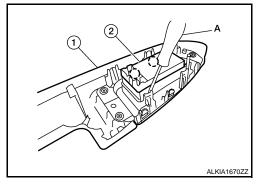
- 1. Disconnect the negative battery terminal.
- Using a suitable tool, remove the rear door arm rest finisher (1), then disconnect the harness connector. Refer to <u>INT-21</u>. "Exploded View".

CAUTION:

Wrap a cloth around suitable tools to protect components from damage.

3. Release the tabs on each side with suitable tool (A), then separate the rear power window switch (2) from the finisher (1) and remove.





INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

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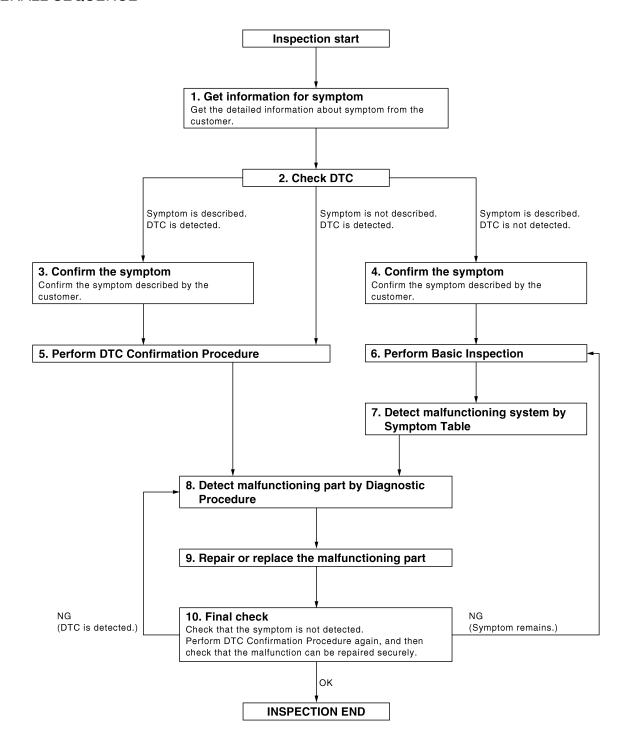
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[FRONT & REAR WINDOW ANTI-PINCH]

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

< BASIC INSPECTION >

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

$oldsymbol{5}$. 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-81, "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-39, "Intermittent Incident".

6. PERFORM BASIC INSPECTION

Perform PWC-116, "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

[FRONT & REAR WINDOW ANTI-PINCH]

< BASIC INSPECTION >

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.
- 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 has 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 [FRONT & REAR WINDOW ANTI-PINCH] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000004362920 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:0000000004362921 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.
- Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm (5.91 in) 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 parts of the 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-201, "Fail Safe", PWC-212, "Fail Safe" or PWC-223, "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:0000000004362922

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:0000000004362923

INITIALIZATION PROCEDURE

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

- 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.
- 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 (5.91 in) 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.

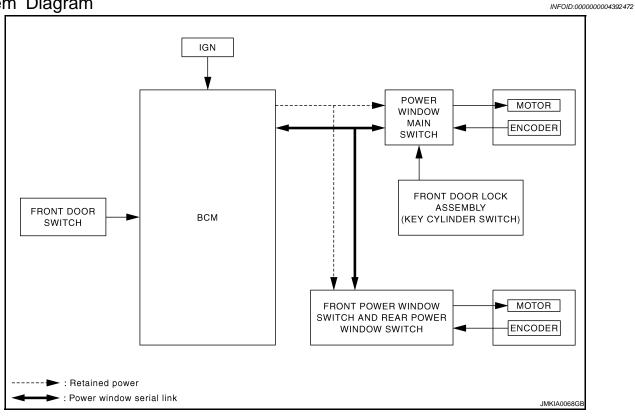
CAUTION:

- Do not check with hands and other parts of the 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-201, "Fail Safe", PWC-212, "Fail Safe" or PWC-223, "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
- Retained power operation when ignition switch is OFF.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram



System Description

POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator	
Key cylinder switch	LOCK/UNLOCK signal (more than 1.5 seconds over)	signal (more than 1.5		
Encoder	Encoder pulse signal			
Power window main switch	Front power window motor (driver side) UP/DOWN signal			
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	Each power window motor	
Rear power window switch	Rear power window motor UP/DOWN signal			
ВСМ	RAP signal			

FRONT POWER WINDOW & REAR POWER WINDOW SWITCH INPUT/OUTPUT SIGNAL CHART

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Item	Input signal to front power window & rear power window switch	Front power window & rear pow- er window switch function	Actuator
Encoder	Encoder pulse signal		
BCM	RAP signal		Front power window motor
Front power window switch (passenger side) & rear power window switch	Front power window motor (passenger side) & rear power window motor UP/DOWN signal	Power window control	(passenger side) & 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.
- 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

- AUTO UP/DOWN operation can be performed when each power window motor 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 again.
- When timer time passes. (45 seconds)

POWER WINDOW LOCK

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

ANTI-PINCH OPERATION

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.91 in) or 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the window glass for 150 mm or 2 seconds after it detects encoder pulse signal frequency change.

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

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

OPERATION CONDITION

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

POWER WINDOW SYSTEM

[FRONT & REAR WINDOW ANTI-PINCH] < FUNCTION DIAGNOSIS > Hold door key cylinder to UNLOCK position for 1.5 seconds or more to perform OPEN operation of the door glass. Α KEYLESS POWER WINDOW DOWN FUNCTION All power windows open when the unlock button on Intelligent Key is activated and kept pressed for more than В 3 seconds NOTE 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. C • When the ignition switch is turned ON while the power window opening is operated. When the unlock button is released. While retained power operation is active, keyless power window down function cannot be operated. D Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-50, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)". NOTE: Е Use CONSULT-III to change settings. MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec) F Н J

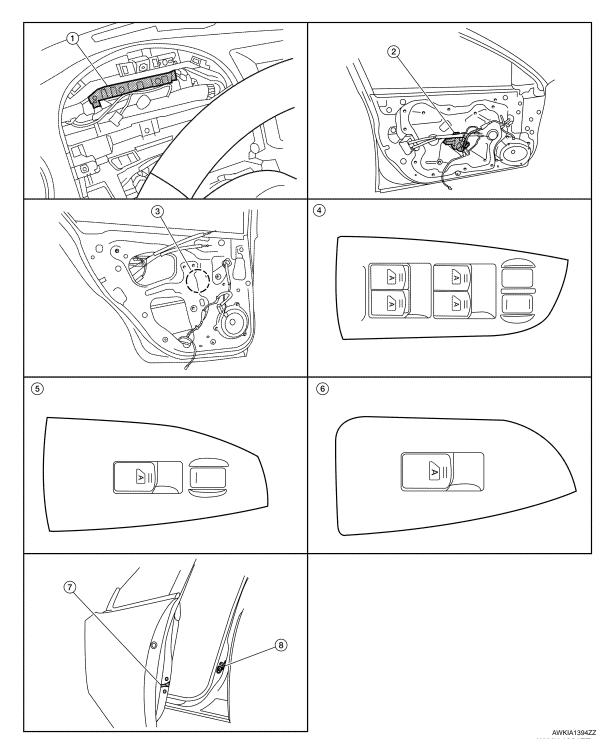
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Component Parts Location

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- 1. BCM M16, M17, M18, M19 (view with combination meter removed)
- 4. Main power window and door lock/ unlock switch D7, D8
- Front door lock assembly LH (key cylinder switch) D10
- 2. Front power window motor LH D9
 Front power window motor RH D104
- 5. Power window and door lock/unlock 6. switch RH D105
- Front door switch LH B8 Front door switch RH B108
- Rear power window motor LH D208 Rear power window motor RH D304
- Rear power window switch LH D207 Rear power window switch RH D307

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Component Description

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Component	Function
BCM	Supplies power supply to power window switch.Controls retained power.
Power window main switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window.
Front power window switch	 Controls anti-pinch operation of power window. Controls power window motor of passenger door.
Rear power window switch	 Controls anti-pinch operation of power window. Controls power window motor of rear right and left doors.
Power window motor	 Integrates the ENCODER and WINDOW MOTOR. Starts operating with signals from each power window switch. Transmits power window motor rotation as a pulse signal to power window switch.
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch	Detects door open/close condition and transmits to BCM.

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DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: Diagnosis Description

INFOID:0000000004391478

BCM CONSULT-III FUNCTION

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.
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		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEADLAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
Air conditioner	AIR CONDITONER		×	
Intelligent Key system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
BCM	BCM	×		
Immobilizer	IMMU		×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Trunk open	TRUNK		×	
Vehicle security system	THEFT ALM	×	×	×
RAP system	RETAINED PWR		×	
Signal buffer system	SIGNAL BUFFER		×	×
TPMS	AIR PRESSURE MONITOR	×	×	

COMMON ITEM: CONSULT-III Function

INFOID:0000000004391479

ECU IDENTIFICATION Displays the BCM part No.

SELF-DIAG RESULT

Refer to BCS-82, "DTC Index".

RETAINED PWR

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

INFOID:0000000004391480

Data monitor

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

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT BCM

BCM: Diagnosis Procedure

INFOID:0000000004391546

1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.	
1		Н	
11	Battery power supply	10	
24		7	

Is the fuse or fusible link blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

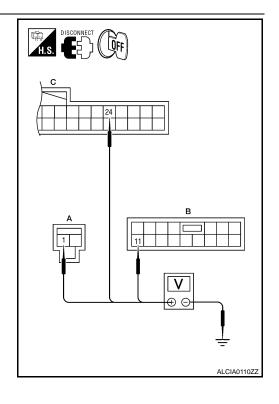
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- 3. Check voltage between BCM harness connector and ground.

(+)	(-)	Voltage
В	СМ		(Approx.)
Connector	Terminal		
M16 (A)	1	Ground	
M17 (B)	11		Battery voltage
M18 (C)	24		

Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.



3. CHECK GROUND CIRCUIT

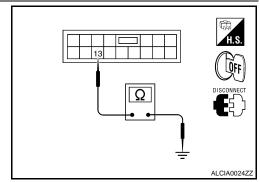
Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M17	13		Yes	

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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BCM: Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

Initialize control unit. Refer to BCS-6, "CONFIGURATION (BCM): Special Repair Requirement".

>> Work End.

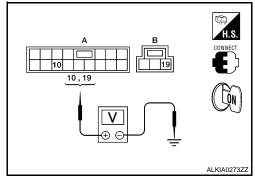
POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- Check voltage between main power window and door lock/ unlock switch connectors D7 (A) terminal 10 and D8 (B) terminal 19 and ground.

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



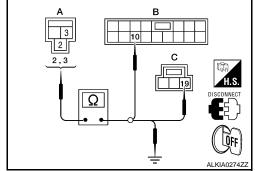
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect BCM connector M16 and main power window and door lock/unlock switch connectors.
- 3. Check continuity between BCM connector M16 (A) terminals 2 and 3 and main power window and door lock/unlock switch connectors D7 (B) terminal 10 and D8 (C) terminal 19.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M16 (A)	3	D7 (B)	10	Yes
W10 (A)	2	D8 (C)	19	163



4. Check continuity between BCM connector M16 (A) terminals 2 and 3 and ground.

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connectors.

$3.\,$ CHECK GROUND CIRCUIT

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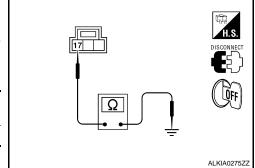
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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch connector D8.
- 3. Check continuity between main power window and door lock/ unlock switch connector D8 terminal 17 and ground.

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



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000004391488

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

FRONT POWER WINDOW SWITCH

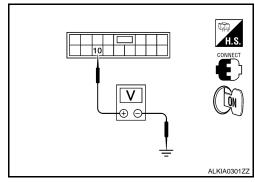
FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000004391491

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D105 terminal 10 and ground.

Terminal				
(+)				
Terminal	(–)	Voltage (V) (Approx.)		
10	Ground	Battery voltage		
	Terminal	Terminal (-)		



Is the inspection result normal?

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

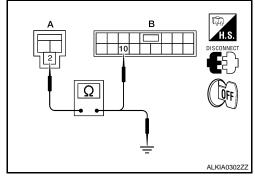
2. CHECK HARNESS CONTINUITY

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M16 and power window and door lock/unlock switch RH connector.
- Check continuity between BCM connector M16 (A) terminal 2 and power window and door lock/unlock switch RH connector D105 (B) terminal 10.

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 M16 (A) terminal 2 and ground.

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

Is the inspection result normal?

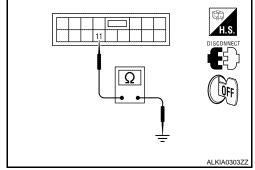
YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

- 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 D105 terminal 11 and ground.

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



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Diagnosis Procedure

1. CHECK POWER SUPPLY CIRCUIT

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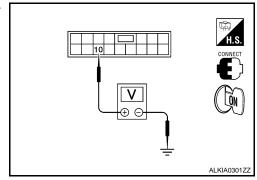
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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Check voltage between rear power window switch connector terminal 10 and ground.

(+) Rear power window switch		(-)	Voltage (V) (Approx.)	
Connector	Terminal		(Арргох.)	
D207 (LH)	10	Ground	Pattory voltage	
D307 (RH)	10	Giouria	Battery voltage	



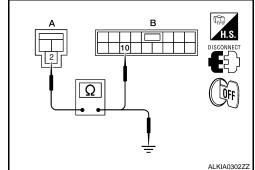
Is the inspection result normal?

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

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M16 and rear power window switch connector.
- 3. Check continuity between BCM connector M16 (A) terminal 2 and rear power window switch connector (B) terminal 10.

BCM connector	Terminal	Rear power window switch connector	Terminal	Continuity
M16 (A)	2	D207 (LH) (B)	10	Yes
WTO (A)	2	D307 (RH) (B)	10	165



4. Check continuity between BCM connector M16 (A) terminal 2 and ground.

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

Is the inspection result normal?

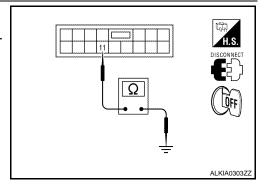
YES >> Replace BCM. Refer to BCS-87, "Removal and Installation".

NO >> Repair or replace harness or connectors.

$3.\,$ CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect rear power window switch connector.
- Check continuity between rear power window switch connector terminal 11 and ground.

Rear power window switch connector	Terminal		Continuity
D207 (LH)	11	Ground	Yes
D307 (RH)	11		162



Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

REAR POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000004392457

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: Special Repair Requirement" and <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: Special Repair Requirement".

>> End.

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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:0000000004391495

1. CHECK POWER WINDOW MOTOR

Check that front power window motor LH operates with 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-134, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000004391496

1. CHECK POWER WINDOW MOTOR

Check front power window motor LH. Refer to <u>PWC-135</u>, "<u>DRIVER SIDE</u>: <u>Component Inspection</u>". <u>Is the inspection result normal?</u>

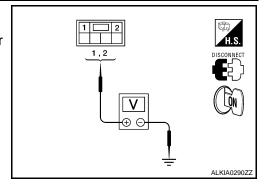
YES >> GO TO 2

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

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

- 1. Disconnect front power window motor LH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor LH connector D9 terminals 1, 2 and ground.

7	erminal			
(+)			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
	1		DOWN	Battery voltage



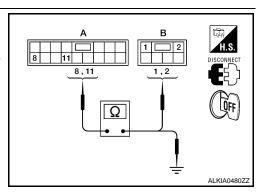
Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector D7.
- 3. Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 8, 11 and front power window motor connector LH D9 (B) terminals 1, 2.



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
Dr (A)	11	D9 (B)	1	162

4. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 8, 11 and ground.

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 >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE: Component Inspection

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR LH

Disconnect front power window motor LH.

2. Check motor operation by connecting battery voltage directly to front power window motor LH.

Tern	Terminal Motor condition	
(+)	(–)	Wiotor condition
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Inspection End.

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

DRIVER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.
PASSENGER SIDE

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PWC-135

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:0000000004391501

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that front power window motor RH operates with 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-136, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000004391502

1. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH. Refer to PWC-137, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

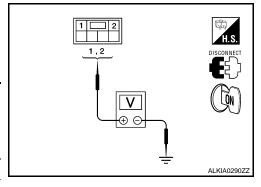
YES >> GO TO 2

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

${f 2}.$ CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Disconnect front power window motor RH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor RH connector D104 terminals 1, 2 and ground.

Terminal				
(+)			Front power window motor	Voltage (V)
Front power window motor RH connector	Terminal	(–)	RH condition	(Approx.)
	2		UP	Battery voltage
D104		Ground	DOWN	0
D104	4	Giodila	UP	0
I	1		DOWN	Battery voltage



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

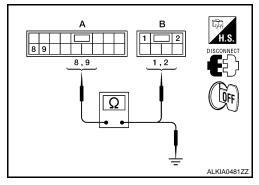
NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and front power window motor RH connector D104 (B) terminals 1, 2.

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
D103 (A)	9	D 104 (D)	1	163



POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 8, 9 and ground.

Power window and door lock/unlock switch RH con- nector	Terminal	Ground	Continuity
D105 (A)	8		No
D103 (A)	9		NO

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-114. "Removal and Installation".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE : Component Inspection

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Disconnect front power window motor RH.

Check motor operation by connecting battery voltage directly to front power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End.

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

PASSENGER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

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

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that rear power window motor LH operates with main power window and door lock/unlock switch or rear power window switch LH.

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INFOID:0000000004391551

< COMPONENT DIAGNOSIS >

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-138, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

INFOID:0000000004391553

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-139, "REAR LH: Component Inspection".

Is the inspection result normal?

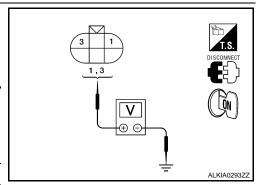
YES >> GO TO 2

NO >> Replace rear power window motor LH. Refer to GW-24, "Rear Door Glass Regulator".

2. CHECK REAR POWER WINDOW SWITCH LH 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 D208 terminals 1, 3 and ground.

Terminal					
(+)			Condition	Voltage (V)	
Rear power window motor LH connector	Terminal	(–)		(Approx.)	
	D208 3		UP	Battery voltage	
D200		'	Ground	DOWN	0
D206			UP	0	
3			DOWN	Battery voltage	



Is the inspection result normal?

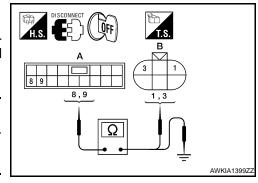
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH connector.
- Check continuity between rear power window switch LH connector D207 (A) terminals 8, 9 and rear power window motor LH connector D208 (B) terminals 1, 3.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	8	D208 (B)	1	Yes
D201 (A)	9	D200 (B)	3	163



4. Check continuity between rear power window switch LH connector D207 (A) terminals 8, 9 and ground.

Rear power window switch LH connector	Terminal	0 1	Continuity	
D207 (A)	8	Ground	No	
D207 (A)	9		No	

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

REAR LH: Component Inspection

INFOID:0000000004391554

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

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- 1. Disconnect rear power window motor LH.
- 2. Check motor operation by connecting battery voltage directly to rear power window motor LH.

Terr	minal	Motor condition	
(+)	(–)	Wotor condition	
3	1	DOWN	
1	3	UP	

Is the inspection result normal?

YES >> Inspection End.

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

REAR LH: Special Repair Requirement

INFOID:0000000004392460

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR RH

INFOID:0000000004392443

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

INFOID:0000000004392444

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check that rear power window motor RH operates with 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-139, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

INFOID:0000000004392445

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to PWC-140, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 2

NO >> Replace rear power window motor RH. Refer to <u>GW-24</u>, "Rear <u>Door Glass Regulator"</u>.

2 . CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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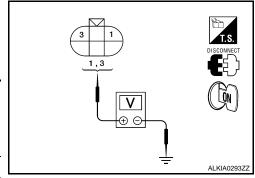
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[FRONT & REAR WINDOW ANTI-PINCH]

- 1. Disconnect rear power window motor RH connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between rear power window motor RH connector D304 terminals 1, 3 and ground.

Terminal				
(+)			Condition	Voltage (V)
Rear power window motor RH connector	Terminal	(–)		(Approx.)
1	1	1 Ground	UP	Battery voltage
D304	'		DOWN	0
3	Giodila	UP	0	
	3		DOWN	Battery voltage



Is the inspection result normal?

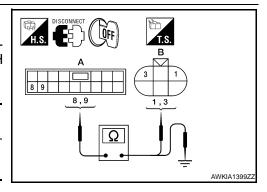
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 3

3. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH connector.
- Check continuity between rear power window switch RH connector D307 (A) terminals 8, 9 and rear power window motor RH connector D304 (B) terminals 1, 3.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	8	D304 (B)	1	Yes
D307 (A)	9	D304 (B)	3	163



4. Check continuity between rear power window switch RH connector D307 (A) terminals 8, 9 and ground.

Rear power window switch RH connector	Terminal		Continuity
D307 (A)	8	Ground	No
	9		110

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

REAR RH: Component Inspection

INFOID:0000000004392446

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

- Disconnect rear power window motor RH.
- 2. Check motor operation by connecting battery voltage directly to rear power window motor RH.

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

Is the inspection result normal?

YES >> Inspection End.

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

REAR RH: Special Repair Requirement

INFOID:0000000004392461

1. PERFORM INITIALIZATION PROCEDURE

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Perform initialization procedure. Refer to <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

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2. CHECK ANTI-PINCH OPERATION

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Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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ENCODER

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000004391506

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:0000000004391507

1. CHECK ENCODER OPERATION

Check that front door glass LH performs 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-142, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

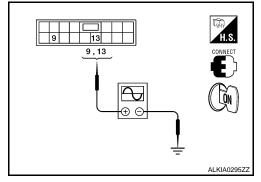
INFOID:0000000004391508

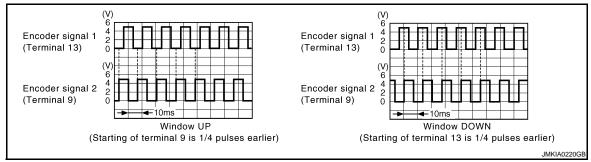
Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- Check signal between main power window and door lock/unlock switch connector D7 terminals 9, 13 and ground with oscilloscope.

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





Is the inspection result normal?

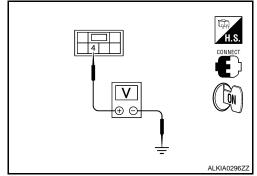
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor LH connector D9 terminal 4 and ground.

(+)			Voltage (V)
Front power win- dow motor LH con- nector	Terminal	(–)	(Approx.)
D9	4	Ground	10



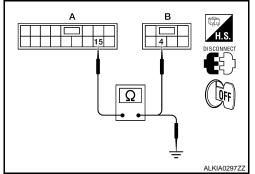
Is the inspection result normal?

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 connector D7 and front power window motor LH connector.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminal 15 and front power window motor LH connector D9 (B) terminal 4.

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 D7 (A) terminal 15 and ground.

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

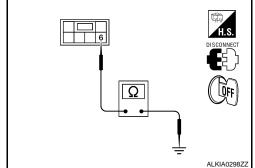
Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".
- NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor LH connector.
- Check continuity between front power window motor LH connector D9 terminal 6 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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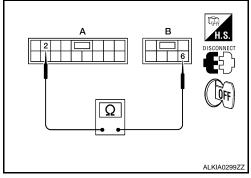
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[FRONT & REAR WINDOW ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch connector D7.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminal 2 and front power window motor LH connector D9 (B) terminal 6.

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?

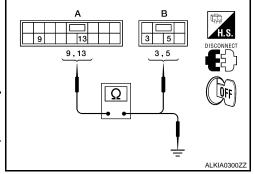
YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

- Disconnect main power window and door lock/unlock switch connector D7.
- Check continuity between main power window and door lock/ unlock switch connector D7 (A) terminals 9, 13 and front power window motor LH connector D9 (B) terminals 3, 5.

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D7 (A)	9	D9 (B)	5	Yes
D7 (A)	13	Da (B)	3	162



3. Check continuity between main power window and door lock/unlock switch connector D7 (A) terminals 9, 13 and ground.

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

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-19</u>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

DRIVER SIDE: Special Repair Requirement

INFOID:0000000004392462

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.
PASSENGER SIDE

PASSENGER SIDE: Description

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

PASSENGER SIDE : Component Function Check

INFOID:0000000004391511

1. CHECK ENCODER OPERATION

Check that front door glass RH performs 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-145, "PASSENGER SIDE : Diagnosis Procedure".

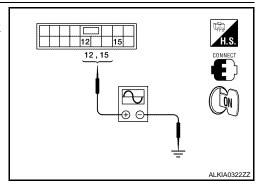
PASSENGER SIDE: Diagnosis Procedure

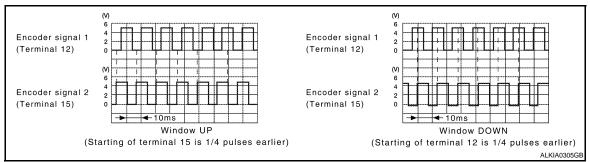
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1. CHECK ENCODER SIGNAL

- 1. Turn ignition switch ON.
- Check signal between power window and door lock/unlock switch RH connector D105 terminal 12, 15 and ground with oscilloscope.

	Terminals				
(+)			Signal		
Power window and door lock/unlock switch RH connector	Terminal	(-)	(Reference value)		
D105	12	Ground	Refer to following		
D103	15	Glound	signal		





Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between front power window motor RH connector D104 terminal 4 and ground.

(+)			Voltage (V)
Front power window motor RH connector	Terminal	(–)	(Approx.)
D104	4	Ground	10

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Is the inspection result normal?

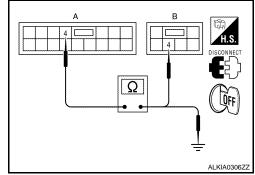
YES >> GO TO 4

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 connectors.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and front power window motor RH connector D104 (B) terminal 4.

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



 Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 4 and ground.

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

Is the inspection result normal?

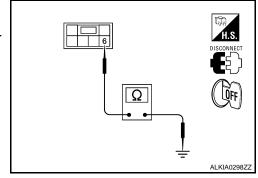
YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor RH connector.
- Check continuity between front power window motor RH connector D104 terminal 6 and ground.

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



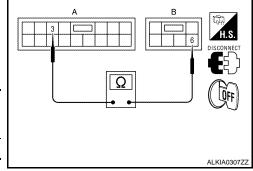
Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminal 3 and front power window motor RH connector D104 (B) terminal 6.

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 PWC-114, "Removal and Installation".

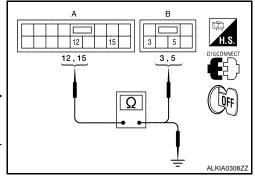
NO >> Repair or replace harness or connectors.

CHECK HARNESS CONTINUITY 3

[FRONT & REAR WINDOW ANTI-PINCH]

- Disconnect power window and door lock/unlock switch RH connector.
- Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and front power window motor RH connector D104 (B) terminals 3, 5.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105 (A)	12	D104 (B)	3	Yes
D103 (A)	15	D 104 (D)	5	163



3. Check continuity between power window and door lock/unlock switch RH connector D105 (A) terminals 12, 15 and ground.

Power window and door lock/unlock switch RH con- nector	Terminal	Ground	Continuity
D105 (A)	12		No
D103 (A)	15		NO

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to <u>GW-19</u>, "<u>Removal and Installation</u>".

NO >> Repair or replace harness or connectors.

PASSENGER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL</u>: <u>Special Repair Requirement"</u> and <u>PWC-119</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

>> End.

REAR LH

REAR LH: Description

Detects condition of the rear power window motor LH operation and transmits to rear power window switch LH as pulse signal.

REAR LH: Component Function Check

1. CHECK ENCODER OPERATION

Check that rear door window motor LH performs AUTO open/close operation normally when operating rear power window switch LH.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-148, "REAR LH: Diagnosis Procedure".

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PWC-147

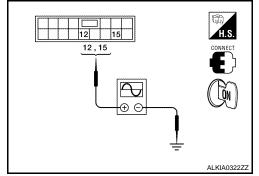
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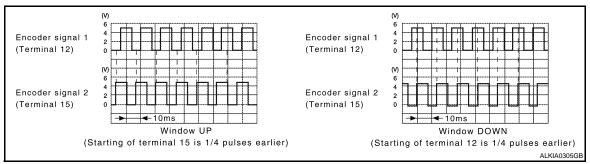
REAR LH: Diagnosis Procedure

1. CHECK ENCODER SIGNAL

- 1. Turn ignition switch ON.
- 2. Check signal between rear power window switch LH connector D207 terminal 12, 15 and ground with oscilloscope.

-			
(+)			Signal (Reference value)
Rear power window switch LH connector	Terminal	(–)	
D207	12	Ground	Refer to following
	15	Giodila	signal





Is the inspection result normal?

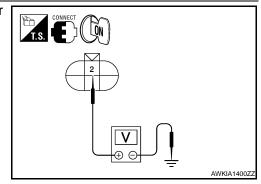
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between rear power window motor LH connector D208 terminal 2 and ground.

(+)			Voltage (V)
Rear power window motor LH connector	Terminal	(–)	(Approx.)
D208	2	Ground	10



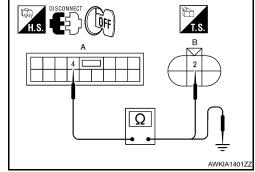
Is the inspection result normal?

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

3. CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH and rear power window motor LH connectors.
- Check continuity between rear power window switch LH connector D207 (A) terminal 4 and rear power window motor LH connector D208 (B) terminal 2.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	4	D208 (B)	2	Yes



4. Check continuity between rear power window switch LH connector D207 (A) terminal 4 and ground.

Rear power window switch LH connector	Terminal	Ground	Continuity
D207 (A)	4		No

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

4. CHECK ENCODER GROUND CIRCUIT

- Turn ignition switch OFF.
- Disconnect rear power window motor LH connector.
- Check continuity between rear power window motor LH connector D208 terminal 4 and ground.

Rear power window motor LH connector	Terminal	Ground	Continuity
D208	4		Yes

Is the inspection result normal?

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

CHECK HARNESS CONTINUITY 2

Disconnect rear power window switch LH connector.

2. Check continuity between rear power window switch LH connector D207 (A) terminal 3 and rear power window motor LH connector D208 (B) terminal 4.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	3	D208 (B)	4	Yes

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-114, "Removal and Installation".

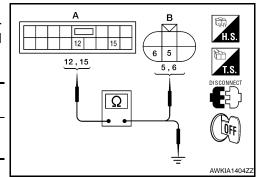
NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

Disconnect rear power window switch LH connector.

2. Check continuity between rear power window switch LH connector D207 (A) terminals 12, 15 and rear power window motor LH connector D208 (B) terminals 5, 6.

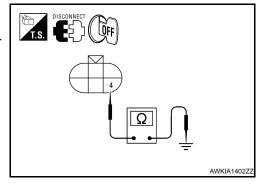
Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D207 (A)	12	D208 (B)	5	Yes
D201 (A)	15	D200 (B)	6	165

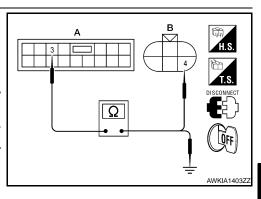


3. Check continuity between rear power window switch LH connector D207 (A) terminals 12, 15 and ground.

Rear power window switch LH connector	Terminal		Continuity
D207 (A)	12	Ground	No
D207 (A)	15		NO

Is the inspection result normal?





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[FRONT & REAR WINDOW ANTI-PINCH]

YES >> Replace rear power window motor LH. Refer to GW-19, "Removal and Installation".

NO >> Repair or replace harness or connectors.

REAR LH: Special Repair Requirement

INFOID:0000000004392464

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR RH

REAR RH: Description

INFOID:0000000004392447

Detects condition of the rear power window motor RH operation and transmits to rear power window switch RH as pulse signal.

REAR RH: Component Function Check

INFOID:0000000004392448

1. CHECK ENCODER OPERATION

Check that rear door window motor RH performs AUTO open/close operation normally when operating rear power window switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-150, "REAR RH : Diagnosis Procedure".

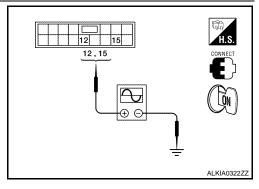
REAR RH : Diagnosis Procedure

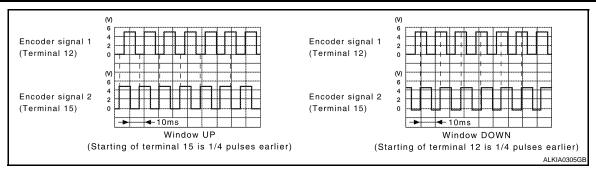
INFOID:0000000004392449

1. CHECK ENCODER SIGNAL

- Turn ignition switch ON.
- 2. Check signal between rear power window switch RH connector D307 terminal 12, 15 and ground with oscilloscope.

-			
(+)			Signal
Rear power window switch RH connector	Terminal	(–)	(Reference value)
D307	12	Ground	Refer to following
D301	15	Giodila	signal





Is the inspection result normal?

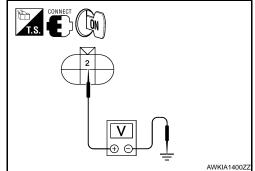
YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 2

2. CHECK ENCODER POWER SUPPLY

Check voltage between rear power window motor RH connector D304 terminal 2 and ground.

(+)			Voltage (V)
Rear power window motor RH connector	Terminal	(–)	(Approx.)
D304	2	Ground	10



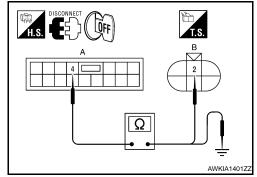
Is the inspection result normal?

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

3. CHECK HARNESS CONTINUITY 1

- Turn ignition switch OFF.
- Disconnect rear power window switch RH and rear power win-2. dow motor RH connectors.
- 3. Check continuity between rear power window switch RH connector D307 (A) terminal 4 and rear power window motor RH connector D304 (B) terminal 2.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	4	D304 (B)	2	Yes



Check continuity between rear power window switch RH connector D307 (A) terminal 4 and ground.

Rear power window switch RH connector	Terminal	Ground	Continuity
D307 (A)	4		No

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-114, "Removal and Installation".

NO >> Repair or replace harness or connectors.

$oldsymbol{4}$. CHECK ENCODER GROUND CIRCUIT

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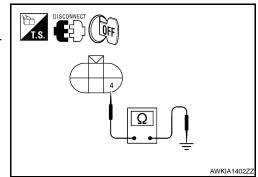
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< COMPONENT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- Disconnect rear power window motor RH connector.
- 3. Check continuity between rear power window motor RH connector D304 terminal 4 and ground.

Rear power window motor RH connector	Terminal	Ground	Continuity
D304	4		Yes



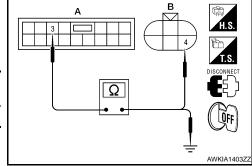
Is the inspection result normal?

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

5. CHECK HARNESS CONTINUITY 2

- Disconnect rear power window switch RH connector.
- Check continuity between rear power window switch RH connector D307 (A) terminal 3 and rear power window motor RH connector D304 (B) terminal 4.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	3	D304 (B)	4	Yes



Is the inspection result normal?

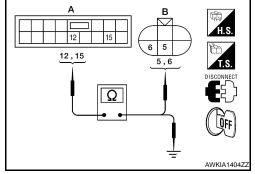
YES >> Replace rear power window switch RH. Refer to <u>PWC-114</u>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

6. CHECK HARNESS CONTINUITY 3

- Disconnect rear power window switch RH connector.
- Check continuity between rear power window switch RH connector D307 (A) terminals 12, 15 and rear power window motor RH connector D304 (B) terminals 5, 6.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D307 (A)	12	D304 (B)	5	Yes
D307 (A)	15	D304 (B)	6	165



INFOID:0000000004392465

Check continuity between rear power window switch RH connector D307 (A) terminals 12, 15 and ground.

Rear power window switch RH connector	Terminal	0	Continuity
D307 (A)	12	Ground	No
D307 (A)	15		INO

Is the inspection result normal?

YES >> Replace rear power window motor RH. Refer to <u>GW-19</u>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

REAR RH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

PWC-152

[FRONT & REAR WINDOW ANTI-PINCH] < COMPONENT DIAGNOSIS > Α >> GO TO 2 $2.\,$ CHECK ANTI-PINCH OPERATION Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". В С >> End. D Е F G Н J **PWC** L M Ν 0

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DOOR SWITCH

Description INFOID:000000004394067

Detects door open/close condition.

Component Function Check

INFOID:0000000004394068

1. CHECK FUNCTION

(III) With CONSULT-III

Check door switches DOOR SW-DR, DOOR SW-AS, DOOR SW-RL, DOOR SW-RR in Data Monitor mode with CONSULT-III.

Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	CLOSE o OPEN: $OFF o ON$
DOOR SW-RL	CLOSE - OF LIN. OF I - ON
DOOR SW-RR	

Is the inspection result normal?

YES >> Door switch is OK.

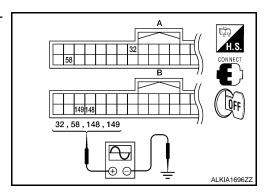
NO >> Refer to PWC-154, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000004394069

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.



[FRONT & REAR WINDOW ANTI-PINCH]

	Terminals									
BCM connector	+) Terminal	(–)	Door co	ndition	Voltage (V) (Approx.)					
connector				OPEN	0					
A: M18	58		Driver side	CLOSE	(V) 15 10 5 0 JPMIA0011GB					
A: M18				OPEN	0					
	32	Ground	Passenger side	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB					
		Ground		OPEN	0					
B: M21	148							Rear RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
D. IVIZ I				OPEN	0					
	149		Rear LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB					

Is the inspection result normal?

YES >> GO TO 4 NO >> GO TO 2

2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

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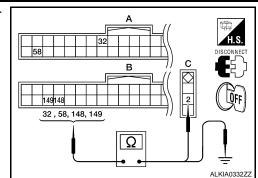
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[FRONT & REAR WINDOW ANTI-PINCH]

Check continuity between BCM connector and door switch connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
A: M18	58	C: B8 (Driver side)		Yes
A. WTO	32	C: B108 (Passenger side)	2	
B: M21	148	C: B116 (Rear RH)	2	162
D. IVIZ I	149	C: B18 (Rear LH)		



3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity	
A: M18	58			
	32	Ground	No	
D: M04	148		INO	
B: M21	149			

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and door switch.

3. CHECK DOOR SWITCH

Refer to PWC-156, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace malfunctioning door switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> Inspection End.

Component Inspection

INFOID:0000000004394070

1. CHECK DOOR SWITCH

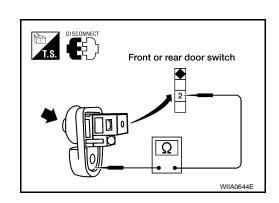
- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch.



DOOR KEY CYLINDER SWITCH

Description INFOID:000000004394076

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

Component Function Check

INFOID:0000000004394077

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1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check KEY CYL UN-SW, KEY CYL UN-SW in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to <u>DLK-50</u>, "<u>DOOR LOCK</u>; <u>CONSULT-III Function (BCM - DOOR LOCK</u>)".

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-157, "Diagnosis Procedure".

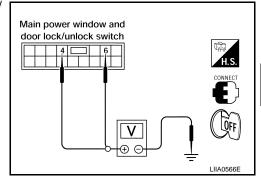
Diagnosis Procedure

INFOID:0000000004394078

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				
(+)	(+)				
Main power window and door lock/unlock switch connector	Terminal	(-)	Key position	Voltage (V) (Approx.)	
	4		Lock	0	
D7	4	Ground	Neutral / Unlock	5	
D/	6	- Ground -	Unlock	0	
	0		Neutral / Lock	5	



Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and <a href="Installation". After that, refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> GO TO 2

2.check door key cylinder signal circuit

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

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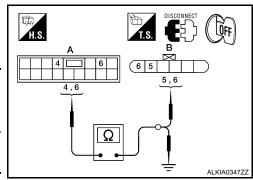
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

 Check continuity between main power window and door lock/ unlock switch connector and front door lock assembly LH (key cylinder switch) connector.

Main power win- dow and door lock/unlock switch connector	Terminal	Front door lock assem- bly LH (key cylinder switch) connector	Terminal	Continuity
A: D7	4	B: D10	6	Yes
A. D1	6	В. БТО	5	165



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

Power window main switch connector	Terminal	_	Continuity	
Λ· D7	4	Ground	No	
A: D7	6		INO	

Is the inspection result normal?

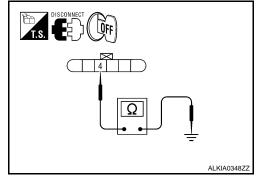
YES >> GO TO 3

NO >> Repair or replace harness.

3.check door key cylinder switch ground circuit

Check continuity between front door lock assembly LH connector and ground.

Front door lock assembly LH connector	Terminal	Ground	Continuity
D10	4		Yes



Is the inspection result normal?

YES >> GO TO 4

NO

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-158, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

>> Replace front door lock assembly LH (key cylinder switch). Refer to DLK-224, "FRONT DOOR LOCK: Removal and Installation". After that, Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Component Inspection

INFOID:0000000004394079

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

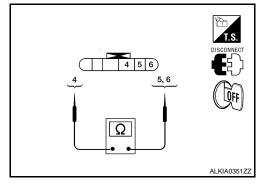
DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Term	inal			
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity	
5		Unlock	Yes	
3	4	Neutral / Lock	No	
6	4	Lock	Yes	
0		Neutral / Unlock	No	



Is the inspection result normal?

NO

YES >> Key cylinder switch is OK.

>> Replace front door lock assembly LH (key cylinder switch). Refer to <u>DLK-224, "FRONT DOOR LOCK: Removal and Installation"</u>. After that, refer to <u>PWC-159, "Special Repair Requirement"</u>.

Special Repair Requirement

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>DLK-8</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-39, "Intermittent Incident".

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POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000004391524

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:
- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000004391525

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 DLK-50, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-160, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

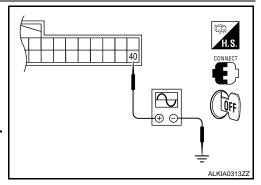
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Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- 2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".

Terminal			0:	
(+)		()	Signal (Reference value)	
BCM connector	Terminal	(–)	(1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
M18	40	Ground	(V) 15 10 5 0 10 ms	



< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Is the inspection result normal?

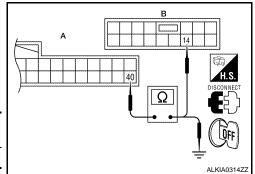
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and main power window and door lock/unlock switch connector D7.
- Check continuity between BCM connector M18 (A) terminal 40 and main power window and door lock/unlock switch connector D7 (B) terminal 14.

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 M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000004392466

INFOID:0000000004391530

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

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 communicate via the power window serial link.

- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH:
- Front door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

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FRONT POWER WINDOW SWITCH: Diagnosis Procedure

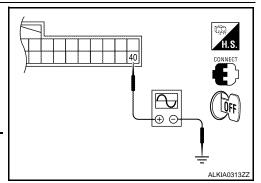
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Power Window Serial Link Check

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

- Remove Intelligent Key, and close the front door LH and RH.
- 2. Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".

	,	,			
	Terminal				
(+)		()	Signal (Reference value)		
BCM connector	Terminal	(-)	(**************************************		
M18	40	Ground	(V) 15 10 5 0		



Is the inspection result normal?

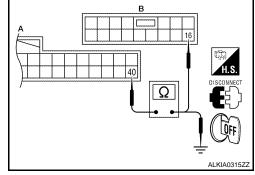
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and power window and door lock/unlock switch RH connector.
- Check continuity between BCM connector M18 (A) terminal 40 and power window and door lock/unlock switch RH connector D105 (B) terminal 16.

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 M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000004392467

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

$2.\,$ CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR LH

REAR LH: Description

 Main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH and BCM communicate via the power window serial link.

 The keyless power window down signal is transmitted from BCM to main power window and door lock/ unlock switch and power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.

• The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH:

- Front door window RH operation
- Rear door window LH operation
- Rear door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

REAR LH: Diagnosis Procedure

1. CHECK REAR POWER WINDOW SWITCH LH

- 1. Remove Intelligent Key, and close all doors.
- Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".

			,	
Terminal				
(+)	(+)		Signal (Reference value)	
BCM connector	Terminal	(-)	(**************************************	
M18	40	Ground	(V) 15 10 5 0 10 10 ms	
1 41 1 41	T/	10		

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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

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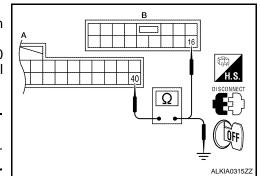
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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M18 and rear power window switch LH connector.
- Check continuity between BCM connector M18 (A) terminal 40 and rear power window switch LH connector D207 (B) terminal 16

BCM connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
M18 (A)	40	D207 (B)	16	Yes



Check continuity between BCM connector M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-113, "Removal and Installation".

NO >> Repair or replace harness or connectors.

REAR LH: Special Repair Requirement

INFOID:0000000004392468

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

REAR RH

REAR RH: Description

INFOID:0000000004392450

- Main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH and BCM communicate via the power window serial link.
- The keyless power window down signal is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- The following signals are transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH, rear power window switch LH, rear power window switch RH:
- Front door window RH operation
- Rear door window LH operation
- Rear door window RH operation
- Power window control by key cylinder switch
- Power window lock switch
- Retained accessory power operation

REAR RH: Diagnosis Procedure

INFOID:0000000004392451

1. CHECK REAR POWER WINDOW SWITCH RH

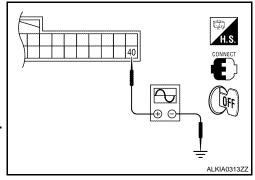
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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- Remove Intelligent Key, and close all doors.
- Check signal between BCM connector M18 terminal 40 and ground with oscilloscope when door lock and unlock switch (key cylinder switch) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 seconds just after door lock and unlock switch (key cylinder switch) is furned to "LOCK" or "LINLOCK"

Switch (ke)	/ cyllrider st	witch) is turi	led to LOCK of UNLOCK.		
	Terminal				
(+)		()	Signal (Reference value)		
BCM connector	Terminal	(–)	(
M18	40	Ground	(V) 15 10 5 0		



Is the inspection result normal?

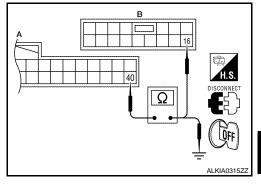
YES >> Power window serial link is OK.

NO >> GO TO 2

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and rear power window switch RH connector.
- Check continuity between BCM connector M18 (A) terminal 40 and rear power window switch RH connector D307 (B) terminal 16.

BCM connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
M18 (A)	40	D307 (B)	16	Yes



Check continuity between BCM connector M18 (A) terminal 40 and ground.

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

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-113, "Removal and Installation".

>> Repair or replace harness or connectors. NO

REAR RH: Special Repair Requirement

${f 1}$. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement and PWC-119, "ADDITIONAL REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

POWER WINDOW LOCK SWITCH

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[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Component Function Check

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1. CHECK POWER WINDOW LOCK

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Activate the power window lock switch and verify that the front power window RH, rear power window LH and rear power window RH are inoperative.

Is the inspection result normal?

YES >> Power window lock switch is OK.

NO >> Replace the main power window and door lock/unlock switch. Refer to PWC-244, "Removal and Installation".

INFOID:0000000004392470

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> GO TO 2

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement" and PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> End.

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ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

PR WIPER HI	Monitor Item	Condition	Value/Status
Front wiper switch HI	ER WIDER HI	Other than front wiper switch HI	OFF
FR WIPER LOW Front wiper switch LO ON FR WASHER SW Front washer switch OFF OFF FR WIPER INT Other than front wiper switch INT OFF FR WIPER STOP Front wiper is not in STOP position OFF FR WIPER STOP Front wiper is in STOP position ON INT VOLUME Wiper intermittent dial is in a dial position 1 - 7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH OFF TURN SIGNAL L Other than turn signal switch LH OFF Turn signal switch LH ON ON TURN SIGNAL L Other than lighting switch 1ST and 2ND OFF Lighting switch LH ON ON TURN SIGNAL L Other than lighting switch HI OFF Lighting switch 1ST or 2ND ON ON HI BEAM SW Other than lighting switch 2ND OFF HEAD LAMP SW 2 Lighting switch 2ND OFF Lighting switch 2ND <t< td=""><td>I IX WIF LIX I II</td><td>Front wiper switch HI</td><td>ON</td></t<>	I IX WIF LIX I II	Front wiper switch HI	ON
Front wiper switch LO	ED WIDED I OW	Other than front wiper switch LO	OFF
FR WASHER SW Front washer switch ON ON FR WIPER INT Other than front wiper switch INT OFF Front wiper switch INT ON FR WIPER STOP Front wiper is not in STOP position OFF INT VOLUME Wiper intermittent dial is in a dial position 1 - 7 Wiper intermittent dial position TURN SIGNAL R Other than turn signal switch RH OFF TURN SIGNAL L Other than turn signal switch LH ON TURN SIGNAL L Other than turn signal switch LH ON TAIL LAMP SW Other than lighting switch 1ST and 2ND OFF Lighting switch 1ST or 2ND ON ON HI BEAM SW Other than lighting switch 1ST or 2ND ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND OFF Lighting switch 2ND OFF Lighting switch 2ND OFF Lighting switch 2ND ON PASSING SW Other than lighting switch PASS OFF Lighting switch PASS ON AUTO LIGHT SW Other than lighting switch AUTO OFF	TR WIFER LOW	Front wiper switch LO	ON
Front washer switch ON	ED W/4 OUED OW/	Front washer switch OFF	OFF
FR WIPER INT	FR WASHER SW	Front washer switch ON	ON
Front wiper switch INT	ED WIDED INT	Other than front wiper switch INT	OFF
Front wiper is in STOP position	FR WIFER IN	Front wiper switch INT	ON
Front wiper is in STOP position	ED WIDED STOD	Front wiper is not in STOP position	OFF
TURN SIGNAL R	FR WIPER STOP	Front wiper is in STOP position	ON
TURN SIGNAL R Turn signal switch RH ON TURN SIGNAL L Other than turn signal switch LH OFF TURN SIGNAL L Other than turn signal switch LH ON TAIL LAMP SW Other than lighting switch 1ST and 2ND OFF Lighting switch 1ST or 2ND ON ON HI BEAM SW Other than lighting switch HI OFF Lighting switch HI ON ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND ON OFF Lighting switch 2ND ON ON PASSING SW Other than lighting switch PASS OFF Lighting switch PASS OFF Lighting switch PASS ON AUTO LIGHT SW Other than lighting switch AUTO OFF Lighting switch OFF OFF Front fog lamp switch OFF OFF Front fog lamp switch ON ON DOOR SW-DR Driver door opened ON DOOR SW-AS Passenger door closed OFF Passenger door opened ON	INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TURN SIGNAL L TURN SIGNAL L Other than turn signal switch LH TURN SIGNAL L ON Other than lighting switch 1ST and 2ND OFF Lighting switch 1ST or 2ND ON ON OTHER SWITCH SWITC	TUDNI CIONAL D	Other than turn signal switch RH	OFF
TURN SIGNAL L Turn signal switch LH ON TAIL LAMP SW Other than lighting switch 1ST and 2ND OFF Lighting switch 1ST or 2ND ON HI BEAM SW Other than lighting switch HI OFF Lighting switch HI ON HEAD LAMP SW 1 Other than lighting switch 2ND OFF Lighting switch 2ND ON OFF Lighting switch 2ND ON ON PASSING SW Other than lighting switch PASS OFF Lighting switch PASS ON ON AUTO LIGHT SW Other than lighting switch AUTO OFF Lighting switch AUTO ON ON FR FOG SW Front fog lamp switch OFF OFF Front fog lamp switch ON ON ON DOOR SW-DR Driver door closed OFF Driver door opened ON ON DOOR SW-RR Rear door RH closed OFF DOOR SW-RL Rear door LH closed OFF	TURN SIGNAL R	Turn signal switch RH	ON
Turn signal switch LH Other than lighting switch 1ST and 2ND Citer than lighting switch 1ST and 2ND Other than lighting switch HI Cighting switch HI Core Citer than lighting switch HI Core Citer than lighting switch HI Core Citer than lighting switch 2ND Core Core	TUDNI CIONAL I	Other than turn signal switch LH	OFF
Lighting switch 1ST or 2ND	TURN SIGNAL L	Turn signal switch LH	ON
Lighting switch 1ST or 2ND	TAIL LAMP CW	Other than lighting switch 1ST and 2ND	OFF
Lighting switch HI	TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
Lighting switch HI	LILDEAM CW/	Other than lighting switch HI	OFF
Lighting switch 2ND	HI BEAIN SW	Lighting switch HI	ON
Lighting switch 2ND	LIEAD LAMB CW/A	Other than lighting switch 2ND	OFF
Lighting switch 2ND	HEAD LAMP SW 1	Lighting switch 2ND	ON
Lighting switch 2ND	LIEAD LAMB CW 2	Other than lighting switch 2ND	OFF
Lighting switch PASS	HEAD LAWP SW 2	Lighting switch 2ND	ON
Lighting switch PASS ON	DACCINIC CW	Other than lighting switch PASS	OFF
AUTO LIGHT SW Lighting switch AUTO ON FR FOG SW Front fog lamp switch OFF OFF Front fog lamp switch ON ON DOOR SW-DR Driver door closed OFF Driver door opened ON DOOR SW-AS Passenger door closed OFF Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	PASSING SW	Lighting switch PASS	ON
Eighting switch AUTO ON FR FOG SW Front fog lamp switch OFF OFF Front fog lamp switch ON ON DOOR SW-DR Driver door closed OFF Driver door opened ON DOOR SW-AS Passenger door closed OFF Passenger door opened ON DOOR SW-RR Rear door RH closed OFF DOOR SW-RL Rear door LH closed OFF	ALITO LICUT CW/	Other than lighting switch AUTO	OFF
FR FOG SW Front fog lamp switch ON ON DOOR SW-DR Driver door closed OFF Driver door opened ON DOOR SW-AS Passenger door closed OFF Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	AUTO LIGHT SW	Lighting switch AUTO	ON
Front fog lamp switch ON	ED EOC CW	Front fog lamp switch OFF	OFF
DOOR SW-DR Driver door opened ON DOOR SW-AS Passenger door closed OFF Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	FR FOG SW	Front fog lamp switch ON	ON
Driver door opened ON	DOOD OW DD	Driver door closed	OFF
DOOR SW-AS Passenger door opened ON DOOR SW-RR Rear door RH closed OFF Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	DOOK SW-DK	Driver door opened	ON
Passenger door opened ON	DOOD CW AC	Passenger door closed	OFF
DOOR SW-RR Rear door RH opened ON Rear door LH closed OFF	DOOK 200-A2	Passenger door opened	ON
Rear door RH opened ON DOOR SW-RL Rear door LH closed OFF	DOOD OW DD	Rear door RH closed	OFF
DOOR SW-RL	DOOK 200-KK	Rear door RH opened	ON
Rear door LH opened ON	DOOD SW DI	Rear door LH closed	OFF
	DOOK 200-KL	Rear door LH opened	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	
DOOR SW-BK	NOTE: This item is displayed, but cannot be monitored.	OFF	
NDL 1 0014 0144	Other than power door lock switch LOCK	OFF	
DL LOCK SW	Power door lock switch LOCK	ON	_
	Other than power door lock switch UNLOCK	OFF	
DL UNLOCK SW	Power door lock switch UNLOCK	ON	
(E) (O) (1 L (O) M	Other than driver door key cylinder LOCK position	OFF	
EY CYL LK-SW	Driver door key cylinder LOCK position	ON	
	Other than driver door key cylinder UNLOCK position	OFF	
EY CYL UN-SW	Driver door key cylinder UNLOCK position	ON	
EY CYL SW-TR	NOTE: This item is displayed, but cannot be monitored.	OFF	
14.74.DD OV4/	When hazard switch is not pressed	OFF	
IAZARD SW	When hazard switch is pressed	ON	
REAR DEF SW	When rear window defogger switch is pressed	ON	
:D 0414051 0144	Trunk lid opener cancel switch OFF	OFF	
R CANCEL SW	Trunk lid opener cancel switch ON	ON	_
:D/DD 00511 6:::	Trunk lid opener switch OFF	OFF	_
R/BD OPEN SW	While the trunk lid opener switch is turned ON	ON	_
	Trunk lid closed	OFF	_
TRNK/HAT MNTR	Trunk lid opened	ON	—
VE 1.00''	When LOCK button of Intelligent Key is not pressed	OFF	_
RKE-LOCK	When LOCK button of Intelligent Key is pressed	ON	_
	When UNLOCK button of Intelligent Key is not pressed	OFF	
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON	
	When TRUNK OPEN button of Intelligent Key is not pressed	OFF	_
KE-TR/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON	
	When PANIC button of Intelligent Key is not pressed	OFF	
RKE-PANIC	When PANIC button of Intelligent Key is pressed	ON	
	When UNLOCK button of Intelligent Key is not pressed and held	OFF	—
KE-P/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON	
NAC MODE CLIC	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF	
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON	
ODTIONI OFNOOD	When outside of the vehicle is bright	Close to 5 V	
PTICAL SENSOR	When outside of the vehicle is dark	Close to 0 V	
EO 0W BB	When front door request switch is not pressed (driver side)	OFF	
EQ SW-DR	When front door request switch is pressed (driver side)	ON	
50 0W 10	When front door request switch is not pressed (passenger side)	OFF	_
EQ SW-AS	When front door request switch is pressed (passenger side)	ON	
	When rear door request switch is not pressed (driver side)	OFF	
REQ SW-RL	When rear door request switch is pressed (driver side)	ON	
	When rear door request switch is not pressed (passenger side)	OFF	
REQ SW-RR	When rear door request switch is pressed (passenger side)	ON	

BCM (BODY CONTROL MODULE) [FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
DEO SW/ DD/TD	When trunk request switch is not pressed	OFF
REQ SW-BD/TR	When trunk request switch is pressed	ON
DUCU CW	When engine switch (push switch) is not pressed	OFF
PUSH SW	When engine switch (push switch) is pressed	ON
ON DIV 0 5/D	Ignition switch OFF or ACC	OFF
GN RLY 2-F/B	Ignition switch ON	ON
100 PLV F/P	Ignition switch OFF	OFF
ACC RLY-F/B	Ignition switch ACC or ON	ON
CLUTCH SW	NOTE: This item is displayed, but cannot be monitored.	OFF
	When the brake pedal is not depressed	ON
BRAKE SW 1	When the brake pedal is depressed	OFF
	When selector lever is in P position	OFF
DETE/CANCL SW	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PN/N SW	When selector lever is in P or N position	ON
	Electronic steering column lock LOCK status	OFF
S/L-LOCK	Electronic steering column lock UNLOCK status	ON
	Electronic steering column lock UNLOCK status	OFF
S/L-UNLOCK	Electronic steering column lock LOCK status	ON
	Ignition switch OFF or ACC	OFF
S/L RELAY-F/B	Ignition switch ON	ON
	Driver door UNLOCK status	OFF
JNLK SEN-DR	Driver door LOCK status	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW-IPDM	When engine switch (push switch) is pressed	ON
	Ignition switch OFF or ACC	OFF
GN RLY1 F/B	Ignition switch ON	ON
	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PN -IPDM	When selector lever is in P or N position	ON
	When selector lever is in any position other than P	OFF
SFT P-MET	When selector lever is in P position	ON
	When selector lever is in any position other than N	OFF
SFT N-MET	When selector lever is in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Electronic steering column lock LOCK status	OFF
S/L LOCK-IPDM	Electronic steering column lock UNLOCK status	ON
	Licotronic steering column lock UNLOCK status	OIV
	Electronic steering column lock UNLOCK status	OFF

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
S/L RELAY-REQ	Ignition switch OFF or ACC	OFF
3/L RELAT-REQ	Ignition switch ON	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door LOCK status	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK
D OK EL AO	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
DOME ENO CEAT	When the engine start is prohibited	RESET
PRMT ENG STAT	When the engine start is permitted	SET
PRMT RKE STAT	NOTE: This item is displayed, but cannot be monitored.	RESET
45.4.0.M. OLOT	When Intelligent Key is not inserted into key slot	OFF
KEY SW -SLOT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
RKE OPE COUN2	NOTE: This item is displayed, but cannot be monitored.	Operation frequency of Intelligent Key
	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
CONFRM ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIDM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIDM IDO	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
CONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
JONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
CONFIRM ID1	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TD 4	The ID of fourth key is not registered to BCM	YET
TP 4	The ID of fourth key is registered to BCM	DONE
	The ID of third key is not registered to BCM	YET
TP 3	The ID of third key is registered to BCM	DONE
	The ID of second key is not registered to BCM	YET
TP 2		

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
TP 1	The ID of first key is not registered to BCM	YET
IF I	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Air pressure of rear RH tire	
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	When ID of front LH tire transmitter is registered	DONE
ID REGGITET	When ID of front LH tire transmitter is not registered	YET
ID REGST FR1	When ID of front RH tire transmitter is registered	DONE
ID REGGI FRI	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
ID REGGI KKI	When ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
ID REGST KLT	When ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
WARINING LAWP	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
DUZZEK	Tire pressure warning alarm is sounding	ON

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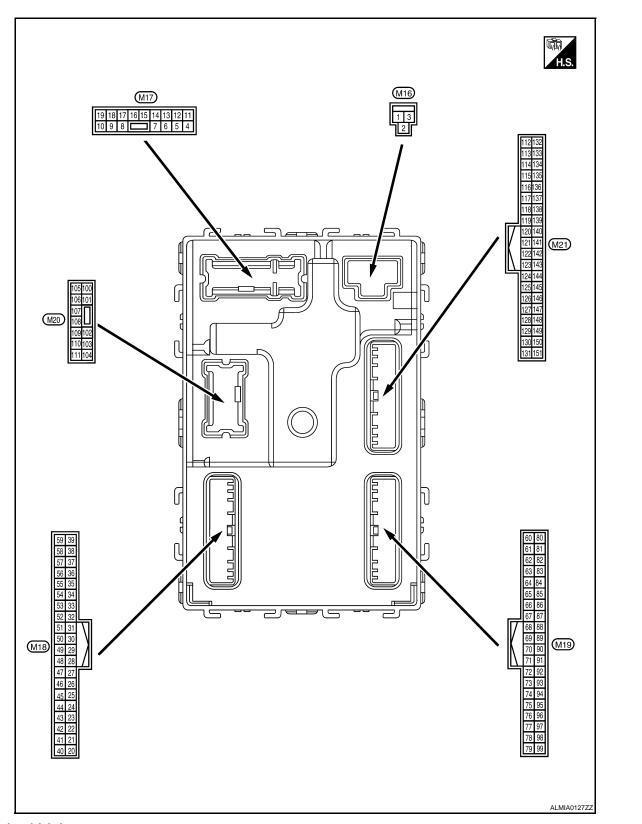
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Terminal Layout



Physical Values

BCM (BODY CONTROL MODULE) [FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Torm	inal No.	Description					
	e color)	Description	In a st		Condition	Value	
(+)	(-)	Signal name	Input/ Output	Contanton		(Approx.)	
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage	
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage	
4	(-round	Interior room lamp	Output	After passing the ir er operation time	nterior room lamp battery sav-	0V	
(P/W)	Orouna	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage	
5	5 Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage	
(G)	Orouna	LOCK	Output	TION GOOT KIT	Other than UNLOCK (actuator is not activated)	0V	
7	Cround	Ston Jama	Output	Cton lown	ON	0V	
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage	
8	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage	
(V)	Ground	All doors LOCK	Output	All doors	Other than LOCK (actuator is not activated)	OV	
9	Ground	Front door LH UN-	Output	Output Front door LH	UNLOCK (actuator is activated)	Battery voltage	
(L)	Orouna	LOCK	Output		Other than UNLOCK (actuator is not activated)	0V	
10	Ground	Rear door RH and rear door LH UN-	Output	Output Rear door RH	UNLOCK (actuator is activated)	Battery voltage	
(G)	Cround	LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V	
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage	
13 (B)	Ground	Ground	_	Ignition switch ON		ov	
					OFF	OV	
14 (GR/ W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 0 JSNIA0010GB	
15 (Y/L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF ACC or ON	Battery voltage 0V	
(172)				7.00 01 014	• • • • • • • • • • • • • • • • • • •		

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description				Value	
(+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
					Turn signal switch OFF	0V (V)	
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch RH	10 5 0 1 s 1 s PKID0926E	
					Turn signal switch OFF	OV	
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage	
(Y)	Ordana	control	Catpat	lamp	ON	OV	
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch	When outside of the vehicle is bright When outside of the vehi-	Close to 5V	
(., /_/					cle is dark	Close to 0V	
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage	
26	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is not depressed)	ov	
(O/L)			, ,		ON (brake pedal is depressed)	Battery voltage	
27 (O)	Ground	Front door lock assembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB	
					UNLOCK status	11.8V	
29				When Intelligent Key is inserted into key slot		Battery voltage	
(Y)	Ground	Key slot switch	Input	_	ey is not inserted into key slot	0V	
30					OFF	0	
(V/Y)	Ground	ACC feedback signal	Input	Ignition switch	ACC or ON	Battery voltage	
31	0	Rear window defog-	lan d	Rear window de-	OFF	0V	
(G) Ground ger feedback signal			Input fogger switch		ON	Battery voltage	

< ECU DIAGNOSIS >

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output	Condition		(Approx.)	
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes) ON (when front door RH	(V) 15 10 5 0 10 ms JPMIA0011GB	
					opens)	(V)	
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	15 10 5 10 ms JPMIA0012GB	
					ON	OV	
38 (GR/ W)	Ground	Rear window defog- ger ON signal	Input	Rear window de- fogger switch	OFF ON	5V 0V	
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	
				Ignition switch OF	F or ACC	OV	
41		Engine switch (push		Engine switch	ON	5.5V	
(W)	Ground	switch) illumination	Output	(push switch) illu- mination	OFF	OV	
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V	
(R)	Ciodila		Carpat	lamp	OFF	Battery voltage	
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		oV	
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V	
(V/W)	(V/W) Ground p	power supply output		J	ACC or ON	5.0V	

< ECU DIAGNOSIS >

Terminal No. (Wire color) (+) (-)		Description Signal name Input/ Output		Condition		Value	
						(Approx.)	
					Standby state	(V) 6 4 2 0 ••• 0.2s	
47 (G/O)	Ground	Tire pressure receiver signal	Input/ Output	Ignition switch ON	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s OCC3880D	
48	0	Selector lever P/N	la a t	Calastanlavan	P or N position	12.0V	
(R/G)	Ground	position signal	Input	Selector lever	Except P and N positions	OV	
					ON	0V	
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	Blinking	(V) 15 10 5 0 11.3V	
					OFF	Battery voltage	
50 (LG/ B)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch high-beam Lighting switch 2ND	0V (V) 15 10 5 0	
					Turn signal switch RH	2 ms JPMIA0031GB	
					All switch OFF (Wiper intermittent dial 4) Front wiper switch HI	10.7V 0V	
51 (L/W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	(Wiper intermittent dial 4) Any of the conditions below with all switch OFF Wiper intermittent dial 1 Wiper intermittent dial 2 Wiper intermittent dial 3 Wiper intermittent dial 6 Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0032GB	

< ECU DIAGNOSIS >

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
			-		All switch OFF (Wiper intermittent dial 4)	0V
50		Combination avitab		Combination	Front washer switch ON (Wiper intermittent dial 4)	(V) 15
52 (G/B)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	10 5 0 2 ms JPMIA0033GB 10.7V
					All switch OFF	0V
					Front wiper switch INT	0.0
53				Combination	Front wiper switch LO	(V) 15
(LG/ R)	G/ Ground Combination switch Output Switch	(Wiper intermit-	Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB		
					All switch OFF	10.7V
					All switch OFF Front fog lamp switch ON	0V
					Lighting switch 2ND	(V)
54 (G/Y)	Ground	Combination switch OUTPUT 4	Output	Combination switch (Wiper intermit-	Lighting switch flash-to- pass	15 10 5 0
				tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GB
57 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5V
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms 11.8V
					ON (front door LH OPEN)	0V
59	Ground	Rear window defog-	Output	Rear window de-	Active	Battery voltage
(G/R)		ger relay		fogger	Not activated	0V

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description				Value		
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)		
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB		
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0063GB		
61		Center console an-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB		
(W/R)	Ground	tenna 2 (+)	Output OFF	OFF	OFF	When	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB
00				When the front	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB		
62 (V)	Ground	Front outside handle RH antenna (-)	Output	door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB		

Terminal No. (Wire color)		Description		One Prince		Value	
(+)	e color)	Signal name	Input/ Output	Condition		(Approx.)	
63 (P)	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
64 (V)	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s 1 s	
					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s JMKIA0063GB	
65 (P)	Ground	Front outside handle LH antenna (+)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No. (Wire color)		Description			Condition	Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
66	Cround	Instrument panel an-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(R) Ground	Glound	tenna (-)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
67 (G) Ground	Cround	Instrument panel antenna (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
68 G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC	0V Battery voltage	

PWC-181

	ninal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
71	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(L/O)				When operating either button on Intelligent Key		(V) 15 10 5 1 ms JMKIA0065GB
	Ground	Combination switch INPUT 5	Input		All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
75 (R/Y)				Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0037GB
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB

< ECU DIAGNOSIS >

	inal No.	Description				Value	٨
(VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
	()		Сири		All switch OFF (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0041GB	B C D
76	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V	E
(R/G)					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	G H I
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB	J PWC
77 (BR)	Ground	Engine switch (push switch)	Input	Engine switch (push switch)	Pressed	0V	
78 (P)	Ground	CAN-L	Input/ Output	(F 2 · · · · · · · · · · · · · · · · ·	Not pressed	Battery voltage —	M
79 (L)	Ground	CAN-H	Input/ Output		_	_	Ν
			-		OFF	OV	
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB	O P
					ON	Battery voltage	
						,	

BCM (BODY CONTROL MODULE) [FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

To	inal Na	Danarintia				
	inal No. e color)	Description	lac 1/		Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
81	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	OV
(Y/L)	Cround	ON INGIDATOR IMP	Output	iginuon switch	ON	Battery voltage
83	Ground	ACC relay control	Output	Ignition switch	OFF	0V
(L)	Cround	nee roley control	Output	igilition switch	ACC or ON	Battery voltage
84 (Y/R)	Ground	A/T device	Output		_	Battery voltage
85	0	Electronic steering	la a cot	Electronic steer-	Lock status	0V
(L/O)	Ground	column lock condition No. 1	Input	ing column lock	Unlock status	Battery voltage
86	Ground	Electronic steering column lock condition	Input	Electronic steer-	Lock status	Battery voltage
(G/R)	Ground	No. 2	прис	ing column lock	Unlock status	0V
87		Selector lever P posi-	Input	Selector lever	P position	OV
(G/B)	Ground	tion switch	mput	Ocicolor level	Any position other than P	Battery voltage
					ON (pressed)	0V
88 (R)		Front door RH request switch	Input	Front door RH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
					ON (pressed)	0V
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V
(Y)	2.34114	lay control	- Supar	-g	ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage
94	Ground	Steering wheel lock	Outout	Ignition switch	OFF or ACC	Battery voltage
(G/Y) Groun	Ground	unit power supply	Output	igilition switch	ON	0V

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Ρ

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB	E
95 (R/W)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB	G H
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	PW
					Front washer switch ON	(V) 15 10 5 0 JPMIA0039GB	M
						1.3V	0

< ECU DIAGNOSIS >

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	
96	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V	
(P/B)		INPUT 4		switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V	
					Any of the conditions below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3V	

< ECU DIAGNOSIS >

	inal No.	Description				Value	А
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	ВС
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
97 (R/B)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermittent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB	G H
					Front wiper switch INT	(V) 15 10 5 2 ms JPMIA0038GB 1.3V	PWC
					Front wiper switch HI	(V) 15 10 2 ms JPMIA0040GB	M N
					Pressed	1.3V	0
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB	Р

< ECU DIAGNOSIS >

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	Battery voltage
99 (L/Y)	Ground	Electronic steering column lock unit communication	Input/ Output	Electronic steering column lock	LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	OV
103	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage
(V)	Ground		Output	Trunk iiu	Close (trunk lid opener actuator is not activated)	OV
110	Ground	Trunk room lamp	Output	Trunk room lamp	ON	OV
(V/W)	Ground	Trank room lamp	Output	Trunk room lamp	OFF	Battery voltage
114	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS >

	ninal No.	Description	ı			Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
115		Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(W)	Ground	1 (+)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
118 Ground	Rear bumper anten-		When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
	Ground	na (-)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
119		Rear bumper anten-		When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(BR/ G W)	Ground	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

BCM (BODY CONTROL MODULE) [FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

	inal No.	Description				V-L
	e color)	Signal name	Input/		Condition	Value (Approx.)
(+) 127	(-)		Output		OFF or ACC	Battery voltage
(BR/	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch		
W)		L/IV) control			ON	0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 0 10 ms JPMIA0011GB
					ON (trunk is open)	0V
				Ignition switch OFF (M/T vehi-	When the clutch pedal is depressed	Battery voltage
		Starter motor relay control	Output	cle)	When the clutch pedal is not depressed	0V
132 (R)	Ground			Ignition switch ON (other than M/ T vehicle)	When selector lever is in P or N position and the brake is depressed	Battery voltage
					When selector lever is in P or N position and the brake is not depressed	OV
					ON (pressed)	0V
141 (BR)	Ground	Trunk request switch	Input	Trunk request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
144	Ground	Request switch buzz-	Output	Request switch	Sounding	OV
(GR)	Cround	er	Carpar	buzzer	Not sounding	Battery voltage
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V
(L/R)		switch	'	switch	Not pressed	Battery voltage
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes) ON (when rear door RH	(V) 15 10 5 0 10 ms JPMIA0011GB
					opens)	0V

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes) ON (when rear door LH opens)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	

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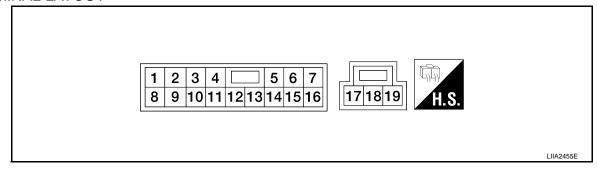
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[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Termina	al No.	Description			Voltago [V]
+	-	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)
2 (GR)	Ground	Encoder ground	_	_	0
4 (L)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
6 (R)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
8 (L)	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 (Y)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
				IGN SW ON	Battery voltage
10 (V)	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 (LG)	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

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Termina	al No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
13 (G)	2	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
14 (O)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
15 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10

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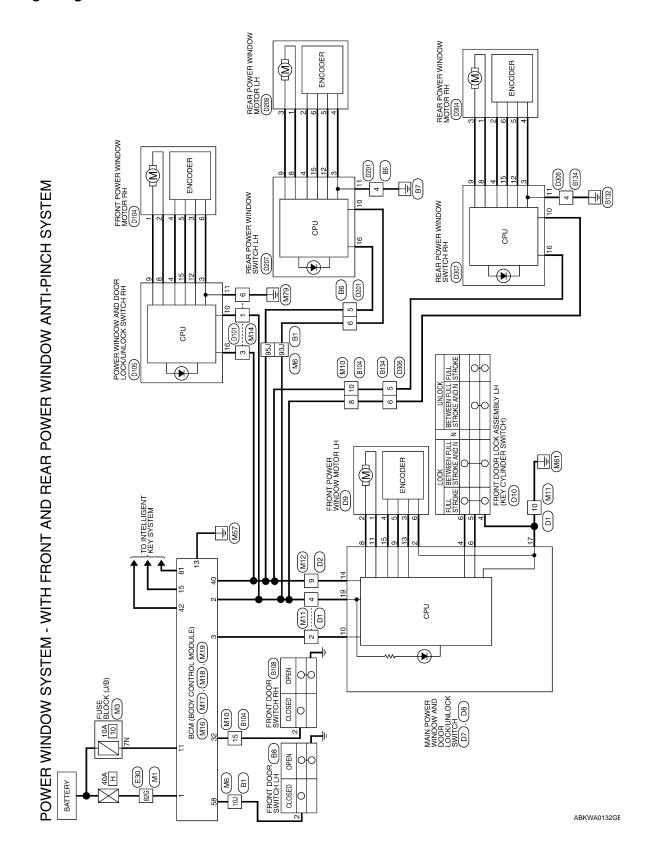
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Wiring Diagram



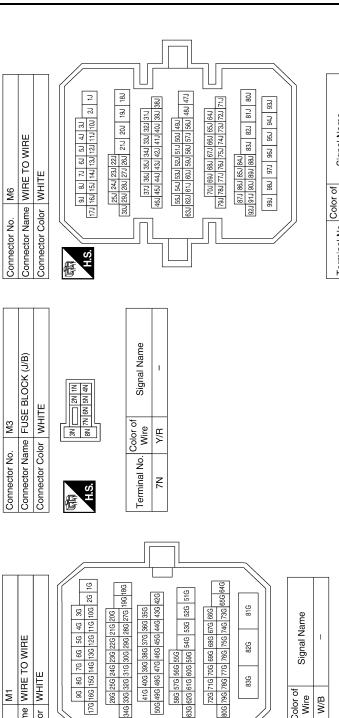
POWER WINDOW SYSTEM CONNECTORS -WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM

Connector Name | WIRE TO WIRE

Ξ

Connector No.

Connector Color WHITE



Signal Name	I	– (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)	1	
Color of Wire	SB	R/Y	Y/G	
Terminal No.	107	93J	95J	

PWC

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82G

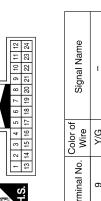
83G

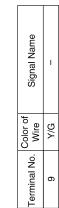
Color of Wire

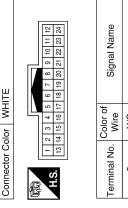
Terminal No. 82G

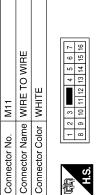
W/B



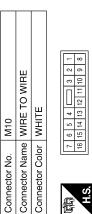










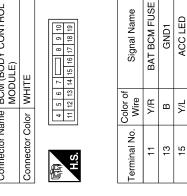




Y/G R/B

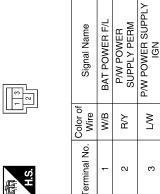
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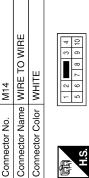


M16	Connector Name BCM (BODY CONTF	MODULE)	BLACK	
Connector No.	Connector Name		Connector Color	

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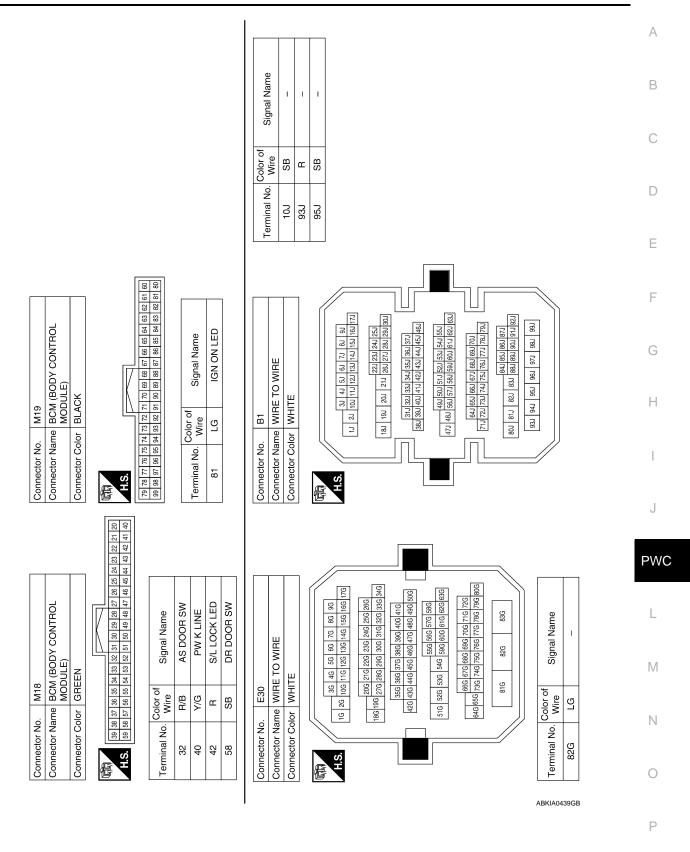






Signal Name	_	_	-
Color of Wire	R/Υ	Y/G	В
Terminal No.	-	က	9

ABKIA0438GB



POWER WINDOW MAIN SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

Connector No.). B104	4
Connector Name WIRE TO WIRE	ame WIF	IE TO WIRE
Connector Color WHITE	olor WH	31
SH 管	1 2 3 4 8 9 10 11	3 4
Terminal No.	Color of Wire	Signal Name
8	œ	ı
10	SB	ı
15	GB	ı

< ECU DIAGNOSIS >

Con	SWITCH LH Con	Con	E	Signal Name		
B8	Connector Name FRONT DOOR SWITCH LH	WHITE			SB	
r No.	r Name	r Color		No. Wire	S	
Connector No.	Connecto	Connector Color WHITE	原 H.S.	Terminal No.	2	

Connector No.). B6	
Connector Name		WIRE TO WIRE
Connector Color WHITE	lor W	HTE
H.S.	1 2 9	3 4 7 8 9 10
Terminal No.	Color of Wire	f Signal Name
4	В	ı
5	as	ı
9	Œ	ı

	RE TO WIRE	IITE	7 6 5 4 3 2 1	Signal Nam	1	ı	ı
. D1	me WII	lor WF	7 6 5 14 16 15 14	Color of Wire	>	œ	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	而 H.S.	Terminal No. Wire	2	4	10
4	IE TO WIRE	TE	7 8 9 10	Signal Name	ı	ı	1
B134	me WIR	or WH	<u>- r</u>	Color of Wire	В	SB	ш
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	用.S.	Terminal No. Wire	4	5	9

Signal Name

Color of Wire GR

Terminal No.

Q-~6

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Connector Name FRONT DOOR SWITCH RH
Connector Color WHITE

Connector No. B108

POWER WINDOW MAIN SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

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Signal Name	UNLOCK	AS UP	ENCODER SIG1	IGN	AS DOWN	ENCODER SIG2	COM	ENCODER POWER
Color of Wire	Œ	_	>	>	ГG	В	0	BR
Terminal No.	9	80	6	10	11	13	14	15

Connector No.). D7	
Connector Name	MAI SWI	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	olor WH	TE
明 H.S.	8 9 10 11 1	2 3 4 5 6 7 9 10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
2	GR	ENCODER GND
4	٦	LOCK

Connector No.	. D2	
Connector Name WIRE TO WIRE	me WIF	RE TO WIRE
Connector Color WHITE	lor WH	ПЕ
H.S.	23 22 21 2	12 11 10 9 8 7 6 5 4 3 2 1
Terminal No.	Color of Wire	Signal Name
6	0	I

Connector No.). D10	
Connector Name		FRONT DOOR LOCK ASSEMBLY LH
Connector Color	olor GRAY	٨٧
H.S.	2	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Terminal No.	Color of Wire	Signal Name
4	В	ı
2	В	1
9	٦	ı

Connector No.	60	
Connector Name		FRONT POWER WINDOW MOTOR LH
Connector Color	-	WHITE
H.S.		4 5 6 2 2
Terminal No.	Color of Wire	f Signal Name
-	ا ا	ı
2	_	ı
3	_o	ı
4	BB	I
2	Υ	-
9	GR	ı

Connector No.	. D8	
Connector Name	me ANE SWI	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	lor WHITE	TE
H.S.		118 19
Terminal No.	Color of Wire	Signal Name
17	В	GND
19	В	BAT

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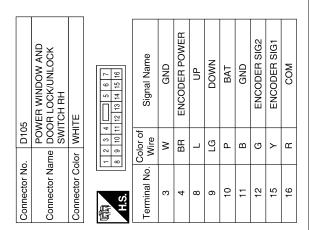
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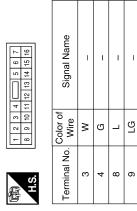
Signal Name	I	I	I	-	ı
Color of Wire	В	В	Ь	۸	SB
Terminal No. Wire	10	11	12	15	16

Connector No.	D104
Connector Name	Connector Name FRONT POWER WINDOW
	MOTOR RH
Connector Color WHITE	WHITE



Signal Name	I	1	1	_	1	ı
Color of Wire	ГG	٦	g	BR	Y	*
Terminal No.	1	2	က	4	2	9

Connector No.	D207
Connector Name	Connector Name AND REAR POWER WINDOW SWITCH LH (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	WHITE



Connector Color WHITE (4 3 10 9 8 7 6 5 1
8 7

Signal Name	ı	1	1
Color of Wire	Ь	Ж	В
Terminal No. Wire	Ļ	3	9

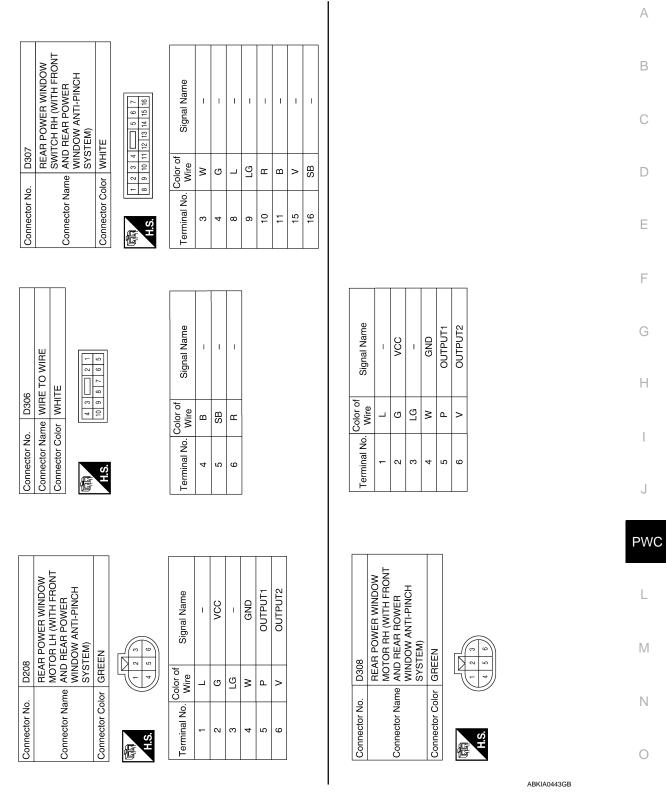
	RE TO WIRE	ІТЕ	8 7 6 5	Signal Name	-	I
. D201	ıme WIF	lor WH	4 01 0 0	Color of Wire	В	SB
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	原。 H.S.	Terminal No.	4	5

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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 [FRONT & REAR WINDOW ANTI-PINCH]

Error	Error condition
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.
Both pulse sensors 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

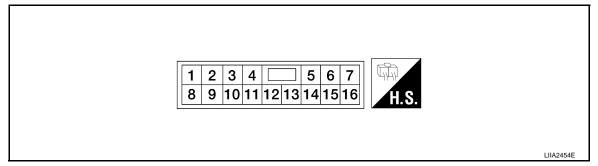
< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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)	Ground	Encoder ground	_	_	0
4 (BR)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
8 (L)	9	Power window motor UP signal	Output	When power window motor is operated UP.	Battery voltage
9 (L/G)	8	Power window motor DOWN signal	Output	When power window motor is operated DOWN.	Battery voltage
10 (P)	Ground	Battery power supply	Input	_	Battery voltage
11 (B)	Ground	Ground	_	_	0
12 (G)	3	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

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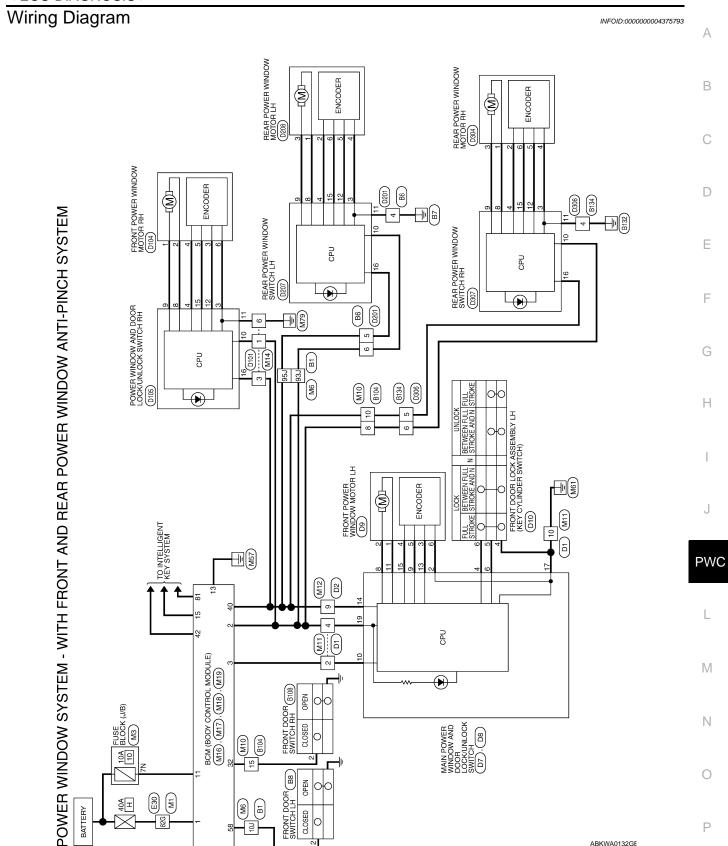
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FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS >

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



-(WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)

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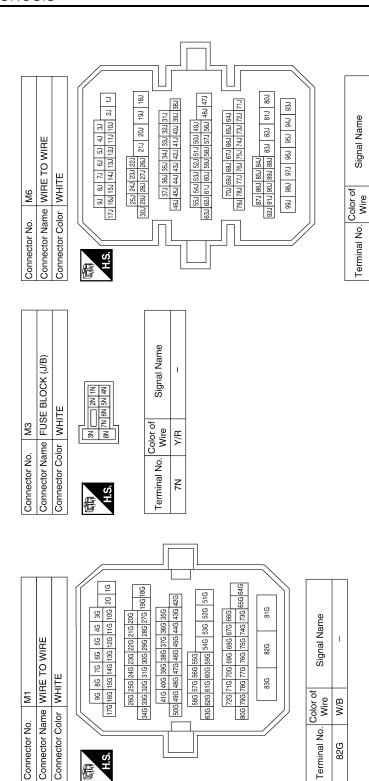
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POWER WINDOW SYSTEM CONNECTORS -WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM



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FRONT POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

Connector No.	<u>M</u>	-	Connector No. M12	M12
nector Nar	me WIF	Connector Name WIRE TO WIRE	Connector Nam	Connector Name WIRE TO WIRE
Connector Color WHITE	or WH	ITE	Connector Color WHITE	r WHITE
H.S.	8 9 10 1	11 12 13 14 15 16	H.S. 13 14 2	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Terminal No. Wire	Wire	Signal Name	Color of Terminal No. Wire	olor of Signal Name
2	M	ı	o	
4	₽Y	1	9	5

	M17	Connector Name BCM (BODY CONTROL	í I COM
	Connector No. M17	Connector Name	
	M16	Connector Name BCM (BODY CONTROL	
	Connector No. M16	Connector Name	
		TO WIRE	

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Connector Name BCM (BODY CONTROL MODULE)	ΠE	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	Signal Name	BAT BCM FUSE	GND1	VCC I ED
me BCN	lor WH	4 5 6 11 12 13	Color of Wire	Y/R	В	//
Connector Na	Connector Color WHITE	H.S.	Terminal No.	=	13	15

BCM (BODY CONTROL	BLACK		of Signal Name	BAT POWER F/L	P/W POWER SUPPLY PERM	P/W POWER SUPPLY
	_		Color of Wire	M/B	₽Y	~
Connector Name	Connector Color	H.S.	Terminal No.	-	2	c

Connector No. M10 Connector Name WIRE T Connector Color WHITE T 6 5 4 T 6 5 4 T 6 5 4	100 MHI	M10 WIRE TO WIRE WHITE 6 5 4
Terminal No.	Color of Wire	Signal Name
80	R/Y	– (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
10	5/A	I
15	B/B	ı

	,	WIRE TO WIRE		© 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	ı	ı	
Γ	. M14		lor WHITE	- ro	Color of Wire	Ρ/Υ	Y/G	1
	Connector No.	Connector Name	Connector Color	是 H.S.	Terminal No.	-	3	,

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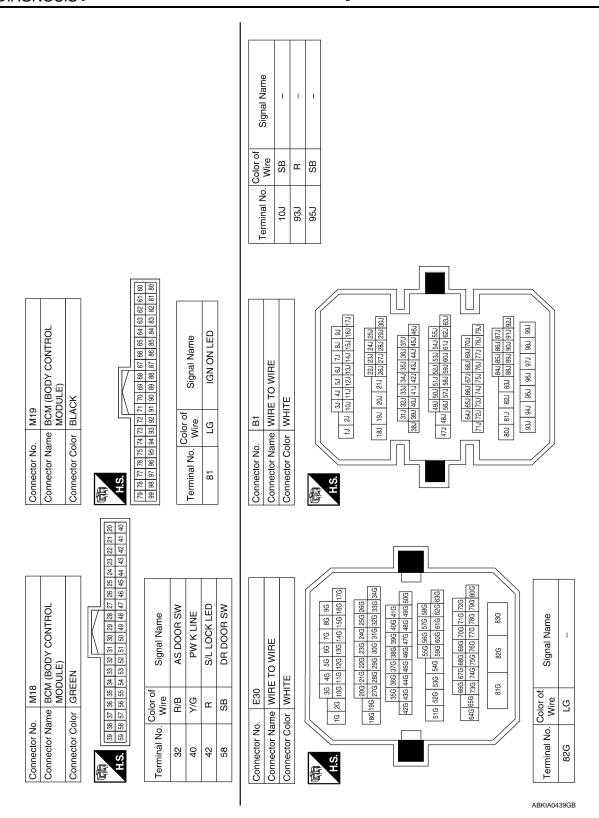
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FRONT POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

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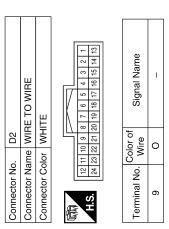
Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Color of Signal Name	8	10 SB -	15 GR -	Connector No. D1	Connector Name WIRE IO WIRE Connector Color WHITE		Terminal No. Wire Signal Name	- N	- A B	10 B	
Connector Color WHITE	H.S.	Color of	NO.	2 SB		Connector No. B134	Connector Color WHTE	H.S.	Terminal No. Color of Signal Name	4 B -	5 SB -	и С	
Connector Name WIRE TO WIRE Connector Color WHITE	(中) (1 2 1 3 4 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5	Terminal No. Wire Signal Name	4 B –	5 SB –	u u	Connector No. B108	Connector Color WHITE	(N- ∞ ∞ N- ∞	Color of S.	0 1 1 1 1 1 1	2 GR –		

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FRONT POWER WINDOW SWITCH [FRONT & REAR WINDOW ANTI-PINCH]

Signal Name	UNLOCK	AS UP	ENCODER SIG1	IGN	AS DOWN	ENCODER SIG2	COM	ENCODER POWER
Color of Wire	Œ	٦	>	>	FG	В	0	BR
Terminal No.	9	8	6	10	11	13	14	15

Connector No.). D7	
Connector Na	MAI ame ANE SWI	Connector Name AND DOOR LOCK/UNLOCK SWITCH
Connector Color WHITE	olor WHI	TE
H.S.	8 9 10	10 11 12 13 14 15 16
Terminal No.	Color of Wire	Signal Name
2	GR	ENCODER GND
4	٦	LOCK



Connector No.). D10	
Connector Na	ame FRC ASS	Connector Name FRONT DOOR LOCK ASSEMBLY LH
Connector Color	olor GRAY	<u>۸</u> ۲
H.S.	2	3 4 8 0 0
Terminal No.	Color of Wire	Signal Name
4	В	ı
5	ш	ı
9	٦	1

Connector No.	. D9	
Connector Name		FRONT POWER WINDOW MOTOR LH
Connector Color WHITE	olor WHI	TE TE
明.S.		3 4 5 6 8
Terminal No.	Color of Wire	Signal Name
-	LG	ı
2	٦	ı
ဇ	ŋ	I
4	BR	I

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Connector Name AND DG Connector Color WHITE H.S. Terminal No. Color of Wire	MAIN MAIN MAIN IN SWIT	Connector No. D8 MAIN POWER WINDOW Connector Name AND DOOR LOCK/UNLOCK SWITCH Connector Color WHITE TH.S. Terminal No. Color of Signal Name
17	В	GND

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FRONT POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

5	Connector Name DOOR LOCK/UNLOCK SWITCH RH	TE	2 3 4	Signal Name	GND	ENCODER POWER	UP	DOWN	BAT	GND	ENCODER SIG2	ENCODER SIG1	COM
. D105	me DOC	lor WHITE	1 2 3 4 8 9 10 11	Color of Wire	8	BR	٦	LG	۵	В	ŋ	У	æ
Connector No.	Connector Na	Connector Color	H.S.	Terminal No.	က	4	80	6	10	Ξ	12	15	16
	WER WINDOW			gnal Name	_	1	1	_	1	ı			

Signal Name	I	I	I	_	_
Color of Wire	ш	В	Ь	^	SB
Terminal No.	10	11	12	15	16

Signal Name	Ι	1	_	1
Color of Wire	Μ	В	٦	ГG
Terminal No.	ε	4	8	6

D104	Sonnector Name FRONT POWER WIND	or WHITE	
Connector No.	Connector Nam	Connector Color WHITE	



Signa						
Color of Wire	ГG	L	g	BR	Υ	W
Terminal No.	-	2	3	4	2	9

Connector No.	D201
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	MHITE
H.S.	3 8 7 6 5 1

D201

Connector No.

REAR POWER WINDOW SWITCH LH (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)

Connector Name

D207

Connector No.

WHITE

Connector Color

Γ	<u>_</u>	5	1	
	2	9		
	П	7		
	Ш	8		
	60	9		
	4	10		
_			_	

Signal Name	I	ı	1	
Color of Wire	В	SB	В	
Terminal No.	4	5	9	

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



Signal Name	I	I	1
Color of Wire	Ь	æ	В
Terminal No.	-	ဧ	9

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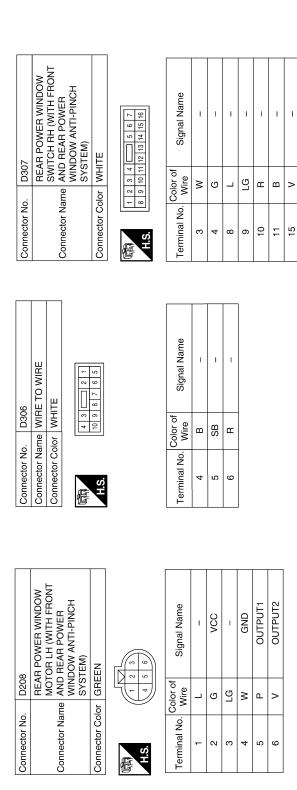
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Signal Name	I	NCC	_	GND	OUTPUT1	OUTPUT2
Color of Wire	٦	g	ГВ	*	Ь	۸
Terminal No.	-	2	3	4	5	9

D308	REAR POWER WINDOW MOTOR RH (WITH FRONT AND REAR ROWER WINDOW ANTI-PINCH SYSTEM)	GREEN	
Connector No.	Connector Name	Connector Color GREEN	





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FAIL-SAFE CONTROL

Fail Safe

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 [FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS >

Error	Error condition		
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.		
Both pulse sensors 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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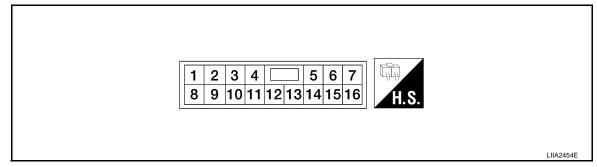
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REAR POWER WINDOW SWITCH [FRONT & REAR WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

REAR POWER WINDOW SWITCH

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

REAR POWER WINDOW SWITCH

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No.		nal No.	Description			Voltage IVI	
	+	-	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)	
	15 (V)	3	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	
	16 (SB)	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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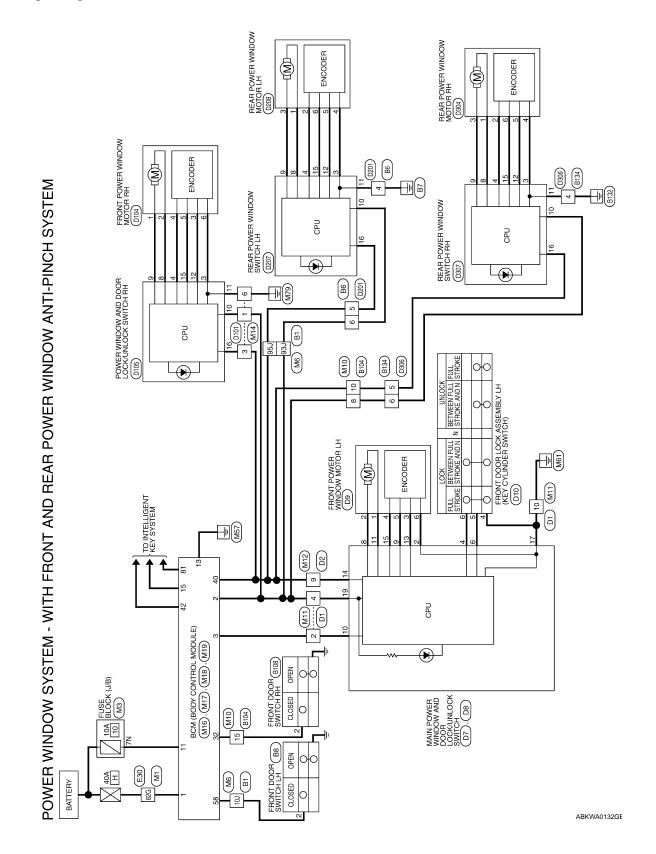
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Wiring Diagram



POWER WINDOW SYSTEM CONNECTORS -WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM

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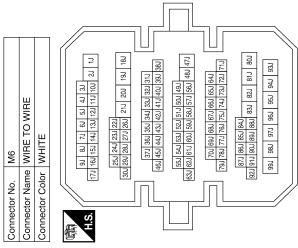
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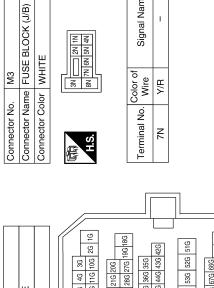
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Signal Name

	5J 4J 3J 12J 11J 10J 2J		55J 54J 53J 52J 51J 50J 49J 63J 62J 61J 60J 59J 58J 57J 56J 48J 47J	70, 69, 68, 67, 66, 65, 64, 79, 73, 72, 71, 76, 75, 74, 73, 72, 71, 76, 76, 76, 76, 76, 77, 73, 72, 73, 73, 73, 73, 73, 73, 73, 73, 73, 73	87.] 86.] 86.] 84.] 82.] 91.] 90.] 88.] 83.] 82.] 81.] 80.]	98J 97J 96J 95J 94J 93J	Signal Name	1	- (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
OOO	90 80 170 160 150 250 240	30J 29J 28J 27J 26J 37J 36J 35J 3 46J 45J 44J 43J 4	55J 54J 53J 63J 62J 61J 60J	79, 78,	87J 86 92J 91J 90	96 ree	Color of Wire	SB	₽Ą
	fin					_//	Terminal No.	107	937



M1 WIRE TO WIRE WHITE	166 156 146 136 146 105 26 16 166 156 146 136 146 136 146 136 146 136 146 136 146 136 146 136 146 136 146 136 146 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136 136	Signal Name	_
o ge	17G 16G 15G 15G 15G 15G 15G 15G 15G 15G 15G 15G 15G	Color of Wire	M/B
Connector No. Connector Name Connector Color	H.S.	Terminal No.	82G

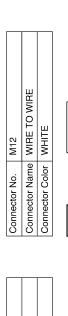
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P/W POWER SUPPLY PERM P/W POWER SUPPLY IGN

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Connector Name | WIRE TO WIRE Connector Color WHITE

Connector Name | WIRE TO WIRE

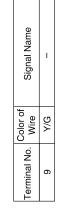
M10

Connector No.

M11

Connector No.

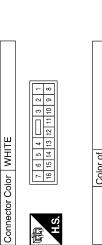
	12	24		Signal Name	
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	9	22		_	ı
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	4	16		E S	()
	2 3 4	15		Color of Wire	>
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	2	ė E	1	Terminal No.	ď







Signal Name	ı	_	-
Color of Wire	M	R/Y	В
Terminal No.	2	4	10

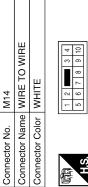


Terminal No. Wire	Color of Wire	Signal Name
8	R/Y	– (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
10	A/G	-
15	R/B	ı



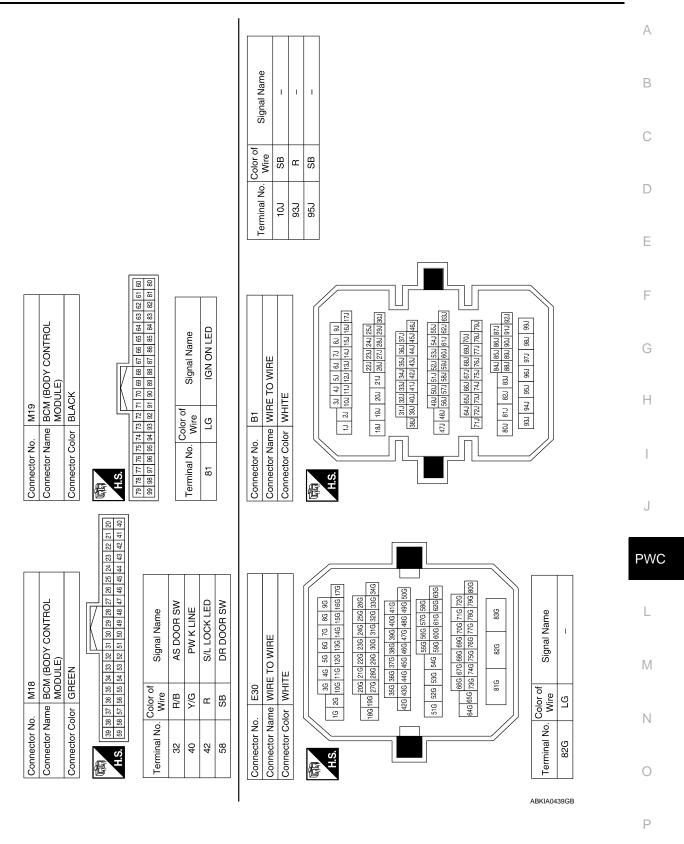
Connector Name BCM (BODY CONTROL MODULE)	ITE	7 8 9 10	Signal Name	BAT BCM FUSE	GND1	031000
MO MO	- WH	11 12 13	Color of Wire	Y/R	В	~
Connector Nam	Connector Color WHITE	H.S.	Terminal No.	1	13	Ť

9	BCM (BODY CONTROL MODULE)	BLACK		Signal Name	BAT POWER E/I
. M16				Color of Wire	A/W
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	,

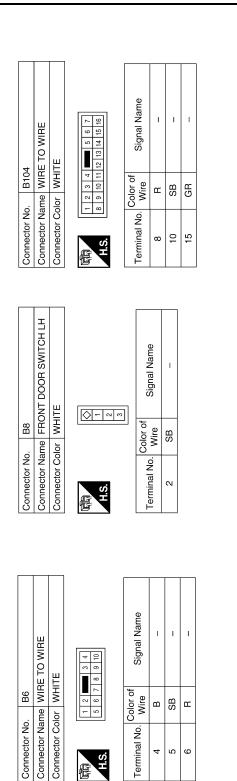


<u> </u>	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	ı	1	1
lor WHI	<u>- 10</u>	Color of Wire	R/Υ	Y/G	В
Connector Color WHITE	是 H.S.	Terminal No.	ļ	3	9

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REAR POWER WINDOW SWITCH



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Terminal No.

Connector No.

	RE TO WIRE	ІТЕ	6 5 4 3 2 1 15 14 13 12 11 10 9 8	Signal Name	I	ı	ı
D1	me WII	lor WF	7 6 5 14 14	Color of Wire	>	œ	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	2	4	10
4	E TO WIRE	TE	7 8 9 10	Signal Name	ı	ı	ı
B134	ne WIRE TO WIRE	or WHITE	ო თ		- В	SB	П
Connector No. B134	Connector Name WIRE TO WIRE	Connector Color WHITE	2 7 8 9	Terminal No. Wire Signal Name	4 B –	5 SB –	9

Signal Name

Color of Wire

Terminal No.

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Connector Name FRONT DOOR SWITCH RH

B108

Connector No.

Connector Color WHITE

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REAR POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

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Signal Name	UNLOCK	AS UP	ENCODER SIG1	IGN	AS DOWN	ENCODER SIG2	COM	ENCODER POWER
Color of Wire	Œ		>	>	FG	ŋ	0	BB
Terminal No.	9	8	6	10	11	13	14	15

o. D7	MAIN POWER WINDOW Connector Name AND DOOR LOCK/UNLOCK SWITCH	Connector Color WHITE	1 2 3 4 7 5 6 7	8 9 10 11 12 13 14 15 16
Connector No.	Connector N	Connector C		Į.

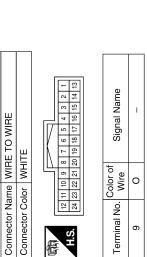
ENCODER GND Signal Name

Color of Wire GR

Terminal No. Ŋ 4

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LOCK



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Connector No.

Connector No.). D10	(
Connector Name		FRONT DOOR LOCK ASSEMBLY LH	
Connector Color	olor GRAY	AY	
H.S.	2	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	
Terminal No.	Color of Wire	Signal Name	
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5	Œ	ı	
G	_	ı	

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

	FRONT POWER WINDOW MOTOR LH	ITE .	3 4 5 6	Signal Name	ı	_	I	ı	_	1
6Q .		lor WHITE		Color of Wire	ГG	٦	ŋ	BR	٨	GR
Connector No.	Connector Name	Connector Color	明.S.	Terminal No.	-	5	3	4	2	9



Signal Nam	GND	BAT
Color of Wire	В	В
Ferminal No.	17	19

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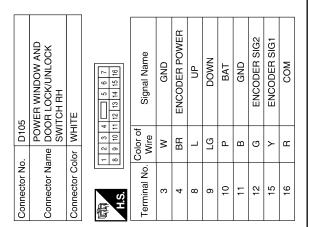
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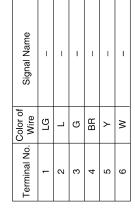
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Signal Name	ı	ı	ı	1	ı
Color of Wire	ш	В	Ь	^	SB
Terminal No. Wire	10	11	12	15	16

D104	Connector Name FRONT POWER WINDOW MOTOR RH	WHITE	3 4 5 6
Connector No.	Connector Name	Connector Color WHITE	管



Connector No.	D207
Connector Name	Connector Name AND REAR POWER WINDOW SWITCH LH (WITH FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color WHITE	WHITE

8 9 10 11 12 13 14 13 16	Signal Name	Ι	I	1	-
01 6 8	Color of Wire	Μ	В	٦	ГG
H.S.	Color of Wire	3	4	8	6

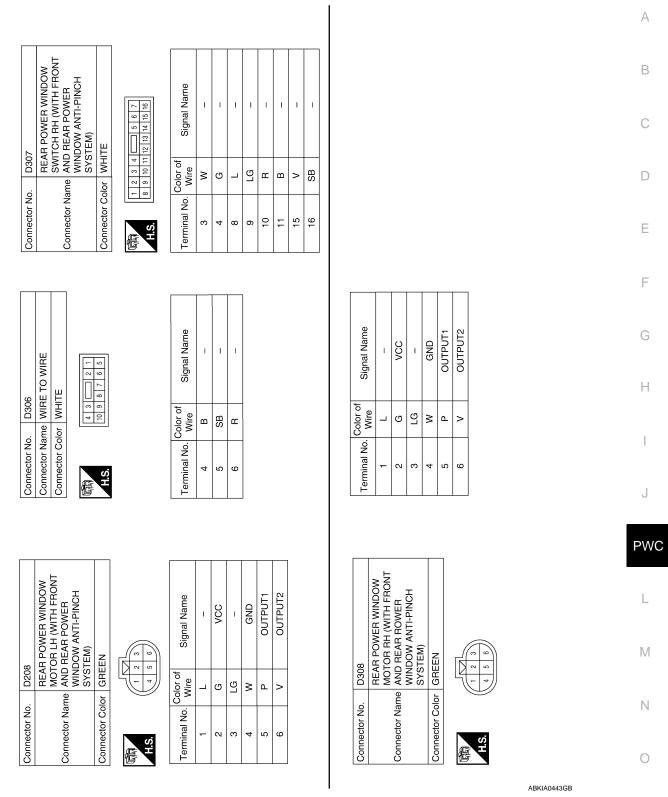
D101	Connector Name WIRE TO WIRE	or WHITE	10 9 8 7 6 5
Connector No.	Connector Nan	Connector Color WHITE	画 H.S.

Signal Name	ı	1	1
Color of Wire	Ь	æ	В
Terminal No.	-	ဧ	9

Connector No.	D201
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
(1) H.S.	3

Signal Name	_	ı	1
Color of Wire	В	SB	В
Terminal No.	4	2	9

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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.

REAR POWER WINDOW SWITCH [FRONT & REAR WINDOW ANTI-PINCH]

Error	Error condition
	End 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 [FRONT & REAR WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH **Diagnosis Procedure** INFOID:0000000004391533 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to PWC-128, "BCM: 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-129. "POWER WINDOW MAIN SWITCH: Diagnosis Procedure". Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO >> Repair or replace the malfunctioning parts.

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000004391534

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH. Refer to PWC-134, "DRIVER SIDE: Component Function Check". Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [FRONT & REAR WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-**ATE**

INFOID:0000000004391535

Diagnosis Procedure

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit. Refer to PWC-136, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection End.

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO

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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000004391536

1. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-30, "REAR LH: Component Function Check". Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000004391537

1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH. Refer to <u>PWC-32</u>, "<u>REAR RH</u>: <u>Component Function Check"</u>. <u>Is the inspection result normal?</u>

YES >> Inspection End.

NO

>> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000004391538

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to <u>PWC-142</u>, "<u>DRIVER SIDE</u>: <u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) [FRONT & REAR WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER Α SIDE) Diagnosis Procedure INFOID:0000000004391539 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? YES >> Inspection End. D NO >> GO TO 2 2. CHECK ENCODER CIRCUIT Е Check encoder circuit. Refer to PWC-145, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". F NO >> Repair or replace the malfunctioning parts. Н J **PWC** M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR LH SIDE)

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR LH SIDE)

Diagnosis Procedure

INFOID:0000000004392453

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-119</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-147, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR RH SIDE)		
< SYMPTOM DIAGNOSIS >	[FRONT & REAR WINDOW ANTI-PINCH]	
ANTI-PINCH SYSTEM DOES NOT OPER	RATE NORMALLY (REAR RH SIDE)	

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

Diagnosis Procedure

NO >> GO TO 2

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to PWC-150, "REAR RH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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PWC-233

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

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000004391540

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-9, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-142, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000004391541

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-9</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL <u>UNIT</u>: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-145, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (REAR LH SIDE)

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY (REAR LH SIDE)

Diagnosis Procedure

INFOID:0000000004392455

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to <u>PWC-119</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL <u>UNIT</u>: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2

2. CHECK ENCODER

Check encoder. Refer to PWC-147, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (REAR RH SIDE) [FRONT & REAR WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES Α NORMALLY (REAR RH SIDE) Diagnosis Procedure INFOID:0000000004392454 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? YES >> Inspection End. D NO >> GO TO 2 2. CHECK ENCODER Е Check encoder. Refer to PWC-150, "REAR RH: Component Function Check". Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". F NO >> Repair or replace the malfunctioning parts. Н J **PWC** L M

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000004391542

1. CHECK FRONT DOOR SWITCH

Check front door switch. Refer to <u>PWC-40</u>, "<u>Component Function Check</u>". <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

1. CHECK FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH)

Check front door lock assembly LH (key cylinder switch). Refer to PWC-157, "Diagnosis Procedure". Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000004391544

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function. Refer to <u>DLK-112, "Component Function Check"</u>. <u>Is the inspection result normal?</u>

YES >> Check intermittent incident. Refer to GI-39. "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-87, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

1. CHECK POWER WINDOW LOCK SWITCH

Check power window lock switch. Refer to PWC-50, "Component Function Check". Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> Repair or replace malfunctioning parts.

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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.

Precautions Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000004394046

NOTE:

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

This vehicle is equipped with a push-button ignition switch and a steering lock unit.

If the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

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

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[FRONT & REAR WINDOW ANTI-PINCH]

ON-VEHICLE MAINTENANCE PRE-INSPECTION FOR DIAGNOSTIC Basic Inspection

INFOID:0000000004362971

BASIC INSPECTION

1.INSPECTION START

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace the malfunctioning parts.

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ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

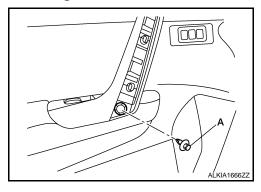
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REMOVAL

- 1. Disconnect the negative battery terminal.
- Using a suitable tool, remove the front door grip cover. Refer to <u>INT-18</u>, "Exploded View".
 CAUTION:

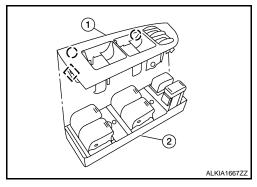
Wrap a cloth around suitable tools to protect components from damage.

3. Remove the power window main switch locking clip (A).



- 4. Release the metal clip, then lift the power window main switch and finisher as an assembly upward to remove it from the front door finisher.
 - []: Metal clip
 - (): Pawl
- 5. Disconnect the harness connector.
- Release the tabs on each side, then separate the switch finisher
 from the power window main switch (2) and remove.
 CAUTION:

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



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

FRONT POWER WINDOW SWITCH

< ON-VEHICLE REPAIR >

[FRONT & REAR WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Removal and Installation

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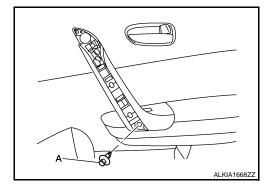
Н

REMOVAL

- 1. Disconnect the negative battery terminal.
- Using a suitable tool, remove the front door grip cover. Refer to <u>INT-18</u>, "<u>Exploded View</u>".
 CAUTION:

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

3. Remove the front power window switch locking clip (A).



- Release the metal clip, then lift the front power window switch and finisher as an assembly upward to remove it from the front door finisher.
 - : Metal clip
 - (): Pawl

CAUTION:

Wrap a cloth around suitable tools to protect components from damage.

- Disconnect the harness connector.
- 6. Release the tabs on each side, then separate the switch finisher (1) from the front power window switch (2) and remove.

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INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initalization procedure Refer to PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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REAR POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

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< ON-VEHICLE REPAIR >

REAR POWER WINDOW SWITCH

Removal and Installation

REMOVAL

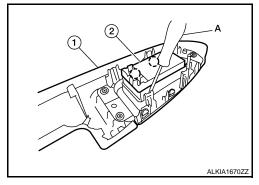
- 1. Disconnect the negative battery terminal.
- 2. Using a suitable tool, remove the rear door arm rest finisher (1), then disconnect the harness connector. Refer to INT-21. "Exploded View".

CAUTION:

Wrap a cloth around suitable tools to protect components from damage.

3. Release the tabs on each side with suitable tool (A), then separate the rear power window switch (2) from the finisher (1) and remove.





INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After every switch harness disconnection, it is necessary to perform the initialization procedure. Refer to PWC-119, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".