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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2. REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 3.

3.PERFORM "BASIC INSPECTION"

Perform the basic inspection.

Refer to PWC-125, "Basic Inspection"

>> GO TO 4.

4. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 5.

5. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the diagnosis with "Component diagnosis" of the applicable system.

>> GO TO 6.

6.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 7.

7. FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

INFOID:0000000000961538

INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-В scription INFOID:0000000000961535 Initial setting is necessary when battery terminal is removed. **CAUTION:** The following specified operations are not performed under the non-initialized condition. Auto-up operation Anti-pinch function D Retained power operation ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Spe-Е cial Repair Requirement INFOID:0000000000961536 INITIALIZATION PROCEDURE 1. Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more. 2. Turn ignition switch ON. 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open) 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more. Н 5. Inspect anti-pinch function. CHECK ANTI-PINCH FUNCTION 1. Fully open the door window. Place a piece of wood near fully closed position. 3. Close door glass completely with AUTO-UP. Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops. Check that glass does not rise when operating the power window main switch while lowering. **CAUTION:** Do not check with hands and other part of body because they may be pinched. Do not get pinched. Check that AUTO-UP operates before inspection when system initialization is performed. **PWC** It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-89, "Fail Safe" Perform initial setting when auto-up operation or anti-pinch function does not operate normally. L • Finish initial setting. Otherwise, next operation cannot be done. 1. Auto-up operation Anti-pinch function 3. Retained power operation when ignition switch is OFF. ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description Ν INFOID:0000000000961537 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 Р Retained power operation

INITIALIZATION PROCEDURE

quirement

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Re-

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

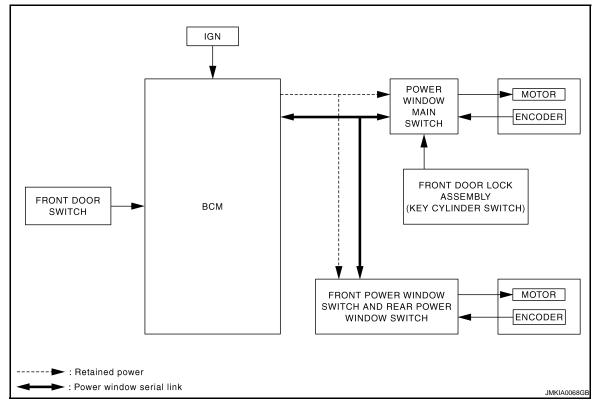
- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-89, "Fail Safe"
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT & REAR WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000000961540

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

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5 seconds or more to OPEN or CLOSE 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 >

[FRONT & REAR WINDOW ANTI-PINCH]

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

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

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

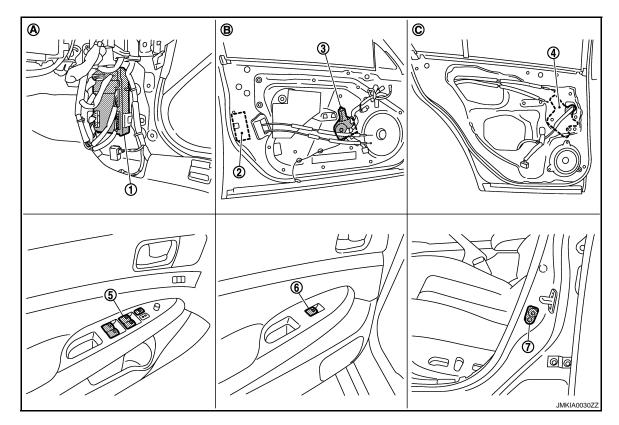
While retained power operation activate, keyless power window down function cannot be operated. Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-51, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

NOTE:

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

Component Parts Location

INFOID:0000000000961541



- 1. BCM M118,M119,M122,M123
- 4. Rear power window motor LH D52
- Front door switch (driver side) B16 7.
- Front door lock actuator (driver side) 3. (key cylinder switch) D15
- Power window main switch D8,D9
- Front power window motor (driver side) D10
- Rear power window switch LH D54

View with dash side lower (passenger side)

View with front door finisher removed C. View with rear door finisher removed

Component Description

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FRONT AND REAR POWER WINDOW ANTI-PINCH SYSTEM

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POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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.	

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

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APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-74, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

Ourstann.	Custom Cub quotom coloritor 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	HEAD LAMP	×	×	×	
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	ВСМ	×			
IVIS - NATS	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	TPMS (AIR PRESSURE MONITOR)	×	×	×	

^{*:} This item is displayed, but is not used.

RETAIND PWR

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

FOID:0000000000961544

Data monitor

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000000961546

1. CHECK POWER WINDOW MAIN SWITCH FUNCTION

Does power window motor operate with power window main switch operation? Is the inspection result normal?

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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

NO >> Refer to PWC-15, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

INFOID:0000000000961547

1. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON.

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

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Terminal			
(+)		Voltage (V) (Approx.)	
Power window main switch connector	Terminal	(–)	(Approx.)
D8	10	Ground	Battery voltage
D9	19	Giodila	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

- 2. Disconnect BCM connector and power window main switch connector.
- 3. Check continuity between BCM connector and power window main switch connector.

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BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M118	3	D8	10	Existed
WITTO	2	D9	19	LAISIEU

Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
M118	3	Ground	Not existed
WITO	2		Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK GROUND CIRCUIT

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Power window main switch connector	Terminal	Ground	Continuity
D9	17	Ground	Existed

Is the inspection result normal?

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

NO >> Repair or replace harness.

CHECK BCM OUTPUT SIGNAL

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

Terminals				
(+)		Voltage (V) (Approx.)		
BCM connector	Terminal	- (-)	()	
M118	3	Cround	Pottory voltage	
IVITO	2	- Ground	Battery voltage	

Is the measurement value within the specification?

YES >> Replace power window main switch. Refer to <u>PWC-126</u>, "Removal and Installation". After that, refer to <u>PWC-16</u>, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000000961548

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-7, "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".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000000961549

- BCM supplies power.
- Front power window motor (passenger side) will be operated if front power window switch (passenger side)
 is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000000961550

1. CHECK POWER WINDOW MOTOR FUNCTION

Does power window motor operate with front power window switch (passenger side) operation? Is the inspection result normal?

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

NO >> Refer to PWC-17, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000000961551

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1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.

2. Check voltage between front power window switch (passenger side) connector and ground.

(+)			Voltage (V)
Front power window switch (passenger side)	Terminal	(–)	(Approx.)
D38	10	Ground	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

2. Disconnect BCM connector and front power window switch (passenger side) connector.

3. Check continuity between BCM connector and front power window switch (passenger side) connector.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M118	2	D38	10	Existed

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M118	2	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect front power window switch (passenger side) connector.

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

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D38	11		Existed

Is the inspection result normal?

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

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

Connect BCM connector.

Check voltage between BCM connector and ground.

Terminals			V-16 0.0
(+)		(-)	Voltage (V) (Approx.)
BCM connector	Terminal	(-)	(11 - 7
M118	2	Ground	Battery voltage

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Is the measurement value within the specification?

'ES >> Replace front power window switch (passenger side). Refer to <u>PWC-126</u>, "Removal and Installation". After that, Refer to <u>PWC-18</u>, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000000961552

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-7, "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".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

INFOID:0000000000961553

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

REAR POWER WINDOW SWITCH: Component Function Check

INFOID:0000000000961554

Rear Power Window Switch

1. CHECK REAR POWER WINDOW SWITCH

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

Is the inspection result normal?

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

NO >> Refer to PWC-18, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000000961555

Rear Power Window Switch power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

	Terminal				
	(+)		Voltage (V) (Approx.)		
Rear por	wer window switch	Terminal	(-)	() [
LH	D54	10 Ground		10 Ground Battery v	Battery voltage
RH	D74	10	Ground	battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

$\overline{2}$. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector and rear power window switch connector.
- Check continuity between BCM connector and rear power window switch connector.

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M118	2	LH	D54	10	Existed
IVITIO	2	RH	D74	10	LAISIEU

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M118	2	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

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

Rear power window switch connector		Terminal		Continuity
LH	D54	11	Ground	Existed
RH	D74	11		LXISteu

Is the inspection result normal?

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

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

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

	V 16 0.0			
(+)		(-)	Voltage (V) (Approx.)	
BCM connector	Terminal	(7)	(44.5)	
M118	2	Ground	Battery voltage	

Is the measurement value within the specification?

YES >> Replace rear power window switch. Refer to PWC-126. "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

>> Replace BCM. Refer to BCS-79, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Refer to <u>PWC-7</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".

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000000961557

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

DRIVER SIDE: Component Function Check

INFOID:0000000000961558

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor (driver side) operate with operating power window main switch? Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-21, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000000961559

Front Power Window Motor (Driver Side) Circuit Check

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

Terminal				
(+)			Power window main switch	Voltage (V)
Front power window motor (driver side) connector	Terminal	(–)	condition	(Approx.)
	2	UP	Battery voltage	
D10	2	Ground	DOWN	0
טוט	1	Giound	UP	0
	1 		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2.

NO

>> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

- 2. Disconnect power window main switch connector .
- Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
	8	D10	2	Existed
50	11	D10	1	LXISIGU

Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal		Continuity
D8	D8 8		Not existed
В	11		NOT EXISTED

Is the inspection result normal?

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR

Check front power window motor (driver side).

Refer to PWC-22, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

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

NO >> Replace front power window motor (driver side). Refer to <u>GW-16</u>, "Removal and Installation". After that, Refer to <u>PWC-22</u>, "DRIVER SIDE: Special Repair Requirement".

DRIVER SIDE : Component Inspection

INFOID:0000000000961560

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR

Does motor operate by connecting the battery voltage directly to front power window motor (driver side) connector?

Front power window motor	Terr	minal	Motor condition	Operation	
(driver side) connector	(+)	(–)	Wotor condition		
D10	1	2	DOWN	Existed	
D10	2	1	UP	LAISIGU	

Is the inspection result normal?

NO

YES >> Power window motor is OK.

>> Replace front power window motor (driver side). Refer to <u>GW-16</u>, "Removal and Installation". After that, Refer to PWC-22, "DRIVER SIDE: Special Repair Requirement".

DRIVER SIDE : Special Repair Requirement

INFOID:0000000000961561

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-29, "DRIVER SIDE : Component Function Check".

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000000961562

INFOID:0000000000961563

Door glass moves UP/DOWN by receiving the signal from power window main switch or front power window switch (passenger side).

PASSENGER SIDE: Component Function Check

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does front power window motor (passenger side) operate with operating power window main switch or front power window switch (passenger side)?

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Is the inspection result normal?

YES >> Power window motor is OK.

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

PASSENGER SIDE : Diagnosis Procedure

Front Power Window Motor Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) OUTPUT SIGNAL

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

Teri	minal				
(+)			Front power window	Voltage (V)	
Front power window motor (passenger side) connector Terminal		(–)	switch condition	(Approx.)	
	2	2	UP	Battery voltage	
D40	2	- Ground	DOWN	0	
D40	1	Glound	UP	0	
	ı		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Replace front power window switch.Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-18, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	8	D40	2	Existed
D30	9	D+0	1	LAISIGU

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

Front power window switch (passenger side) connector	Terminal		Continuity	
D38	8	Ground	Not existed	
D36	9		 	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

Refer to PWC-24, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

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

NO >> Replace power window motor. Refer to <u>GW-16</u>, "Removal and Installation". After that, Refer to <u>PWC-24</u>, "PASSENGER SIDE: Special Repair Requirement".

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PASSENGER SIDE: Component Inspection

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COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR

Does motor operate by connecting the battery voltage directly to front power window motor (passenger side) connector?

Front power window motor (passen-	Terminal		Motor condition	
ger side) connector	(+)	(-)	Wotor condition	
D40	1	2	DOWN	
	2	1	UP	

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor (passenger side). Refer to <u>GW-16, "Removal and Installation"</u>. After that, Refer to PWC-24, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Special Repair Requirement

INFOID:0000000000961566

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2 . CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-31, "PASSENGER SIDE : Component Function Check".

REAR LH

REAR LH: Description

INFOID:0000000000961567

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

REAR LH: Component Function Check

INFOID:0000000000961568

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to <u>PWC-24</u>, "<u>REAR LH</u>: <u>Diagnosis Procedure</u>".

REAR LH: Diagnosis Procedure

INFOID:0000000000961569

Rear Power Window Motor LH Circuit Check

${f 1}$.CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

^{1.} Trun ignition switch OFF.

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Terminal					
(+)			Rear power window	Voltage (V)	
Rear power window mo- tor LH connector	Terminal	(–)	switch LH condition	(Approx.)	
	1	4	UP	Battery voltage	
D52	ı	Ground	DOWN	0	
D32	3	Giouna	UP	0	
			DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Replace rear power window switch LH. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

CHECK HARNESS CONTINUITY

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
	8	D52	1	Existed
D54	9	D32	2	LXISTEG

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

Rear power window switch LH con- nector	Terminal		Continuity
D54	8	Ground	Not existed
	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO

NO >> Repair or replace harness.

3.CHECK POWER WINDOW MOTOR

Check rear power window motor LH.

Refer to PWC-25, "REAR LH: Component Inspection".

Is the inspection result normal?

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

>> Replace rear power window motor LH. Refer to <u>GW-22</u>, "<u>Removal and Installation</u>". After that, Refer to <u>PWC-26</u>, "<u>REAR LH</u>: <u>Special Repair Requirement</u>".

REAR LH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

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

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[FRONT & REAR WINDOW ANTI-PINCH]

Rear power window motor LH con-	Terr	minal	- Motor condition	
nector	(+)	(–)	Wotor condition	
D52	1	3	UP	
	3	1	DOWN	

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor LH. Refer to <u>GW-22, "Removal and Installation"</u>. After that, Refer to <u>PWC-26, "REAR LH: Special Repair Requirement"</u>.

REAR LH: Special Repair Requirement

INFOID:0000000000961571

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-33, "REAR LH: Component Function Check".

REAR RH

REAR RH: Description

INFOID:0000000000961572

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

REAR RH: Component Function Check

INFOID:0000000000961573

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-26, "REAR RH : Diagnosis Procedure".

REAR RH: Diagnosis Procedure

INFOID:0000000000961574

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

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

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal					
(+)			Rear power window	Voltage (V)	
Rear power window mo- tor RH connector	Terminal	(–)	switch condition	(Approx.)	
		UP	Battery voltage		
D72	ı	ı	Cround	DOWN	0
3	Ground	UP	0		
	3	-	DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Replace rear power window switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

2.CHECK HARNESS CONTINUITY

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

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D74	8	D72	1	Existed
	9	D72	2	LXISIEU

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

Rear power window switch RH con- nector	Terminal		Continuity
D74	8	Ground	Not existed
	9		NOI EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-27, "REAR RH: Component Inspection".

Is the inspection result normal?

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

NO >> Replace power window motor RH. Refer to GW-22, "Removal and Installation". After that, Refer to PWC-28, "REAR RH: Special Repair Requirement".

REAR RH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

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

Rear power window motor RH con-	Terminal		- Motor condition	
nector	(+)	(-)	Wotor condition	
D72	1	3	UP	
	3	1	DOWN	

Is the inspection result normal?

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-22, "Removal and Installation"</u>. After that, Refer to <u>PWC-28, "REAR RH: Special Repair Requirement"</u>.

REAR RH: Special Repair Requirement

INFOID:0000000000961576

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-35, "REAR RH : Component Function Check".

[FRONT & REAR WINDOW ANTI-PINCH]

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DRIVER SIDE

DRIVER SIDE : Description

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Detects condition of the front power window motor (driver side) operation and transmits to power window main switch as the pulse signal.

DRIVER SIDE : Component Function Check

INFOID:0000000000961578

1. CHECK ENCODER OPERATION

Does driver side door glass perform AUTO open/close operation normally when operating power window main switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-29, "DRIVER SIDE : Diagnosis Procedure".

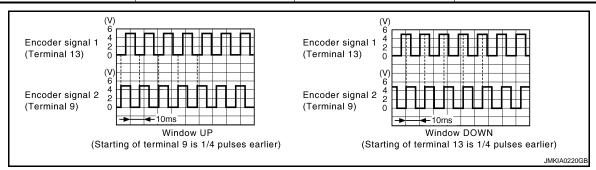
DRIVER SIDE: Diagnosis Procedure

INFOID:0000000000961579

1. CHECK ENCODER OPERATION

- 1. Connect front power window motor (driver side) connector.
- 2. Turn ignition switch ON.
- 3. Check signal between power window main switch connector and ground with oscilloscope.

Terminals			
(-	+)		Signal
Power window main switch connector	Terminal	(–)	(Reference value)
D8	9	Ground	Poter to following signal
D6	13	Ground	Refer to following signal



Is the inspection result normal?

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

NO >> GO TO 2.

2.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) POWER SUPPLY

- Turn ignition switch ON.
- 2. Check voltage between front power window motor (driver side) connector and ground.

(+)			Voltage (V)	
Front power window motor (driver side) connector	Terminal	(–)	(Approx.)	
D10	4	Ground	10	

Is the measurement value within the specification?

YES >> GO TO 4.

< COMPONENT DIAGNOSIS >

NO >> GO TO 3.

3.CHECK HARNESS CONTINUITY 1

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	15	D10	4	Existed

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

Power window main switch connector	dow main switch connector Terminal		Continuity
D8	15	Ground	Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor (driver side) connector.
- 3. Check continuity between front power window motor (driver side) connector and ground.

Front power window motor (driver side) connector	Terminal	Ground	Continuity
D10	6		Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

${f 5.}$ CHECK HARNESS CONTINUITY 2

- 1. Disconnect power window main switch connector.
- Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	2	D10	6	Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6.CHECK HARNESS CONTINUITY 3

- 1. Disconnect power window main switch connector.
- Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	9	D10	3	Existed
	13	D10	5	LAISIGU

Check continuity between power window main switch connector and ground.

[FRONT & REAR WINDOW ANTI-PINCH]

Power window main switch connector	window main switch connector Terminal		Continuity
D8	9	Ground	Not existed
	13		Not existed

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-16</u>, "<u>Removal and Installation</u>". After that, Refer to <u>PWC-22</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE: Description

Detects condition of the front power window motor (passenger side) operation and transmits to front power window switch (passenger side) as the pulse signal.

PASSENGER SIDE: Component Function Check

1. CHECK ENCODER OPERATION

Does passenger side door glass perform AUTO open/close operation normally when operating power window main switch or front power window switch (passenger side)?

Is the inspection result normal?

YES >> Encoder operation is OK.

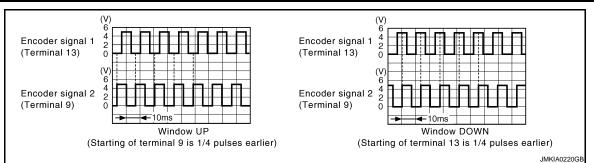
NO >> Refer to PWC-31, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

1. CHECK ENCODER SIGNAL

- 1. Connect power window motor connector.
- 2. Turn ignition switch ON.
- 3. Check signal between front power window switch (passenger side) connector and ground with oscilloscope.

(+)		Signal		
Front power window switch (passenger side) connector	Terminal	(–)	(Reference value)	
D38	12	Cround	Defer to following signal	
D38	15	Ground	Refer to following signal	



Is the inspection result normal?

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

NO >> GO TO 2.

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

- 1. Turn ignition switch ON.
- 2. Check voltage between front power window motor (passenger side) connector and ground.

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(+)			Voltage (V)
Front power window motor (passenger side) connector	Terminal	(–)	(Approx.)
D40	4	Ground	10

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

${f 3.}$ CHECK HARNESS CONTINUITY 1

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

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	4	D40	4	Existed

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

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D38	4		Not existed

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-18, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Front power window motor (passenger side) connector	" e lerminal		Continuity
D40	6		Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY 2

- 1. Disconnect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) connector and front power window motor (passenger side) connector.

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	3	D40	6	Existed

Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-18, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect front power window switch (passenger side) connector.

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

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	12	D40	5	Existed
	15	D40	3	LAISIEU

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

Front power window switch (passen- ger side) connector	Terminal		Continuity
D38	12	Ground	Not existed
D30	15		Not existed

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-16, "Removal and Installation". After that, Refer to PWC-24, "PASSENGER SIDE: Special Repair Requirement".

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

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

REAR LH: Component Function Check

1. CHECK ENCODER OPERATION

Does rear door LH glass perform AUTO open/close operation normally when operating power window main switch or rear power window switch LH?

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-33, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

1.CHECK ENCODER SIGNAL

1. Connect rear power window motor LH connector.

2. Turn ignition switch ON.

Check signal between rear power window switch connector and ground with oscilloscope.

Terminals				
((+)		Signal	
Rear power window switch LH connector	Terminal	(–)	(Reference value)	
D54	12 15	- Ground	Refer to following signal	

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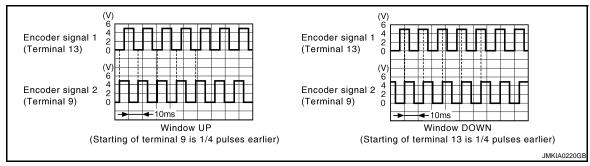
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Is the inspection result normal?

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

NO >> GO TO 2.

2. CHECK REAR POWER WINDOW MOTOR LH POWER SUPPLY

1. Turn ignition switch ON.

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

Terminal			
(-	+)		Voltage (V) (Approx.)
Rear power window motor LH connector	Terminal	(–)	(Approx.)
D52	2	Ground	10

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK HARNESS CONTINUITY 1

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D54	4	D52	2	Existed

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

Rear power window switch LH con- nector	Terminal	Ground	Continuity
D54	4		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Rear power window motor LH connector	Terminal	Ground	Continuity
D52	4	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY 2

1. Disconnect rear power window switch LH connector.

Check continuity between rear power window switch LH connector and rear power window motor LH connector.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D54	3	D52	4	Existed

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

Disconnect rear power window switch LH connector.

Check continuity between rear power window switch LH connector and rear power window motor LH connector.

Rear power window switch LH con- nector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D54	12	D52	5	Existed
	15	552	6	LAISIGU

3. Check rear power window switch LH connector and ground.

Rear power window switch LH connector	Terminal		Continuity
D54	12	Ground	Not existed
	15	-	INOL GXISIGU

Is the inspection result normal?

YES >> Replace rear power window motor LH. Refer to <u>GW-22, "Removal and Installation"</u>. After that, Refer to <u>PWC-26, "REAR LH: Special Repair Requirement"</u>.

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

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

REAR RH: Component Function Check

1. CHECK ENCODER OPERATION

Does rear door glass RH perform 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-35, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

1. CHECK ENCODER SIGNAL

- Connect rear power window motor RH connector.
- 2. Turn ignition switch ON.
- 3. Check signal between rear power window switch RH connector and ground with oscilloscope.

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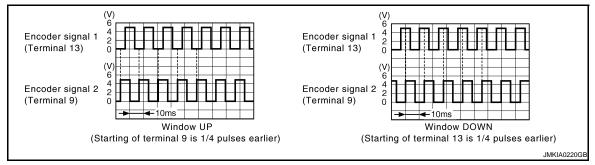
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PWC-35

Terminals				
(+)		Signal	
Rear power window switch RH connector	Terminal	(-)	(Reference value)	
D74	12 15	- Ground	Refer to following signal	



Is the inspection result normal?

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

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR RH POWER SUPPLY

Turn ignition switch ON.

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

((+)		Voltage (V) (Approx.)
Rear power window motor RH connector	Terminal	(–)	(Approx.)
D72	2	Ground	10

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK HARNESS CONTINUITY 1

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

Rear power window switch RH connector	Terminal	Rear power window motor RH con- nector	Terminal	Continuity
D74	4	D72	2	Existed

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

Rear power window switch RH con- nector	Terminal	Ground	Continuity
D74	4		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch RH. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Rear power window motor RH connector	Terminal	Ground	Continuity
D72	4	Ground	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

${f 5.}$ CHECK HARNESS CONTINUITY 2

Disconnect rear power window switch RH connector.

Check continuity between rear power window switch RH connector and rear power window motor RH connector.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D74	3	D72	4	Existed

Is the inspection result normal?

>> Replace rear power window switch RH. Refer to PWC-126, "Removal and Installation". After that, YES Refer to PWC-19, "REAR POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

Disconnect rear power window switch RH connector.

Check continuity between rear power window switch RH connector and rear power window motor RH connector.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D74	12	D72	5	Existed
574	15	DIZ	6	LXISIEU

3. Check rear power window switch RH connector and ground.

Rear power window switch RH con- nector	Terminal	Ground	Continuity
D74	12		Not existed
5/4	15		NOT EXISTED

Is the inspection result normal?

>> Replace rear power window motor RH. Refer to GW-22, "Removal and Installation". After that, YES Refer to PWC-28, "REAR RH: Special Repair Requirement".

NO >> Repair or replace harness.

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DOOR SWITCH

Description INFOID:000000000961589

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

Component Function Check

INFOID:0000000000961590

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-13, "RETAIND PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

NO >> Refer to PWC-38, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000000961591

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check voltage between BCM connector and ground.

	Terminals				Voltage (V)
(+)	(-)	Door c	Door condition	
BCM connector	Terminal	(–)		(Approx.)	
	124		Passangar sida	OPEN	0
M123	124	Ground	Passenger side	CLOSE	Battery voltage
W123	150	Ground	Driver side	OPEN	0
	130		Driver side	CLOSE	Battery voltage

Is the measurement value within the specification?

YES >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Front door switch connector		Terminal	Continuity
M123	124	Passenger side	B116	2	Existed
INITZO	150	Driver side	B16	2	LXISIGU

4. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
M123	124	Ground	Not existed
IVITZS	150		Not existed

DOOR SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

	Terminal			
	(+)	()		
BCM connector	Terminal	(-)	(Approx.)	
M123	124	Ground	Pottory voltage	
IVITZS	150	Ground	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-39, "Component Inspection".

Is the inspection result normal?

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

NO >> Replace door switch.

Component Inspection

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal Door switches		Door switch	Continuity
		Door Switch	Continuity
2	Ground part of door switch	Pressed	Not existed
2	Ground part of door switch	Released	Existed

Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace door switch.

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DOOR KEY CYLINDER SWITCH

Description INFOID:000000000001593

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

Component Function Check

INFOID:0000000000961594

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Monitor item	Co	ondition	
KEY CYL LK-SW	Lock	: ON	
REY CYLLK-SVV	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
KEY CYL UN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

YES >> Key cylinder switch is OK.

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

Diagnosis Procedure

INFOID:0000000000961595

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

	Terminals			
(+)			Key position	Voltage (V)
Power window main switch connector	Terminal	(-)		(Approx.)
	4		Lock	0
Do	7	Cround	Neutral / Unlock	5
D8	C	Ground	Unlock	0
	6		Neutral / Lock	5

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect power window main switch connector and front door key lock assembly (driver side) (key cylinder switch) connector.
- 3. Check continuity between power window main switch connector and front door lock assembly (driver side) (key cylinder switch) connector.

Power window main switch connector	Terminal	Front door lock assembly (driver side) (key cylinder switch) connector	Terminal	Continuity
	4	D15	6	Existed
20	6	D13	5	LAISIEU

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

DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Power window main switch connector	Terminal		Continuity
D8	4	Ground	Not existed
D8	6		Not existed

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Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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3.check door key cylinder switch ground circuit

Check continuity between front door lock assembly (driver side) connector and ground.

Front door lock assembly (driver side) connector	Terminal	Ground	Continuity
D15	4	Ground	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-41, "Component Inspection".

Is the inspection result normal?

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

NO

>> Replace front door lock assembly (driver side) (key cylinder switch). Refer to DLK-207, "FRONT DOOR LOCK: Removal and Installation". After that, Refer to PWC-41, "Special Repair Requirement".

Component Inspection

INFOID:0000000000961596

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (key cylinder switch).

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO

>> Replace front door lock assembly (driver side) (key cylinder switch). Refer to <u>DLK-207</u>, "<u>FRONT DOOR LOCK</u>: Removal and Installation". After that, Refer to <u>PWC-41</u>, "<u>Special Repair Requirement</u>".

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

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DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> Inspection end.

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

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

- Front passenger side door window and rear door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000000961599

Power Window Serial Link Check (Driver Side)

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 <u>DLK-50</u>, "DOOR LOCK: CONSULT-III Function (BCM - DOOR LOCK)".

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
GDE LOCK GW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
ODE UNLOCK 3W	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-43, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000000961600

Power Window Serial Link Check (Driver Side)

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

	Terminal	Q	
(+)		(-)	Signal (Reference value)
BCM connector	Terminal	(-)	(
M123	132	Ground	(V) 15 10 5 0 PIIA1297E

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< 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 and power window main switch connector.
- 3. Check continuity between BCM connector and power window main switch connector.

BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M123	132	D8	14	Existed

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M123	132	Ground	Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

- Front passenger side door window and rear door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000000961602

INFOID:0000000000961601

Power Window Serial Link Check (Passenger Side)

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 <u>DLK-50</u>, "DOOR LOCK: <u>CONSULT-III Function</u> (<u>BCM - DOOR LOCK</u>)".

Monitor item		Condition		
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-44, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000000961603

Power Window Serial Link Check (Passenger Side)

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

	Terminal		
(+)		()	Signal (Reference value)
BCM connector	Terminal	(-)	(,
M123	132	Ground	(V) 15 10 5 0 10 ms

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2.

2. CHECK BCM OUTPUT SIGNAL CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connector and front power window switch (passenger side) connector.
- 3. Check continuity between BCM connector and front power window switch (passenger side) connector.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M123	132	D38	16	Existed

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M123	132	Ground	Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-18, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

- Front passenger side door window and rear door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

REAR LH: Component Function Check

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INFOID:0000000000961605

INFOID:0000000000961604

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	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDE UNLOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-46, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

INFOID:0000000000961606

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

	Terminal		0: 1	
(+)	(+)		Signal (Reference value)	
BCM connector	Terminal	(-)	(-)	(
M123	132	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. Disconnect BCM connector and rear power window switch LH connector.
- 2. Check continuity between BCM connector and rear power window switch LH connector.

BCM connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
M123	132	D54	16	Existed

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M123	132	Giodila	Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-126, "Removal and Installation". After that, Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side) and rear power window switch.

- Front passenger side door window and rear door window operation signal
- Power window control by key cylinder switch signal
- Power window lock switch signal
- Retained power operation signal

REAR RH: Component Function Check

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	Condition	
CDL LOCK SW	LOCK	: ON	
	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDL UNLOCK 3VV	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-47, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

	Terminal (+)			
(+)			(+)	
BCM connector	Terminal	(–) (Reference value)	(, (, (, (, (, (, (, (, (, (, (, (, (, ((
M123	132	Ground	(V) 15 10 5 0 PIIA1297E	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2.

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INFOID:0000000000961607

INFOID:0000000000961608

INFOID:0000000000961609

PWC-47

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

BCM connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
M123	132	D74	16	Existed

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M123	132	Giodila	Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to <u>PWC-126, "Removal and Installation"</u>. After that, Refer to <u>PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement"</u>.

NO >> Repair or replace harness.

POWER WINDOW LOCK SWITCH

< COMPONENT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH Α Description INFOID:0000000000961610 Ground circuit of power window main switch shuts off if power window lock switch of power window main switch is operated. This inhibits all operation, except for the main switch. Component Function Check INFOID:0000000000961611 1. CHECK POWER WINDOW LOCK SIGNAL Exchanges for a normal power window main switch and operation is checked. D Does power window lock operate? YES >> Replace power window main switch. Refer to PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement". Е NO >> Check condition of harness and connector. Special Repair Requirement INFOID:0000000000961612 F 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-7, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? YES >> Inspection end. Н >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO

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ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	OFF
TIX WIII LIXTII	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
TR WIFER LOW	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
TIX WASHER SW	Front washer switch ON	ON
FR WIPER INT	Other than front wiper switch INT	OFF
I IX WIF LIX IIVI	Front wiper switch INT	ON
FR WIPER STOP	Front wiper is not in STOP position	OFF
FR WIFER 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 R	Turn signal switch RH	ON
TURN SIGNAL L	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF
TAIL LAIVIP SVV	Lighting switch 1ST or 2ND	ON
LI DEAM CW	Other than lighting switch HI	OFF
HI BEAM SW	Lighting switch HI	ON
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF
HEAD LAIVIP SVV I	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
HEAD LAIMP SW 2	Lighting switch 2ND	ON
PASSING SW	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
AUTO LIGHT SW	Other than lighting switch AUTO	OFF
AOTO LIGITI SW	Lighting switch AUTO	ON
FR FOG SW	Front fog lamp switch OFF	OFF
1 K 1 OG 3W	Front fog lamp switch ON	ON
RR FOG SW	NOTE: The item is indicated, but not monitored.	OFF
DOOD CW DD	Driver door closed	OFF
DOOR SW-DR	Driver door opened	ON
DOOD SW AS	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
DOOD SW DD	Rear RH door closed	OFF
DOOR SW-RR	Rear RH door opened	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status	_
DOOR SW-RL	Rear LH door closed	OFF	- A
DOOK SW-KL	Rear LH door opened	ON	_
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	OFF	В
CDL I OCK SW	Other than power door lock switch LOCK	OFF	_
CDL LOCK SW	Power door lock switch LOCK	ON	С
CDL LINII OCK CW	Other than power door lock switch UNLOCK	OFF	_
CDL UNLOCK SW	Power door lock switch UNLOCK	ON	_
ZEV CVI LIZ CW	Other than driver door key cylinder LOCK position	OFF	- D
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON	_
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF	E
NET CTL UN-SW	Driver door key cylinder UNLOCK position	ON	_
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF	F
HAZADD CW/	Hazard switch is not pressed	OFF	=
HAZARD SW	Hazard switch is pressed	ON	_
REAR DEF SW	NOTE: The item is indicated, but not monitored.	OFF	- G
H/L WASH SW	NOTE: The item is indicated, but not monitored.	OFF	Н
ED CANCEL CW	Trunk lid opener cancel switch OFF	OFF	_
FR CANCEL SW	Trunk lid opener cancel switch ON	ON	-
ED/DD ODEN CW	Trunk lid opener switch OFF	OFF	- 1
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	ON	- -
EDAUGULAT MANTO	Trunk lid closed	OFF	J
TRNK/HAT MNTR	Trunk lid opened	ON	=
DKE LOCK	LOCK button of Intelligent Key is not pressed	OFF	DV
RKE-LOCK	LOCK button of Intelligent Key is pressed	ON	- PV
DIVE LINII OCK	UNLOCK button of Intelligent Key is not pressed	OFF	_
RKE-UNLOCK	UNLOCK button of Intelligent Key is pressed	ON	L
OVE TD/DD	TRUNK OPEN button of Intelligent Key is not pressed	OFF	_
RKE-TR/BD	TRUNK OPEN button of Intelligent Key is pressed	ON	_
RKE-PANIC	PANIC button of Intelligent Key is not pressed	OFF	- IV
KKE-PANIC	PANIC button of Intelligent Key is pressed	ON	_
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	OFF	N
RRE-P/W OPEN	UNLOCK button of Intelligent Key is pressed and held	ON	_
DIVE MODE OUG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF	C
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON	_
ODTICAL CENCOR	Outside of the vehicle bright	Close to 5 V	P
OPTICAL SENSOR	Outside of the vehicle dark	Close to 0 V	_
250 0W D5	Driver door request switch is not pressed	OFF	=
REQ SW-DR	Driver door request switch is pressed	ON	=
250 014/40	Passenger door request switch is not pressed	OFF	-
REQ SW-AS	Passenger door request switch is pressed	ON	_

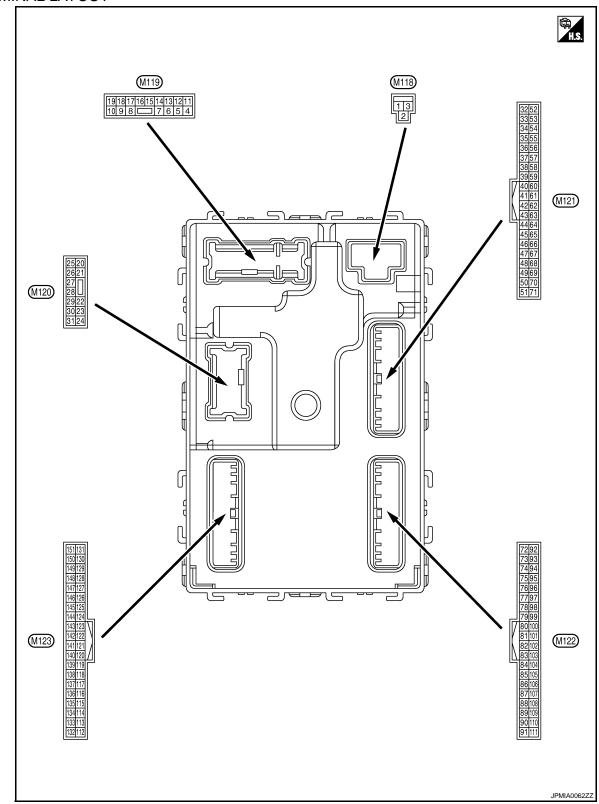
< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
REQ SW-BD/TR	Trunk request switch is not pressed	OFF
NEQ 3W-DD/TN	Trunk request switch is pressed	ON
PUSH SW	Push-button ignition switch (push switch) is not pressed	OFF
FOSITOW	Push-button ignition switch (push switch) is pressed	ON
IONI DI VO. E/D	Ignition switch in OFF or ACC position	OFF
IGN RLY2 -F/B	Ignition switch in ON position	ON
ACC RLY -F/B	Ignition switch in OFF position	OFF
ACC RLT -F/B	Ignition switch in ACC or ON position	ON
CLUCH SW	The clutch pedal is not depressed	OFF
CLOCITOW	The clutch pedal is depressed	ON
BRAKE SW 1	The brake pedal is not depressed	ON
DRAKE SW I	The brake pedal is depressed	OFF
DETE/CANCL SW	Selector lever in P position	OFF
DETE/CANCE SW	Selector lever in any position other than P	ON
CET DN/NI CW	Selector lever in any position other than P and N	OFF
SFT PN/N SW	Selector lever in P or N position	ON
C/L L OCK	Steering is locked	OFF
S/L -LOCK	Steering is unlocked	ON
C/L LINIL OCK	Steering is unlocked	OFF
S/L -UNLOCK	Steering is locked	ON
C/L DELAY E/D	Ignition switch is OFF or ACC position	OFF
S/L RELAY-F/B	Ignition switch is ON position	ON
LINIUK OENI DD	Driver door is unlocked	OFF
UNLK SEN-DR	Driver door is locked	ON
DUOU OW IDDM	Push-button ignition switch (push-switch) is not pressed	OFF
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	ON
ION DIVA E/D	Ignition switch is OFF or ACC position	OFF
IGN RLY1 -F/B	Ignition switch is ON position	ON
DETE OW IDDM	Selector lever in P position	OFF
DETE SW -IPDM	Selector lever in any position other than P	ON
OFT DAL IDDA	Selector lever in any position other than P and N	OFF
SFT PN -IPDM	Selector lever in P or N position	ON
OFT D. MET	Selector lever in any position other than P	OFF
SFT P -MET	Selector lever in P position	ON
OFT N. MET	Selector lever in any position other than N	OFF
SFT N -MET	Selector lever in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
011 1 001/1755	Steering is locked	OFF
S/L LOCK-IPDM	Steering is unlocked	ON
	Steering is unlocked	OFF
S/L UNLK-IPDM	Steering is locked	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
S/L RELAY-REQ	Ignition switch in OFF or ACC position	OFF
5/L RELAT-REQ	Ignition switch in ON position	ON
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door is locked	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLK
D OK EL A O	Ignition switch in ACC or ON position	RESET
D OK FLAG	Ignition switch in OFF position	SET
DOME ENO OFFI	The engine start is prohibited	RESET
PRMT ENG STRT	The engine start is permitted	SET
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	RESET
KEY SW -SLOT	Intelligent Key is not inserted into key slot	OFF
NEY SW -SLOT	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: The item is indicated, but not monitored.	_
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
D REGST FL1	ID of front LH tire transmitter is registered	DONE
D KLGOT I'LI	ID of front LH tire transmitter is not registered	YET
D DECST ED1	ID of front RH tire transmitter is registered	DONE
D REGST FR1	ID of front RH tire transmitter is not registered	YET
D DECCT DD4	ID of rear RH tire transmitter is registered	DONE
D REGST RR1	ID of rear RH tire transmitter is not registered	YET
D DECCT DI 4	ID of rear LH tire transmitter is registered	DONE
D REGST RL1	ID of rear LH tire transmitter is not registered	YET
AVA DAUNIO I AAAD	Tire pressure indicator OFF	OFF
WARNING LAMP	Tire pressure indicator ON	ON
	Tire pressure warning alarm is not sounding	OFF
BUZZER	Tire pressure warning alarm is sounding	ON

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS >

	inal No.	Description				Value
(Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OFF		Battery voltage
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4		Interior room lamp	•	After passing the ir er operation time	nterior room lamp battery sav-	0 V
LG)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage
5		Passenger door UN-	•	_	UNLOCK (Actuator is activated)	Battery voltage
(V)	Ground	LOCK	Output	Passenger door	Other than UNLOCK (Actuator is not activated)	0 V
7	Cround	Cton lamp	Outout	Stan James	ON	0 V
(Y)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Ground	All doors, fuel lid	Output	All doors, fuel lid	LOCK (Actuator is activated)	Battery voltage
V)	Ground	LOCK	Output		Other than LOCK (Actuator is not activated)	0 V
9	Cravind	Driver door, fuel lid	Outrout	Driver door, fuel	UNLOCK (Actuator is activated)	Battery voltage
G)	Ground	UNLOCK	Output	lid	Other than UNLOCK (Actuator is not activated)	0 V
0	Cround	Rear RH door and rear LH door UN-	Cutout	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
BR)	Ground	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
3 3)	Ground	Ground	_	Ignition switch ON		0 V
					OFF	0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	When the illumination brightening/dimming level is in the neutral position (V) 10 0
15					OFF	JSNIA0010GB Battery voltage
Y)	Ground	ACC indicator lamp	Output	Ignition switch	ACC or ON	0 V

< ECU DIAGNOSIS >

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal (front RH)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E
					Turn signal switch OFF	0 V
18 (O)	Ground	Turn signal (front LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E
19	Ground	Room lamp timer	Output	Interior room	OFF	Battery voltage
(V)	0.000	control	Carpar	lamp	ON	0 V
20 (V)	Ground	Turn signal (rear RH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E
23	Ground	Trunk lid opening.	Output	Trunk lid	Open (Trunk lid opener actuator is activated)	Battery voltage
(G)	C. Suria		- Caiput		Close (Trunk lid opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (G)	Ground	Turn signal (rear LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
30			_		ON	0 V
(R)	Ground	Trunk room lamp	Output	Trunk room lamp	OFF	Battery voltage

< ECU DIAGNOSIS >

	ninal No.	Description		0 1111		Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
34 (SB)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
35	0	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
35 (V)	Ground	1 (+)	Cuiput	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
20		Rear bumper anten-		When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
38 (B)	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	

	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
39	Crown	Rear bumper anten-	Outout	When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(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
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage 0 V
50 (R)	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)	0 V
				Ignition switch OFF (M/T mod- els)	When the clutch pedal is depressed	Battery voltage
					When the clutch pedal is not depressed	0 V
52 (SB)	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage
				ON (A/T models)	When selector lever is in P or N position and the brake is not depressed	0 V
					ON (Pressed)	0 V
61 (W)	Ground	Trunk request switch	Input	Trunk request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
64	Ground	Request switch buzz-	Output	Request switch	Sounding	0 V
(V)	Ground	er	Output	buzzer	Not sounding	Battery voltage

< ECU DIAGNOSIS >

	inal No. e color)	Description	T			Value	А
+	-	Signal name	Input/ Output		Condition	(Approx.)	, 1
					Pressed	0 V	В
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB	C
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	(V) 15 10 5 0	E
					ON (When rear RH door opens)	JPMIA0011GB 11.8 V	G
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	I
					ON (When rear LH door opens)	0 V	PWC
					When Intelligent Key is in the passenger compartment	(V) 15 10 5 0	L
72 (R)	Ground	Room antenna 2 (-) (center console)	Output	Ignition switch OFF		JMKIA0062GB	Ν
		,			When Intelligent Key is not in the passenger compartment	15 10 5 0	0
						1 s	Р

< ECU DIAGNOSIS >

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
73		Room antenna 2 (+)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(G)	Ground	(center console)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
74	Ground	Passenger door an-	Output	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(SB)	Ground	tenna (-)		quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 11 1 s JMKIA0063GB	
75	Ground	Passenger door an-	Outout	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(BR)	Giouna	tenna (+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	

< ECU DIAGNOSIS >

	ninal No.	Description	ı	0 1111		Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
				When the driver	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
76 (V)	Ground	Driver door antenna (-)	Output	door 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	
77		Driver door antenna	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
77 (LG)	Ground	(+)	Cuiput	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
70		Room antenna (-) (in-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
78 (Y)	Ground	strument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS >

	inal No. e color)	Description			0 100	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
79	Ground	Room antenna (+) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0063GB
80 (GR)	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.
81 (W)	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.
82 (R)	Ground	Ignition relay (relay box) control	Output	Ignition switch	OFF or ACC	0 V Battery voltage
83	Ground	Remote keyless entry receiver signal	Input/ Output	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)				When operating e	ither button on Intelligent Key	(V) 15 10 5 0 1 ms JMKIA0065GB

< ECU DIAGNOSIS >

	inal No.	Description				Value	
(Wir	e color)	Signal name	Input/ Output		Condition	value (Approx.)	1
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB)
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 JPMIA0037GB	E
						1.3 V	(
					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 JPMIA0040GB 1.3 V	ŀ

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	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
88	Ground	Combination switch	Input	Combination	Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0036GB
(V)	Glodina	INPUT 3	mput	switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
					Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB
89 (BR)	Ground	Push-button ignition switch (push switch)	Input	Push-button ignition switch (push	Pressed	0 V
90	Ground	CAN - L	Input/	switch)	Not pressed	Battery voltage
(P)	Ground	CAN - H	Output Input/			_
(L)	0.000		Output		OFF	0.1/
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	(V) 15 10 5 0 JPMIA0015GB
					ON	Battery voltage

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< ECU DIAGNOSIS >

Signal name		inal No.	Description				Value	٨
Ground ON indicator lamp Output Ignition switch ON Battery voltage		e color)	Signal name			Condition		A
Ground ACC relay control Quiput Ignition switch ACC or ON Battery voltage		Ground	ON indicator lamp	Output	Ignition switch			В
Ground Steering lock condition No. 1 Input Steering lock Input Steering lock status Input Steering lock status Battery voltage		Ground	ACC relay control	Output	Ignition switch			С
Columbia		Ground		Output		_	Battery voltage	
Steering lock condition No. 2 Input Steering lock UNLOCK status UNLOCK		Ground		Input	Steering lock			D
Selector lever P position Selector lever P position Selector lever P position O V		Ground		Input	Steering lock		Battery voltage	Е
Ground Passenger door request switch ON (Pressed) OV	99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V	_
Ground Passenger door request switch Passenger door request switch OFF (Not pressed)	(11)		tion switch					F
Ground Signature Ground Signature Ground Signature Ground Signature Ground Signature Ground G		Ground		Input		OFF (Not pressed)	15 10 5 0 10 ms JPMIA0016GB	G H
Ground Switch Driver door request switch Driver door request switch OFF (Not pressed) OFF (Not pressed) OFF (Not pressed) OFF or ACC ON Baltery voltage Remote keyless entry receiver power supply Output Ignition switch OFF Battery voltage						ON (Pressed)	0 V	
Ground lay control Output Ignition switch ON Battery voltage 103 (LG) Ground Ground Ignition switch ON Ground Ignition switch OFF Battery voltage		Ground		Input		OFF (Not pressed)	15 10 5 0 10 ms JPMIA0016GB	PW
103 (LG) Ground Remote keyless entry receiver power supply Output Ignition switch OFF Battery voltage		Ground		Output	Ignition switch			
055 400	103	Ground	receiver power sup-	Output	Ignition switch OF			M
106 (W) Ground Ground Ground Unit power supply Output Ignition switch Ignition switch ON OV	106	Ground	Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage	Ν

PWC-65

< ECU DIAGNOSIS >

	inal No. e color)	Description	Input/		Condition	Value (Approx.)
+	_	Signal name	Output			(Approx.)
					All switch OFF	(V) 15 10 0 2 ms JPMIA0041GB
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
107 (LG)	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
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No. (Wire color)		Description		0.00		Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
	Ground	Combination switch INPUT 4	Input	Combination	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	
108					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB	
(R)				switch	Lighting switch 1ST (Wiper intermittent dial 4) Any of the conditions below with all switches OFF Wiper intermittent dial 1 Wiper intermittent dial 5 Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0036GB	
						(V) 15 10 5 0 2 ms JPMIA0039GB	

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Terminal No. Description Value (Wire color) Condition Input/ (Approx.) Signal name Output All switch OFF 2 ms JPMIA0041GB 1.4 V Lighting switch PASS 2 ms JPMIA0037GB 1.3 V Combination Combination switch 109 switch Ground Input Lighting switch 2ND **INPUT 2** (Y) (Wiper intermittent dial 4) 2 ms JPMIA0036GB 1.3 V Front wiper switch INT 2 ms JPMIA0038GB 1.3 V Front wiper switch HI 2 ms JPMIA0040GB 1.3 V Pressed 0 V 110 Ground Hazard switch Input Hazard switch (G) Not pressed 10 ms JPMIA0012GB 1.1 V

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description				Value	
		Signal name	Input/ Output	Condition		(Approx.)	
					LOCK status	Battery voltage	
111 (Y) Grou	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 5 0 50 ms JMKIA0066GB	
					For 15 seconds after UN- LOCK	Battery voltage	
					15 seconds or later after UNLOCK	0 V	
113	113 Ground	Optical sensor signal	Input	Ignition switch ON	When bright outside of the vehicle	Close to 5 V	
(P) Glound	Cround				When dark outside of the vehicle	Close to 0 V	
114 (R) Ground	Clutch interlock	Input	Clutch interlock	OFF (Clutch pedal is not depressed)	0 V		
	Cround	switch	прис	switch	ON (Clutch pedal is depressed)	Battery voltage	
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage	
		Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	
118 (P)	Ground				ON (Brake pedal is depressed)	Battery voltage	
				ICC brake hold relay (With ICC)	OFF	0 V	
					ON	Battery voltage	
119 (SB)	Ground	Front door lock assembly driver side (unlock sensor)	Input	Driver door	LOCK status	(V) 15 10 5 0	
					UNLOCK status	11.8 V	
104				When Intelligent K	(ey is inserted into key slot	Battery voltage	
121 (R)	Ground	Key slot switch	Input	When Intelligent Key is not inserted into key slot		0 V	
122		d ACC feedback signal	Input	Ignition switch	OFF	0 V	
(V)	Ground				ACC or ON	Battery voltage	
123 (W) Ground		d IGN feedback signal	Input	1	OFF or ACC	0 V	
				Ignition switch	ON	Battery voltage	

Terminal No.		Description				Value	
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (When passenger door opens)	0 V	
129 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB	
					ON	0 V	
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	
				Ignition switch OF	T	0 V	
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps OFF) ON (When tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level. (V) 15 10 5 0 JPMIA0159GB	
					OFF	0 V	
134 (GR)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	ON OFF	0 V Battery voltage	
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON		o V	
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V	
(V)		power supply output			ACC or ON	5.0 V	

< ECU DIAGNOSIS >

Terminal No. (Wire color)		Description Signal name Input/ Output		Condition		Value (Approx.)	
139 (L)	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	
140	0	Selector lever P/N	1	Outrates	P or N position	12.0 V	
(GR)	Ground	position signal	Input	Selector lever	Except P and N positions	0 V	
		Security indicator signal	Output	Security indicator	ON	0 V	
141 (G) Gro	Ground				Blinking	(V) 15 10 5 0 1 s JPMIA0014GB	
					OFF	Battery voltage	
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	0 V (V) 15 10 5 0 2 ms JPMIA0031GB	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4) Front wiper switch HI (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	10.7 V 0 V (V) 15 10 2 ms JPMIA0032GB	

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No.		Description				Value	
(Wire	e color)	Signal name	Input/ Output	Condition		(Approx.)	
					All switch OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)	(V) 15	
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switches OFF Wiper intermittent dial 1 Wiper intermittent dial 5 Wiper intermittent dial 6	10 5 0 2 ms JPMIA0033GB	
					All switches OFF	0 V	
					Front wiper switch INT		
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermittent dial 4)	Front wiper switch LO Lighting switch AUTO	(V) 15 10 5 0	
						JPMIA0034GB	
					All switch OFF	0 V	
				Combination switch (Wiper intermittent dial 4)	Front fog lamp switch ON	(V)	
					Lighting switch 2ND	15	
146 (SB)	Ground	Combination switch OUTPUT 4	Output		Lighting switch PASS Turn signal switch LH	2 ms JPMIA0035GB	
149 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5 V	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB	
					ON (When driver door opens)	0 V	
151 (G)	Ground	d Rear window defog- ger relay	Output	Rear window de- fogger	Active	0 V	
					Not activated	Battery voltage	

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

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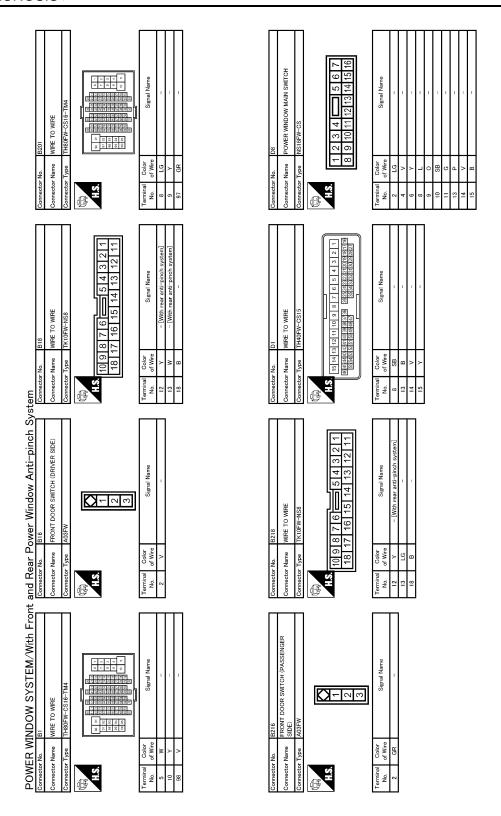
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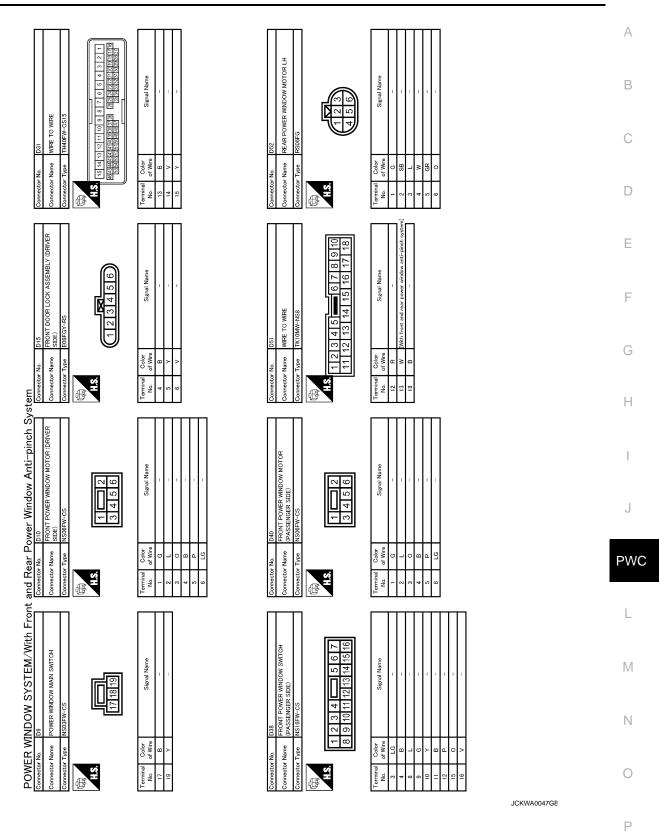
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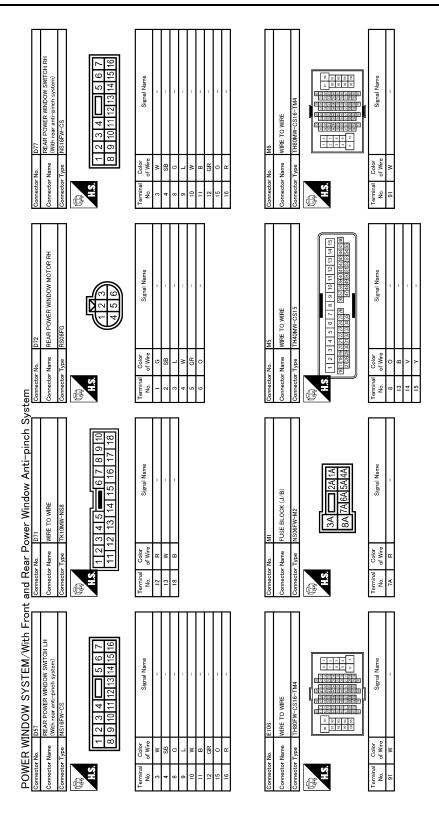
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BCM (BODY CONTROL MODULE)

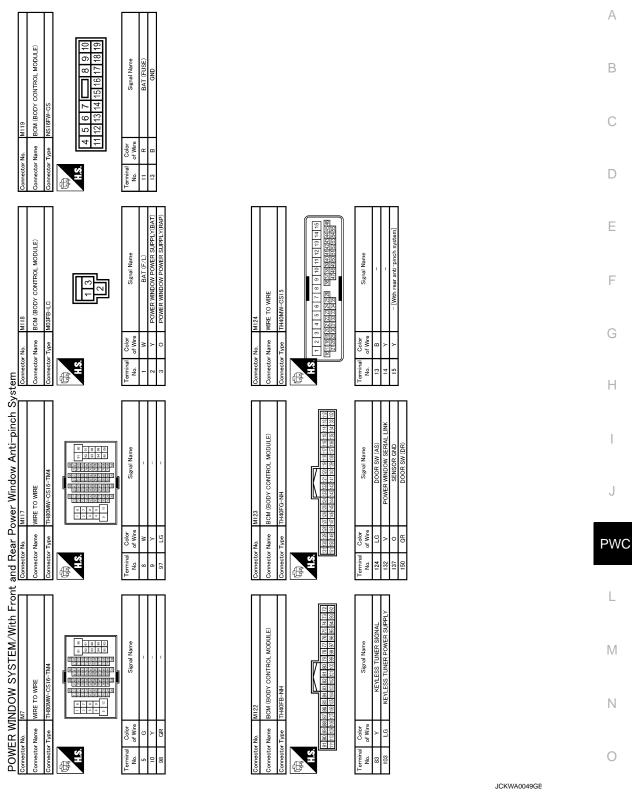


JCKWA0046GE





JCKWA0048GE



Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation	
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC	
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC	
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC	
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms	
B2560: STARTER CONT RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Starter control relay signal Starter relay status signal 	
B2563: HI VOLTAGE	Inhibit engine crankingInhibit steering lock	500 ms after the power supply voltage decreases to less than 18 V	
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)	
B2602: SHIFT POSITION	Inhibit steering lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more 	
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V) 	
B2604: PNP SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF 	
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON	
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)	
B2607: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation	
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)	
B2609: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status	
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal) 	
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection		
B2612: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When any of the following conditions is fulfilled • Steering lock unit status signal (CAN) is received normally • The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CA from IPDM E/R)	
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM become normal	
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal	
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control in side BCM becomes normal	
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization	
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)	

DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE B2563: HI VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTTENA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

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[FRONT & REAR WINDOW ANTI-PINCH]

Priority		DTC
4	B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSITION B2604: PNP SW B2605: PNP SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2608: STARTER RELAY B2609: S/L STATUS B2600: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2601: ACC RELAY B2611: ACC RELAY B2612: S/L STATUS B2614: ACC RELAY B2615: BLOWER RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B2619: BCM B2611: ACC RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC CUMBER CORNEL CORNE	
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1727: [BATT VOLT LOW] RL C1734: CONTROL UNIT 	
6	B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA	

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page			
No DTC is detected. further testing may be required.	_	_	_	_			
U1000: CAN COMM CIRCUIT	_	_	_	BCS-33			
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-34			
U0415: VEHICLE SPEED SIG	_	_	_	BCS-35			
B2013: ID DISCORD BCM-S/L	×	_		SEC-43			
B2014: CHAIN OF S/L-BCM	×	_	_	SEC-44			
B2190: NATS ANTTENA AMP	×	_	_	SEC-37			
B2191: DIFFERENCE OF KEY	×	_	_	SEC-40			
B2192: ID DISCORD BCM-ECM	×	_	_	<u>SEC-41</u>			
B2193: CHAIN OF BCM-ECM	×	_	_	<u>SEC-42</u>			
B2553: IGNITION RELAY	_	_	_	PCS-48			
B2555: STOP LAMP	_	_	_	SEC-47			
B2556: PUSH-BTN IGN SW	_	×	_	SEC-49			
B2557: VEHICLE SPEED	×	×	_	SEC-51			
B2560: STARTER CONT RELAY	×	×	_	<u>SEC-52</u>			
B2562: LOW VOLTAGE	_	_	_	BCS-36			
B2563: HI VOLTAGE	×	×	_	BCS-37			
B2601: SHIFT POSITION	×	×	_	SEC-53			
B2602: SHIFT POSITION	×	×	_	<u>SEC-56</u>			
B2603: SHIFT POSI STATUS	×	×	_	<u>SEC-58</u>			
B2604: PNP SW	×	×	_	SEC-61			
B2605: PNP SW	×	×	_	SEC-63			
B2606: S/L RELAY	×	×	_	SEC-65			
B2607: S/L RELAY	×	×	_	SEC-66			
B2608: STARTER RELAY	×	×	_	SEC-68			
B2609: S/L STATUS	×	×	_	SEC-70			
B260A: IGNITION RELAY	×	×	_	PCS-50			
B260B: STEERING LOCK VNIT	_	×	_	SEC-74			
B260C: STEERING LOCK VNIT	_	×		SEC-75			
B260D: STEERING LOCK VNIT	_	×		SEC-76			
B260F: ENG STATE SIG LOST	×	×		SEC-77			
B2611: ACC RELAY	_	_		PCS-52			
B2612: S/L STATUS	×	×	_	SEC-79			
B2614: ACC RELAY CIRC	_	×		PCS-54			
B2615: BLOWER RELAY CIRC	_	×	-	PCS-57			

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

< ECU DIAGNOSIS >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2616: IGN RELAY CIRC	_	×	_	PCS-60
B2617: STARTER RELAY CIRC	×	×	_	SEC-83
B2618: BCM	×	×	_	PCS-63
B2619: BCM	×	×	_	<u>SEC-85</u>
B261A: PUSH-BTN IGN SW	_	×	_	<u>SEC-86</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	SEC-88
B2621: INSIDE ANTENNA	_	_	_	DLK-58
B2622: INSIDE ANTENNA	_	_	_	DLK-60
B2623: INSIDE ANTENNA	_	_	_	<u>DLK-62</u>
B26E1: ENG STATE NO RES	×	×	_	<u>SEC-78</u>
C1704: LOW PRESSURE FL	_	_	×	<u>WT-14</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-14</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-14</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-14</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-16</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-16</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-16</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-16</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-19</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-19</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-19</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-19</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-22</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-22</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-22</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-22</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-24</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-24</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-24</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-24</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-27</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-27</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-27</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-27</u>
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-31</u>

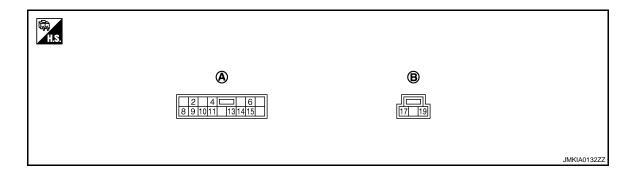
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[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



B. D9

PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

A. D8

Term	Terminal No.		Description			Voltage [V]	
+	-	Wire color	Signal name	Input/ Output	Condition	(Approx.)	
2	Ground	LG	Encoder ground	_	_	0	
4	Ground	Υ	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0	
6	Ground	Υ	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0	
8	11	L	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is UP at operated.	Battery voltage	
9	2	0	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
					IGN SW ON	Battery voltage	
10	Ground	SB	Rap signal	Input	Within 45 second after ignition switch is turned to OFF	Battery voltage	
			. 5	•	When driver side or passenger side door is opened during retained power operation	0	
11	8	G	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	Battery voltage	

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

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Ground

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Ground

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

Input

timer operates.

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

Battery power supply

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Battery voltage

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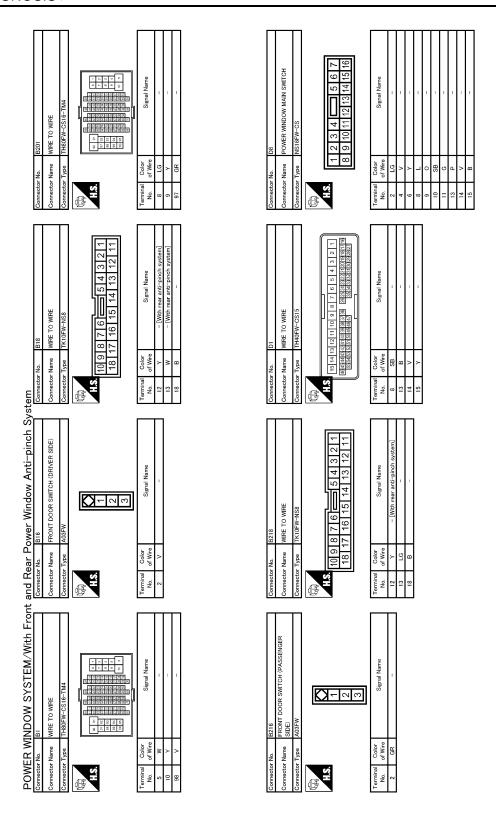
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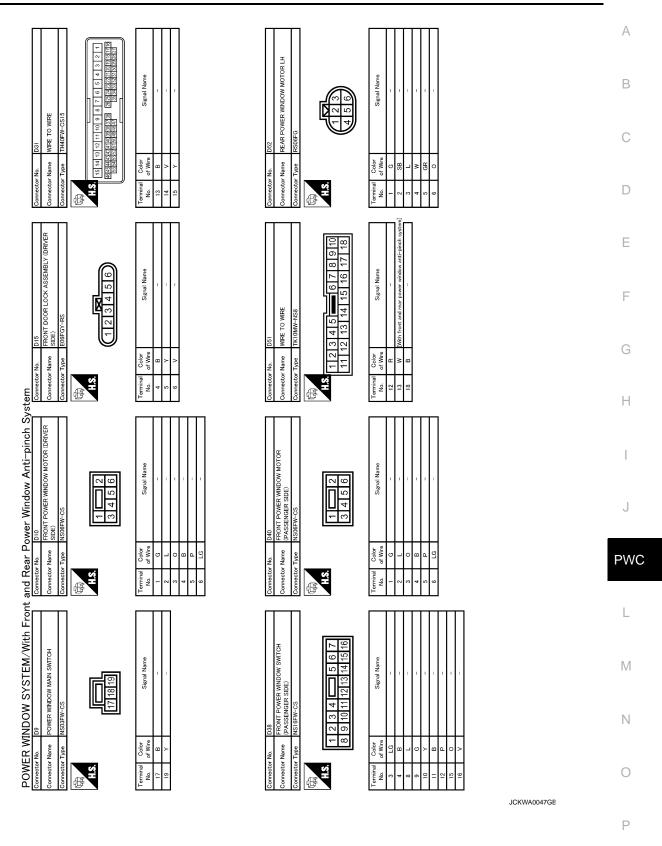
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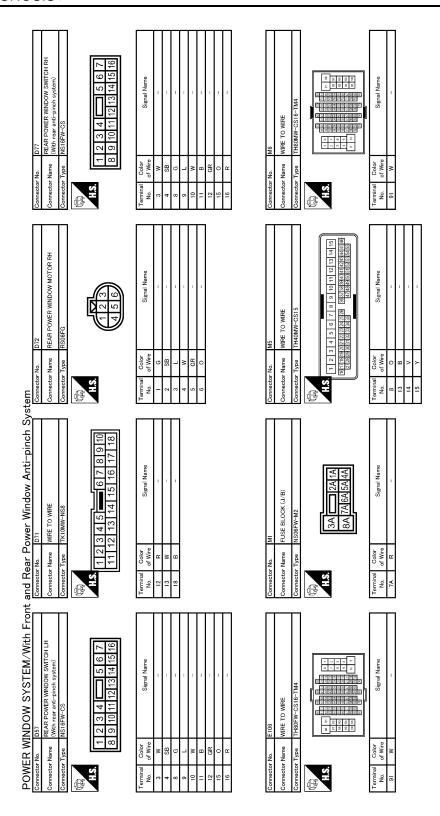
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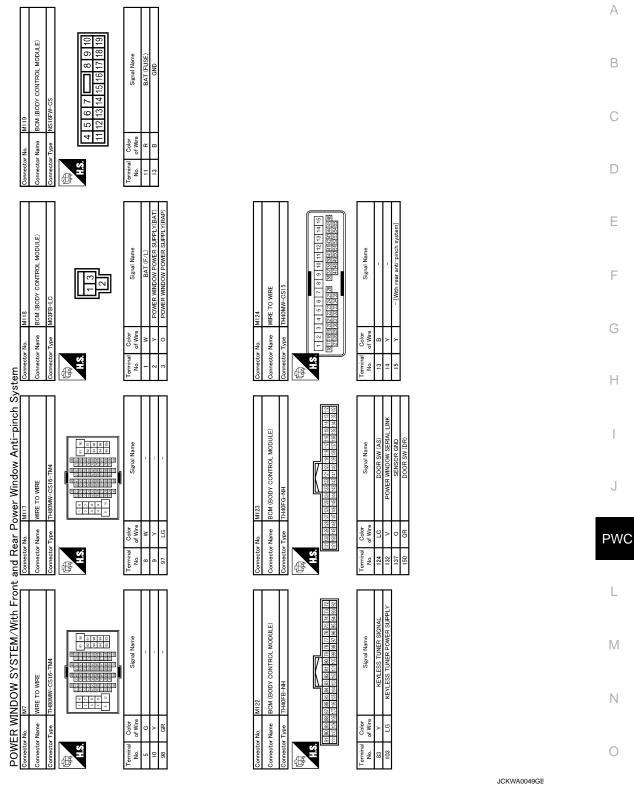


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Fail Safe

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	or malfunction When only one side of pulse signal is being detected for more than the specified value.			
Both pulse sensors mal- function	, , ,			
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 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.

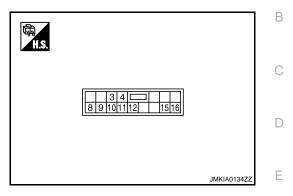
< ECU DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES FRONT POWER WINDOW SWITCH

Terminal No. Description Wire Voltage [V] Condition Input/ (Approx.) color + Signal name Output Groun 3 LG 0 Encoder ground d When ignition switch ON or Groun 4 В Encoder power supply Output power window timer oper-10 d When power window motor Power window motor Output 8 9 L Battery voltage UP signal UP at operated. When power window motor Power window motor 9 G 8 Output Battery voltage DOWN signal DOWN at operated. Groun 10 Υ Battery power supply Input Battery voltage d Groun 11 В Ground 0 d When power window motor 12 3 Ρ Encoder pulse signal 1 Input operates. JMKIA0070GB

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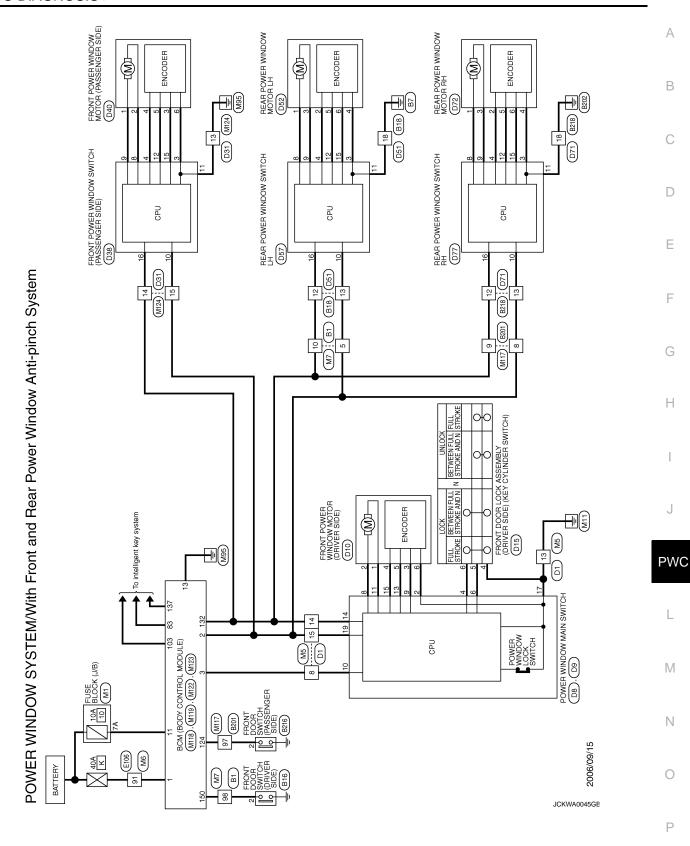
FRONT POWER WINDOW SWITCH [FRONT & REAR WINDOW ANTI-PINCH]

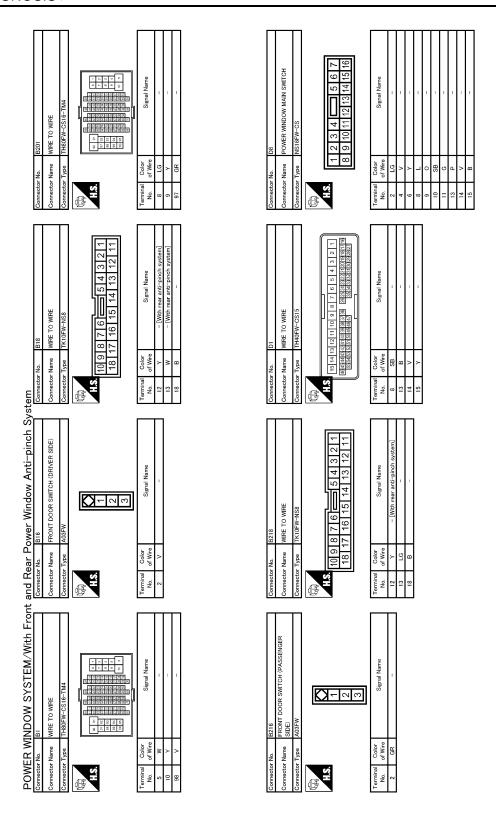
< ECU DIAGNOSIS >

Tern	ninal No.		Wire Description			Voltage [V]	
+	-	color	Signal name	Input/ Output	Condition	(Approx.)	
15	3	0	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	
16	Groun d	V	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms	

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

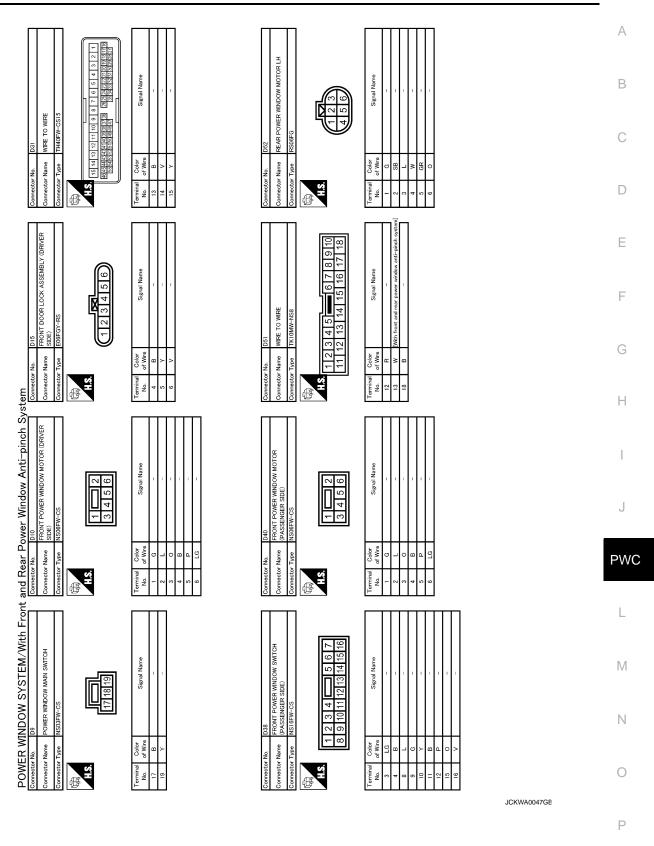
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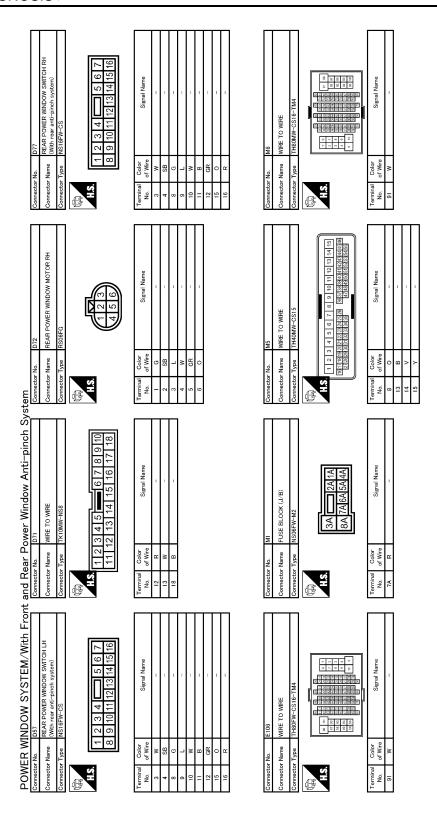




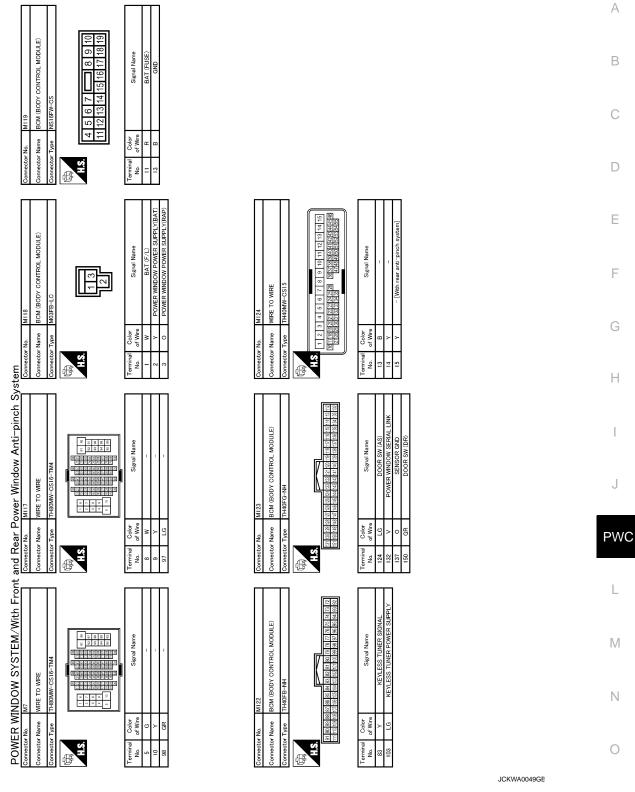
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[FRONT & REAR WINDOW ANTI-PINCH]





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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.

FRONT POWER WINDOW 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				
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.			
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.			
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.			
Malfunction of not yet up- dated closed position of glass	When glass open/ close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).			

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

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

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

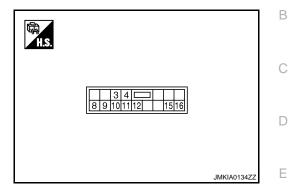
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[FRONT & REAR WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

REAR POWER WINDOW SWITCH

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

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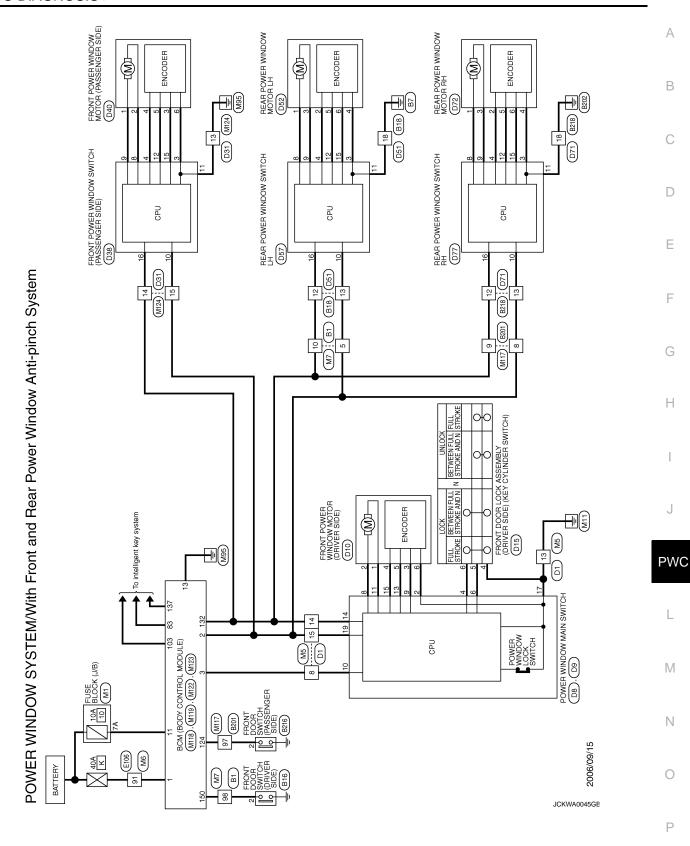
REAR POWER WINDOW SWITCH [FRONT & REAR WINDOW ANTI-PINCH]

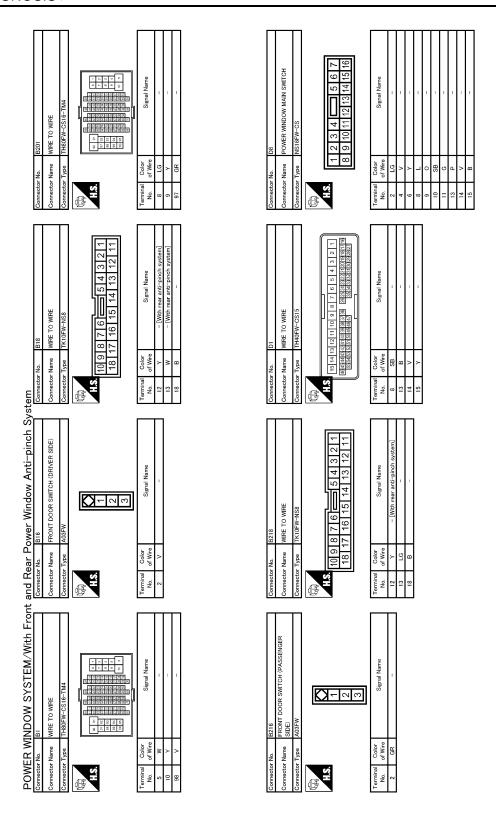
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Terminal No.		Wire	Description			Voltage [V]
+	-	color	Signal name	Input/ Output	Condition	(Approx.)
15	3	0	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
16	Groun d	R	Power window serial link	Input/ Output	IGN SW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

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

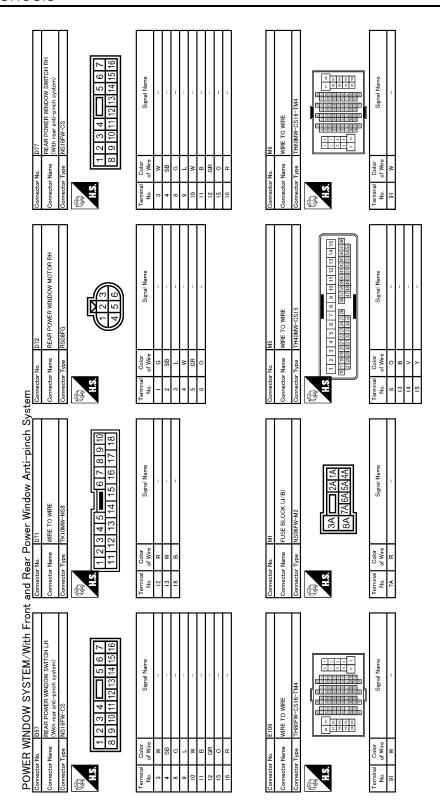
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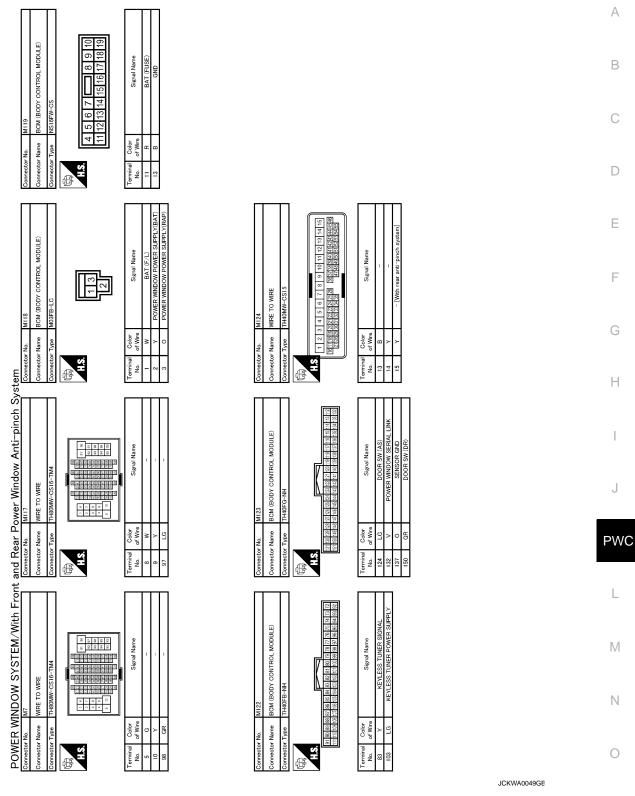


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Α 4645444342474140595937356 282524232221201919191716 555458595955150494847 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 REAR POWER WINDOW MOTOR LH Signal Name Signal Name В WIRE TO WIRE C nnector Name H.S. H.S. D 偃 Е Signal Name Signal Name F WIRE TO WIRE G Connector Name Œ and Rear Power Window Anti-pinch System Н FRONT POWER WINDOW MOTOR (DRIVER SIDE) CONT POWER WINDOW MOTOR ASSENGER SIDE) Signal Name Signal Name J Connector Name PWC Œ POWER WINDOW SYSTEM/With Front L RONT POWER WINDOW SWITCH POWER WINDOW MAIN SWITCH Signal Name Signal Name M Ν Connector Name 0 JCKWA0047GE Ρ



JCKWA0048GE



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				
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 Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY **SWITCH** В **Diagnosis Procedure** INFOID:0000000000961627 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-38, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT Check power window switch power supply and ground circuit. Refer to PWC-15, "POWER WINDOW MAIN SWITCH: Component Function Check". F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CHECK POWER WINDOW MAIN SWITCH SERIAL LINK CIRCUIT Check power window serial link circuit. Н Refer to PWC-43, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. 4.CHECK POWER WINDOW MAIN SWITCH Check power window main switch. Refer to PWC-15, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> Inspection end. **PWC** >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO M Ν

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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:0000000000961628

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check front power window motor.

Refer to PWC-21, "DRIVER SIDE: Component Function Check".

Is the measurement value within the specification?

YES >> Inspection end.

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

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-Α **ATE** Diagnosis Procedure INFOID:0000000000961629 В 1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) Check front power window switch (passenger side). Refer to PWC-16, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 2. D NO >> Repair or replace the malfunctioning parts. 2.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT Е Check front power window switch (passenger side) serial link circuit. Refer to PWC-44, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? F YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT Check front power window motor (passenger side) circuit. Refer to PWC-22, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? Н YES >> Inspection end. >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO **PWC**

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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:0000000000961630

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-18, "REAR POWER WINDOW SWITCH: Component Function Check".

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT

Check rear power window switch LH serial link circuit.

Refer to PWC-45, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-24, "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 Α Diagnosis Procedure INFOID:0000000000961631 $oldsymbol{1}$ -CHECK REAR POWER WINDOW SWITCH RH В Check rear power window switch RH. Refer to PWC-18, "REAR POWER WINDOW SWITCH: Component Function Check". Is the measurement value within the specification? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT D Check rear power window switch RH serial link circuit. Refer to PWC-47, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. F 3.CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-26, "REAR RH: Component Function Check". Is the inspection result normal? YES >> Inspection end. Н >> Check intermittent incident. Refer to GI-39. "Intermittent Incident". NO J **PWC** M

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ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [FRONT & REAR WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000000961632

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-29, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER Α SIDE) Diagnosis Procedure INFOID:0000000000961633 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement". Is the inspection result normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CHECK DOOR WINDOW SLIDING PART Е A foreign material adheres to window glass or glass run rubber. Glass run rubber wear or deformation. · Sash is tilted too much or not enough. F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3. CHECK ENCODER CIRCUIT Check encoder circuit. Н Refer to PWC-31, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> Inspection end. NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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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:0000000000961634

1.PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-7</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-33, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR RH SIDE) [FRONT & REAR WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (REAR RH SIDE) Α Diagnosis Procedure INFOID:0000000000961635 1. PERFORM INITIALIZATION PROCEDURE В Perform initialization procedure. Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement". Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. D 2.CHECK DOOR WINDOW SLIDING PART · A foreign material adheres to window glass or glass run rubber. Е Glass run rubber wear or deformation. Sash is tilted too much or not enough. Is the inspection result normal? F YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CHECK ENCODER CIRCUIT Check encoder circuit. Refer to PWC-35, "REAR RH: Component Function Check". Is the inspection result normal? Н YES >> Inspection end. NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE 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:0000000000961636

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-29, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE 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:0000000000961637

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1. PERFORM INITIALIZAITON PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-31, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000000961638

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-33, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-35, "REAR RH: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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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:0000000000961640

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-38, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000000961641

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-7, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

 $2. {\sf CHECK} \ {\sf FRONT} \ {\sf DOOR} \ {\sf LOCK} \ {\sf ASSEMBLY} \ ({\sf DRIVER} \ {\sf SIDE}) \ ({\sf KEY} \ {\sf CYLINDER} \ {\sf SWITCH})$

Check front door lock assembly (driver side) (key cylinder switch).

Refer to PWC-40, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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PWC-121

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000000961642

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to DLK-107, "Component Function Check".

Is the inspection result normal?

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

NO >> Replace BCM. Refer to BCS-79, "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

INFOID:0000000000961643

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to <u>PWC-126, "Removal and Installation"</u>. After that, Refer to <u>PWC-16, "POWER WINDOW MAIN SWITCH: Special Repair Requirement"</u>.

Is the inspection result normal?

YES >> Inspection end.

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

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PRECAUTIONS

[FRONT & REAR WINDOW ANTI-PINCH]

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 SRS and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRE-INSPECTION FOR DIAGNOSTIC

[FRONT & REAR WINDOW ANTI-PINCH] < ON-VEHICLE MAINTENANCE > **ON-VEHICLE MAINTENANCE** Α PRE-INSPECTION FOR DIAGNOSTIC **Basic Inspection** INFOID:0000000000961645 В **BASIC INSPECTION** 1.INSPECTION START C Check the service history. 2. Check the following parts. D • Fuse/circuit breaker blown. • Poor connection, open or short circuit of harness connector. · Battery voltage. Is the inspection result normal? Е YES >> Inspection end. NO >> Repair or replace the malfunctioning parts. F Н

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POWER WINDOW MAIN SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

< ON-VEHICLE REPAIR >

ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

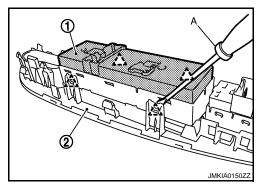
- 1. Remove the power window main switch finisher (2). Refer to INT-10, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

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



INFOID:0000000000961646

INSTALLATION

Install in the reverse order of removal.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[FRONT WINDOW ANTI-PINCH]

BASIC INSPECTION	
DIAGNOSIS AND REPAIR WORKFLOW	А
Work Flow	В
DETAILED FLOW	
1. OBTAIN INFORMATION ABOUT SYMPTOM	С
Interview the customer to obtain the malfunction information (conditions and environment when the malfunction occurred) as much as possible when the customer brings the vehicle in.	D
>> GO TO 2.	
2. REPRODUCE THE MALFUNCTION INFORMATION	Е
Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur.	F
>> GO TO 3.	
3.PERFORM "BASIC INSPECTION"	G
Perform the basic inspection. Refer to <a diagnosis"<="" href="https://pww.ncbi.nlm.new.new.new.new.new.new.new.new.new.new</td><td></td></tr><tr><td>>> GO TO 4.</td><td>Н</td></tr><tr><td>4. IDENTIFY THE MALFUNCTIONING SYSTEM WITH " symptom="" td=""><td></td>	
Use "Symptom diagnosis" from the symptom inspection result in step 2. Then identify where to start performing the diagnosis based on possible causes and symptoms.	I
>> GO TO 5.	J
5. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"	
Perform the diagnosis with "Component diagnosis" of the applicable system.	PWC
00.70.0	
>> GO TO 6. 6. REPAIR OR REPLACE THE MALFUNCTIONING PARTS	L
Repair or replace the specified malfunctioning parts.	
Repair of replace the openined maintributering parts.	M
>> GO TO 7.	
7.FINAL CHECK	N
Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.	
Is the malfunctioning part repaired or replaced? YES >> Trouble diagnosis is completed.	0
YES >> Trouble diagnosis is completed. NO >> GO TO 3.	
	Р

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000000961648

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:00000000000961649

INITIALIZATION PROCEDURE

- Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or
- Turn ignition switch ON.
- 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 3 seconds or more.
- 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 or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-212, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000000961650

[FRONT WINDOW ANTI-PINCH]

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:0000000000961651

INITIALIZATION PROCEDURE

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

INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT WINDOW ANTI-PINCH]

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-212, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

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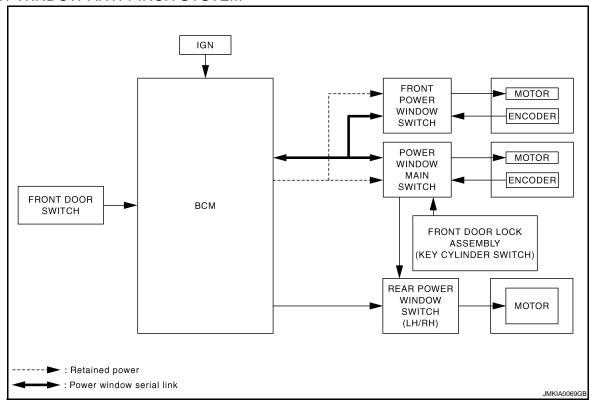
PWC-129

FUNCTION DIAGNOSIS

POWER WINDOW SYSTEM

System Diagram

FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000000961653

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	
ВСМ	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

FRONT POWER WINDOW SWITCH INPUT/OUTPUT SIGNAL CHART

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 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.

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< FUNCTION DIAGNOSIS >

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

KEYLESS POWER WINDOW DOWN OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

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

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

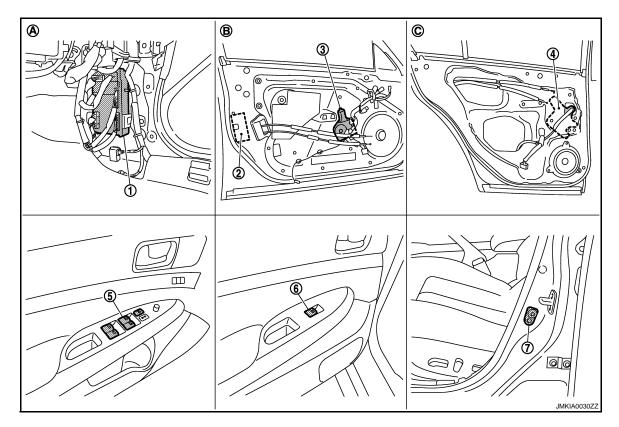
- When the unlock button is kept pressed more than 15 seconds.
- When the ignition switch is turned ON while the power window opening is operated.
- When the unlock button is released.

While retained power operation activate, keyless power window down function cannot be operated. Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-51, "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)". NOTE:

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

Component Parts Location

INFOID:0000000000961654



- 1. BCM M118.M119.M122.M123
- Rear power window motor LH D52
- Front door switch (driver side) B16 7.
- Front door lock actuator (driver side) (key cylinder switch) D15
- Power window main switch D8,D9
- Front power window motor (driver side) D10
- Rear power window switch LH D54

- View with dash side lower (passenger side)
- View with front door finisher removed C. View with rear door finisher removed

Component Description

INFOID:0000000000961655

FRONT WINDOW ANTI-PINCH SYSTEM

POWER WINDOW SYSTEM

< FUNCTION DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Component	Function	
ВСМ	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 front passenger side 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: CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000000961656

APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-74, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

System	Sub quatem adjection 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	HEAD LAMP	×	×	×
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	×		
IVIS - NATS	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	TPMS (AIR PRESSURE MONITOR)	×	×	×

^{*:} This item is displayed, but is not used.

RETAIND PWR

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

NFOID:0000000000961657

Data monitor

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Monitor Item	Description
DOOR SW-DR	Indicates [ON/OFF] condition of driver side door switch.
DOOR SW-AS	Indicates [ON/OFF] condition of passenger side door switch.

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COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

BCM supplies power.

• It operates each power window motor via corresponding power window switch and makes window move up/down when power window main switch is operated.

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000000961659

INFOID:0000000000961658

Power Window Main Switch

${f 1}$. CHECK POWER WINDOW MAIN SWITCH FUNCTION

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

Is the inspection result normal?

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

NO >> Refer to PWC-136, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000000961660

Power Window Main Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

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

Terminal			
((+)		Voltage (V)
Power window main switch connector	Terminal	(–)	(Approx.)
D8	10	Ground	Battery voltage
D9	19	Giodila	battery voltage

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M118	3	D8	10	Existed
IVITIO	2	D9	19	LAISIEU

4. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
M118	3	Ground	Not existed
	2	Not e:	Not existed

Is the inspection result normal?

YES >> GO TO 4.

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

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

Power window main switch connector	Terminal	Ground	Continuity
D9	17	Giodila	Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK BCM OUTPUT SIGNAL

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

Terminals			
(+)		Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	(+)
M118	3	Ground	Pottory voltage
IVITO	2	Ground	Battery voltage

Is the measurement value within the specification?

- YES >> Check power window main switch output signal (rear power window switch LH) GO TO 5.
- YES >> Check power window main switch output signal (rear power window switch RH) GO TO 6.
- NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

5.check power window main switch output signal (rear power window switch LH)

- 1. Turn ignition switch ON.
- Check voltage between power window main switch and ground.

	Terminal				
(+)			Window	Voltage (V)	
Power window main switch connector	Terminal	(–)	condition	(Approx.)	
	4		UP	Battery voltage	
D8	I	Ground	DOWN	0	
Do	3	Giound	UP	0	
	3		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 7.

NO >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

$\mathsf{6}.$ CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

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

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< COMPONENT DIAGNOSIS >

	Terminal				
(+)	(+)		Window	Voltage (V)	
Power window main switch connector	Terminal	(–)	condition	(Approx.)	
	7	7	UP	Battery voltage	
D8	,	Ground	DOWN	0	
Do	5		UP	0	
	3		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 8.

NO >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

7.check harness continuity (rear power window switch LH)

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

Power window main switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
	1	D54	2	Existed
50	3	DJ4	3	LAISIEU

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

Power window main switch connector	Terminal		Continuity
D8	1	Ground	Not existed
20	3		Not existed

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

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

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

Power window main switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
	5	D74	3	Existed
50	7	574	2	LAISIEU

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

Power window main switch connector	Terminal		Continuity
D8	5	Ground	Not existed
D0	7		NOT EXISTED

Is the inspection result normal?

YES >> GO TO 9.

NO >> Repair or replace harness.

9. CHECK POWER WINDOW MAIN SWITCH

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Check power window main switch.

Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

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

NO >> Replace power window main switch. Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

After that, PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

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1. CHECK POWER WINDOW MAIN SWITCH

1. Check power window main switch.

Power window main switch	Terminal		Pov	ver window main switch condition	Continuity
	10	1	LH	UP	
	10	7	RH	J OF	
D8	1	3	LH	NEUTRAL	Existed
50	5	7	RH	NEOTIVAL	LXISIEU
	10	3	LH	DOWN	
	10	5	RH	DOWN	

2. Check continuity between power window main switch (power window lock switch). (Lock operation).

Power window main switch	Terminal		Power window main switch condition		Continuity	
	3		LH	UP		
	5	=	RH	UP UP		
	1	1	LH			
D8	3	17	LII	NEUTRAL	Not existed	
Do	5	17	RH	NEOTIVAL	Not existed	
	7		IXII			
	1	1	LH	DOWN		
	7		RH	DOWN		

3. Check continuity between power window main switch (power window lock switch). (Unlock operation).

Power window main switch	Teri	Terminal		Power window main switch condition	
	3		LH	UP	
	5		RH	UP	
	1		LH		
D8	3	17	LIT	- NEUTRAL	Existed
Do	5		RH		
	7				
	1		LH	DOMA	
	7		RH	DOWN	

Is the inspection result normal?

YES >> Power window main switch is OK.

NO >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000000961662

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-151, "DRIVER SIDE : Component Function Check"

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000000961663

- BCM supplies power.
- Front power window motor (passenger side) will be operated if front power window switch (passenger side) is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000000961664

Front Power Window Switch

1. CHECK POWER WINDOW MOTOR FUNCTION

Does front power window motor (passenger side) operate with front power window switch (passenger side) operation?

Is the inspection result normal?

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

NO >> Refer to PWC-140, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000000961665

Front Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between front power window switch (passenger side) connector and ground.

	Terminal		
(+)			Voltage (V)
Front power window switch (passenger side) connector		(–)	(Approx.)
D38	10	Ground	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector and front power window switch (passenger side) connector.
- 3. Check continuity between BCM connector and front power window switch (passenger side) connector.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M118	2	D38	10	Existed

^{4.} Check continuity between BCM connector and ground.

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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BCM connector	Terminal		Continuity
M118	2	Ground	Not existed
s the inspection result normal? YES >> GO TO 4. NO >> Repair or replace harr CHECK GROUND CIRCUIT Turn ignition switch OFF.	ess.		
 Disconnect front power windown Check continuity between front 			nector and ground.
Front power window switch (passenger side)	Terminal Ground		Continuity
D38	11		Existed
Requirement". NO >> Repair or replace harr 4.CHECK BCM OUTPUT SIGNA 1. Connect BCM connector. 2. Check voltage between BCM	-		
	Terminals		
(+)		(-)	Voltage (V) (Approx.)
BCM connector	Terminal	Cround	Detterminations
M118 Is the measurement value within the measurement within the measurement value within the measurement within the measurement value within the measurement with the measurement within the measurement with the measurement with the measurement with the measurement within the measurement with the measurement with the measurement with the measurement within the measurement with the me	2	Ground	Battery voltage
YES >> Replace front power wation". After that, Reference Requirement". NO >> Replace BCM. Refer to FRONT POWER WINDOW	er to <u>PWC-141, "FRO</u> o <u>BCS-79, "Removal ar</u>	NT POWER WINDO	C-238, "Removal and Installa- W SWITCH: Special Repair
1. PERFORM INITIALIZATION PR	ROCEDURE		
Perform initialization procedure. Refer to <u>PWC-128</u> , "ADDITIONAL ment".	SERVICE WHEN REP	LACING CONTROL L	JNIT : Special Repair Require-
Is the inspection result normal? YES >> GO TO 2. NO >> Check intermittent inc.		ntermittent Incident".	
2.CHECK ANTI-PINCH OPERAT	ION		
Check anti-pinch operation. Refer to PWC-128, "ADDITIONAL ment". Is the inspection result normal?	SERVICE WHEN REP	LACING CONTROL L	JNIT : Special Repair Require-
YES >> Inspection end. NO >> Refer to PWC-153, "PREAR POWER WINDOW		mponent Function Ch	<u>eck"</u> .

REAR POWER WINDOW SWITCH: Description

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

REAR POWER WINDOW SWITCH: Component Function Check

INFOID:0000000000961668

Rear Power Window Switch

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

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

Is the inspection result normal?

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

NO >> Refer to PWC-142, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000000961669

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

	Term	inal		Voltage (V) (Approx.)	
	(+)				Condition
	Rear power window switch connector		(–)		
LH	D54	1	Ground	Ignition switch ON	Battery voltage
RH	D74	'	Ground	ignition switch ON	

Is the measurement value within the specification?

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

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

NO >> GO TO 4.

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

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

Power window main switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D8	1	D54	2	Existed
20	3	D34	3	LAISIEU

Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal		Continuity
D8	1	Ground	Not existed
26	3		NOT EXISTED

Is the inspection result normal?

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

NO >> Repair or replace harness.

3.check harness continuity (rear power window switch RH)

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

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Power window main switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D8	5	D74	3	Existed
Во	7	5/4	2	LAISIEU

Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal		Continuity
D8	5	Ground	Not existed
	7		NOT EXISTED

Is the inspection result normal?

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

NO >> Repair or replace harness.

4. CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Rear power windo	w switch connector	Terminal	Continuity
M118	2	LH	D54	1	Existed
WITTO	3	RH	D74		LAISIEU

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M118	3	Ground	Not existed

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-143, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

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

NO >> Replace rear power window switch. Refer to PWC-238, "Removal and Installation".

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Rear power window switch	Terminal		Power window switch condition	Continuity
	1	5	UP	
D54 (LH) D74 (RH)	3	4	- OP	Existed
	3	4	NEUTRAL	
	5	2	NEOTRAL	Existed
	1	4	DOWN	
	5	2	DOWN	

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-238, "Removal and Installation".

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[FRONT WINDOW ANTI-PINCH]

< COMPONENT DIAGNOSIS >

DRIVER SIDE

DRIVER SIDE: Description

POWER WINDOW MOTOR

INFOID:0000000000961671

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

DRIVER SIDE: Component Function Check

INFOID:0000000000961672

1. CHECK POWER WINDOW MOTOR CIRCUIT

Does power window motor operate with operating power window main switch?

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-144, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000000961673

Power Window Motor Circuit Check

1. CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

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

	Terminal				
(+)			Power window main switch	Voltage (V)	
Power window motor (driver side) connector Terminal		(–)	Condition	(Approx.)	
	2	Ground	UP	Battery voltage	
D10			DOWN	0	
D10	1	Giouna	UP	0	
			DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 2.

NO

>> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

2.CHECK HARNESS CONTINUITY

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	8	D10	2	Existed
Do	11	B10	1	LAISIEU

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

Power window main switch connector	Terminal		Continuity
D8	8	Ground	Not existed
	11		INUL EXISTED

Is the inspection result normal?

YES >> GO TO 3.

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

NO >> Repair or replace harness.

3. CHECK POWER WINDOW MOTOR

Check front power window motor (driver side).

Refer to PWC-145, "DRIVER SIDE: Component Inspection".

Is the inspection result normal?

NO

NO

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

>> Replace power window motor (driver side). Refer to <u>GW-16, "Removal and Installation"</u>. After that, Refer to <u>PWC-145, "DRIVER SIDE: Special Repair Requirement"</u>.

DRIVER SIDE: Component Inspection

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COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR

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

Front power window motor (driver	Terminal		Motor condition	
side) connector	(+)	(-)	Wotor Condition	
D10	1	2	DOWN	
	2	1	UP	

Is the inspection result normal?

YES >> Power window motor is OK.

>> Replace power window motor. Refer to <u>GW-16</u>, "<u>Removal and Installation</u>". After that, Refer to <u>PWC-145</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

DRIVER SIDE: Special Repair Requirement

INFOID:0000000000961675

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-128</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-128</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-151, "DRIVER SIDE: Component Function Check".

PASSENGER SIDE

PASSENGER SIDE : Description

Door glass moves UP/DOWN by receiving the signal from power window main switch or front power window switch (passenger side).

PASSENGER SIDE : Component Function Check

INFOID:0000000000961677

1. CHECK POWER WINDOW MOTOR CIRCIUT

Does power window motor operate with operating power window main switch or front power window switch (passenger side)?

PWC-145

Is the inspection result normal?

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

YES >> Power window motor is OK.

NO >> Refer to PWC-146, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000000961678

Front Power Window Motor (Passenger Side) Circuit Check

 ${f 1}$.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) OUTPUT SIGNAL

- 1. Disconnect front power window motor (passenger side) connector.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor (passenger side) connector and ground.

Teri	minal			
(+) Front power window motor (passenger side) connector Terminal			Front power window motor (passenger	Voltage (V)
		(–)	side) condition	(Approx.)
	2	Ground	UP	Battery voltage
D40			DOWN	0
D40	1	Giouna	UP	0
	I		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Replace

>> Replace front power window switch (passenger side). Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-141, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

2. CHECK HARNESS CONTINUITY

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

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	8	D40	2	Existed
230	9	540	1	LAISIEU

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

Front power window switch (passenger side) connector	Terminal		Continuity
D38	8	Ground	Not existed
D36	9		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

Refer to PWC-147, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

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

NO >> Replace front power window motor (passenger side). Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-147, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Component Inspection

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COMPONENT INSPECTION

COMPONENT INSPECTION

${f 1}$.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Does motor operate by connecting the battery voltage directly to front power window motor (passenger side) connector?

Front power window motor (passen-	Terminal		Motor condition	
ger side) connector	(+)	(-)	Wiotor condition	
D40	1	2	DOWN	
D40	2	1	UP	

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor (passenger side). Refer to GW-16, "Removal and Installation". After that, Refer to PWC-147, "PASSENGER SIDE: Special Repair Requirement".

PASSENGER SIDE: Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-153, "PASSENGER SIDE: Component Function Check".

REAR LH

REAR LH: Description

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

REAR LH: Component Function Check

CHECK POWER WINDOW MOTOR CURCUIT

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

Is the inspection result normal?

YES >> Power window motor is OK.

>> Refer to PWC-147, "REAR LH: Diagnosis Procedure" NO

REAR LH: Diagnosis Procedure

Power Window Motor Circuit Check

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1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

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

Terminal					
(+)			Window	Voltage (V)	
Rear power window mo- tor LH connector	Terminal	minal (-)	condition	(Approx.)	
	D52	1		UP	Battery voltage
DE2			Ground	DOWN	0
D52		Giouria	UP	0	
	2		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 2.

NO >> Check rear power window switch. Refer to PWC-142, "REAR POWER WINDOW SWITCH: Component Function Check".

2. CHECK HARNESS CONTINUITY

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

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D54	5	D52	1	Existed
4	D52	2	Existed	

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

Rear power window switch LH con- nector	Terminal		Continuity
D54	5	Ground	Not existed
D34	4		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-148, "REAR LH: Component Inspection".

Is the inspection result normal?

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

NO >> Replace rear power window motor LH. Refer to GW-22, "Removal and Installation".

REAR LH: Component Inspection

COMPONENT INSPECTION

1. CHECK POWER WINDOW MOTOR

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

POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Rear power window motor LH con-	Terminal		Motor condition	
nector	(+)	(-)	Wotor condition	
D52	2	1	DOWN	
D52	1	2	UP	

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Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace power window motor. Refer to <u>GW-22</u>, "<u>Removal and Installation</u>".

REAR RH

REAR RH: Description

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

REAR RH: Component Function Check

1. CHECK POWER WINDOW MOTOR CIRCUIT

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

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-149, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

1. Disconnect rear power window motor RH connector.

2. Turn ignition switch ON.

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

Terminal				
(+)			Rear power window	Voltage (V)
Rear power window mo- tor RH connector	Terminal	(–)	switch RH condition	(Approx.)
	1		UP	Battery voltage
D72	! 	Ground	DOWN	0
DIZ	2	Giouria	UP	0
	2		DOWN	Battery voltage

Is the measurement value within the specification?

YES >> GO TO 2.

NO

>> Check rear power window switch RH. Refer to PWC-142, "REAR POWER WINDOW SWITCH: Component Function Check".

2. CHECK HARNESS CONTINUITY

Turn ignition switch OFF.

2. Disconnect rear power window switch RH connector and rear power window motor RH connector.

Check continuity between rear power window switch RH connector and rear power window motor RH connector.

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POWER WINDOW MOTOR

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D74	5	D72	1	Existed
D/4	4	D72	2	LXISIEU

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

Rear power window switch RH connector	Terminal		Continuity
D74	5	Ground	Not existed
D74	4		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-150, "REAR RH: Component Inspection".

Is the inspection result normal?

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

NO >> Replace rear power window motor RH. Refer to <u>GW-22</u>, "Removal and Installation".

REAR RH: Component Inspection

INFOID:0000000000961688

COMPONENT INSPECTION

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

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

Rear power window motor RH con-	Terminal		Motor condition	
nector	(+) (-)		Wotor condition	
D72	2	1	DOWN	
D72	1	2	UP	

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-22, "Removal and Installation"</u>.

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DRIVER SIDE

INFOID:0000000000961689

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DRIVER SIDE: Description

Detects condition of the front power window motor (driver side) operation and transmits to power window main switch as pulse signal.

DRIVER SIDE: Component Function Check

INFOID:0000000000961690

1. CHECK ENCODER OPERATION

Does front driver side door glass perform AUTO open/close operation normally when operating power window main switch?

Is the inspection result normal?

YES >> Encoder operation is OK.

>> Refer to PWC-151, "DRIVER SIDE : Diagnosis Procedure" NO

DRIVER SIDE: Diagnosis Procedure

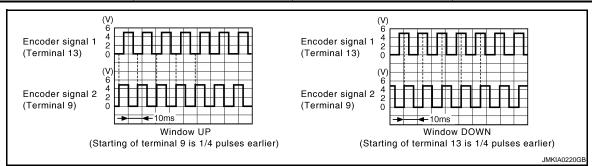
INFOID:00000000000961691

Encoder Circuit Check

1. CHECK ENCODER OPERATION

- Connect front power window motor (driver side) connector.
- 2. Turn ignition switch ON.
- Check signal between power window main switch connector and ground with oscilloscope.

Terminals				
(+)		Signal (Reference value)	
Power window main switch connector	Terminal	(–)	(Reference value)	
	9	Ground	Refer to following signal	
Do	13	Giodila	Refer to following signal	



Is the inspection result normal?

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

NO >> GO TO 2.

2.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) POWER SUPPLY

- 1. Turn ignition switch ON.
- Check voltage between front power window motor (driver side) connector and ground.

Terminal				
(-	+)		Voltage (V) (Approx.)	
Front power window motor (driver side) connector	Terminal	(–)	(Approx.)	
D10	4	Ground	10	

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< COMPONENT DIAGNOSIS >

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK HARNESS CONTINUITY 1

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	15	D10	4	Existed

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

Power window main switch connector	Terminal	Ground	Continuity
D8	15		Not existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor (driver side) connector.
- 3. Check continuity between front power window motor (driver side) connector and ground.

Front power window motor (driver side) connector	Terminal	Ground	Continuity
D10	6		Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY 2

- 1. Disconnect power window main switch connector.
- Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	2	D10	6	Existed

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- Disconnect power window main switch connector.
- 2. Check continuity between power window main switch connector and front power window motor (driver side) connector.

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D8	9	D10	3	Existed
	13	510	5	LXISTEG

Check continuity between power window main switch connector and ground.

Power window main switch connector	Terminal		Continuity
D8	9	Ground	Not existed
	13		Not existed

Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-16</u>, "<u>Removal and Installation</u>". After that, Refer to <u>PWC-145</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE : Description

Detects condition of the front power window motor (passenger side) operation and transmits to front power window switch (passenger side) as pulse signal.

PASSENGER SIDE : Component Function Check

1. CHECK ENCODER OPERATION

Does front passenger side door glass perform AUTO open/close operation normally when operating front power window switch (passenger side)?

Is the inspection result normal?

YES >> Encoder operation is OK.

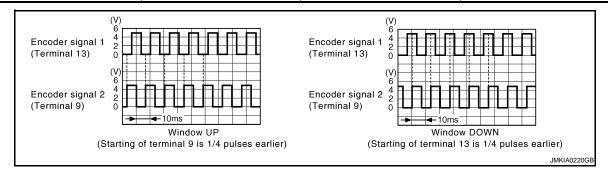
NO >> Refer to PWC-153, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

1. CHECK ENCODER SIGNAL

- 1. Connect front power window motor (passenger side) connector.
- Turn ignition switch ON.
- 3. Check signal between front power window switch (passenger side) connector and ground with oscilloscope.

(+)			Signal (Reference value)	
Front power window switch connector	Terminal	(Reference va		
D38	12	Ground	Refer to following signal	
D30	15	Ground	There to following signal	



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< COMPONENT DIAGNOSIS >

Is the inspection result normal?

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

NO >> GO TO 2.

2.check front power window motor (passenger side) power supply

Turn ignition switch ON.

2. Check voltage between front power window motor (passenger side) connector and ground.

(+)			Voltage (V)
Front power window motor (passenger side) connector	Terminal	(–)	(Approx.)
D38	4	Ground	10

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.

- 2. Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.
- Check continuity between front power window switch (passenger side) connector and front power window motor (passenger side) connector.

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	4	D40	4	Existed

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

Front power window switch (passenger side) connector	Terminal	Ground	Continuity
D38	4		Not existed

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-141, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

4. CHECK GROUND CIRCUIT

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

Front power window motor (passenger side) connector	Terminal	Ground	Continuity
D40	6		Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5.CHECK HARNESS CONTINUITY 2

- 1. Disconnect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) connector and front power window motor (passenger side) connector.

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< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	3	D40	6	Existed

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side). Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-141, "FRONT POWER WINDOW SWITCH: Special Repair Requirement".
- NO >> Repair or replace harness.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect front power window switch (passenger side) connector.
- Check continuity between front power window switch (passenger side) connector and front power window motor (passenger side) connector.

Front power window switch (passenger side) connector	Terminal	Front power window motor (passenger side) connector	Terminal	Continuity
D38	12	D40	5	Existed
D30	15	540	3	LAISIEU

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

Front power window switch (passenger side) connector	Terminal	_	Continuity
	12	Ground	Not existed
D36	15		Not existed

Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to <u>GW-16, "Removal and Installation"</u>. After that, Refer to <u>PWC-147, "PASSENGER SIDE: Special Repair Requirement"</u>.

NO >> Repair or replace harness.

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DOOR SWITCH

Description

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

Component Function Check

INFOID:0000000000961696

1. CHECK FRONT DOOR SWITCH INPUT SIGNAL

Check ("DOOR SW-DR" and "DOOR SW-AS") in "DATA MONITOR" mode with CONSULT-III. Refer to PWC-134, "RETAIND PWR: CONSULT-III Function (BCM - RETAINED PWR)".

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

Is the inspection result normal?

YES >> Front door switch circuit is OK.

NO >> Refer to <u>PWC-156</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000000961697

1. CHECK HARNESS CONTINUITY

Check voltage between BCM connector and ground.

	Terminals				
(+)		Door condition		Voltage (V)	
BCM connector	Terminal	(–)	200.00.10.10.1		(Approx.)
	124		Passanger side	OPEN	0
M123	124	Ground	Passenger side	CLOSE	Battery voltage
IVI 123	150	Giouna	Driver side	OPEN	0
	150			Driver side	CLOSE

Is the measurement value within the specification?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Front door switch connector	Terminal	Continuity
M123	124	B116	2	Existed
	150	B16	2	LAISIEU

4. Check continuity between BCM connector ground.

BCM connector	Terminal		Continuity
M123	124	Ground	Not existed
	150		NOT EXISTED

DOOR SWITCH

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK BCM OUTPUT SIGNAL

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

Terminal				
(+)		(_)	Voltage (V) (Approx.)	
BCM connector	Terminal	(-)	(11 - 7	
M123	124	Ground	Battory voltago	
WIIZS	150	Ground	Ground Battery voltage	Dattery Voltage

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

4. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-157, "Component Inspection".

Is the inspection result normal?

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

NO >> Replace front door switch.

Component Inspection

1. CHECK FRONT DOOR SWITCH

Check front door switches.

Terminal		Door switch	Continuity	
Do	oor switches	Door Switch	Continuity	
2	Ground part of door switch	Pressed	Not existed	
2	2 Ground part of door switch	Released	Existed	

Is the inspection result normal?

YES >> Front door switch is OK.

NO >> Replace front door switch.

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DOOR KEY CYLINDER SWITCH

Description INFOID:000000000961699

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

Component Function Check

INFOID:0000000000961700

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-158, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000000961701

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

Terminals					
(+)	(+)		Key position	Voltage (V)	
Power window main switch connector	Terminal	(–)	,	(Approx.)	
	6	- Ground	Lock	0	
D8			Neutral / Unlock	5	
D6			Unlock	0	
			Neutral / Lock	5	

Is the measurement value within the specification?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect power window main switch connector and front door lock assembly (driver side) (key cylinder switch) connector.
- 3. Check continuity between power window main switch connector and front door lock assembly (driver side) (key cylinder switch) connector.

Power window main switch connector	Terminal	Front door lock assembly (driver side) (key cylinder switch) connector	Terminal	Continuity	
D8	4	D15	6	Existed	
	6	010	5	LXISIEU	

DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

Power window main switch connector	Terminal	01	Continuity
D8	4	Ground	Not existed
	6		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

 ${f 3.}$ CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

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

Front door lock assembly (driver side) (key cylinder switch) connector	Terminal	Ground	Continuity
D15	4		Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-159, "Component Inspection".

Is the inspection result normal?

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

NO >> Replace front door lock assembly (driver side) (door key cylinder switch). Refer to <u>DLK-207</u>, <u>"FRONT DOOR LOCK : Removal and Installation"</u>. After that, Refer to <u>PWC-159</u>, "<u>Special Repair Requirement</u>".

Component Inspection

INFOID:0000000000961702

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly (driver side) (key cylinder switch).

Terminal				
Front door lock assembly switch) co		Key position	Continuity	
F		Unlock	Existed	
5	4	Neutral / Lock	Not existed	
6	4	Lock	Existed	
6	Neutral / Unlock	Not existed		

Is the inspection result normal?

NO

YES >> Key cylinder switch is OK.

>> Replace front door lock assembly(driver side) (key cylinder switch). Refer to <u>DLK-207</u>, "<u>FRONT DOOR LOCK</u>: Removal and Installation". After that, Refer to <u>PWC-159</u>, "<u>Special Repair Requirement</u>".

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

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INFOID:0000000000961703

DOOR KEY CYLINDER SWITCH

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

Is the inspection result normal?

YES >> Inspection end.

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

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000000961704

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Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch and front power window switch (passenger side)

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side)

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

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000000961705

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 <u>DLK-50</u>, "DOOR LOCK: <u>CONSULT-III Function</u> (BCM - DOOR LOCK)".

Monitor item	Condition		
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-161, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000000961706

Power Window Serial Link Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Remove key from ignition switch, and close the door of driver side and passenger side.

Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".

Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".

	Terminal	0:1	
(+)	(+)		Signal (Reference value)
BCM connector	Terminal	(-)	,
M123	132	Ground	(V) 15 10 5 0 PIIA1297E

Is the inspection result normal?

YES >> Power window serial link is OK.

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POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

NO >> GO TO 2

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M123	132	D8	14	Existed

Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity	
M123	132	Ground	Not existed	

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000000961707

Power window main switch, front power window switch (passenger side) and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to power window main switch and front power window switch (passenger side)

Keyless power window down signal

The signal mentioned below is transmitted from power window main switch to front power window switch (passenger side)

- Front passenger side door window operation signal
- Power window control by key cylinder switch signal
- Retained power operation signal
- · Power window lock switch signal

FRONT POWER WINDOW SWITCH : Component Function Check

INFOID:0000000000961708

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 DOOR LOCK SYSTEM" with CONSULT-III. Refer to DOOR LOCK SYSTEM wi

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-162, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000000961709

Power Window Serial Link Check

1. CHECK POWOW WINDOW SWITCH

1. Remove key from ignition switch, and close the door of driver side and passenger side.

POWER WINDOW SERIAL LINK

< COMPONENT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

- 2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (driver side and passenger side) is turned to "LOCK" or "UNLOCK".

	Terminal		Circal	
(+)		(_)	Signal (Reference value)	
BCM connector	Terminal	(-)	,	
M123	132	Ground	(V) 15 10 5 10 10 ms PIIA1297E	

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.
- 3. Check continuity between BCM connector and front power window switch (passenger side) connector.

BCM connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
M123	132	D38	16	Existed

4. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity	
M123	132	Ground	Not existed	

Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-238, "Removal and Installation". After that, Refer to PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

NO >> Repair or replace harness.

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POWER WINDOW LOCK SWITCH

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH

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

Component Function Check

INFOID:0000000000961711

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal power window main switch, and operation is checked.

Does power window lock operate?

YES >> Replace power window main switch. Refer to PWC-164, "Special Repair Requirement". After that,

NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:0000000000961712

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-128</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

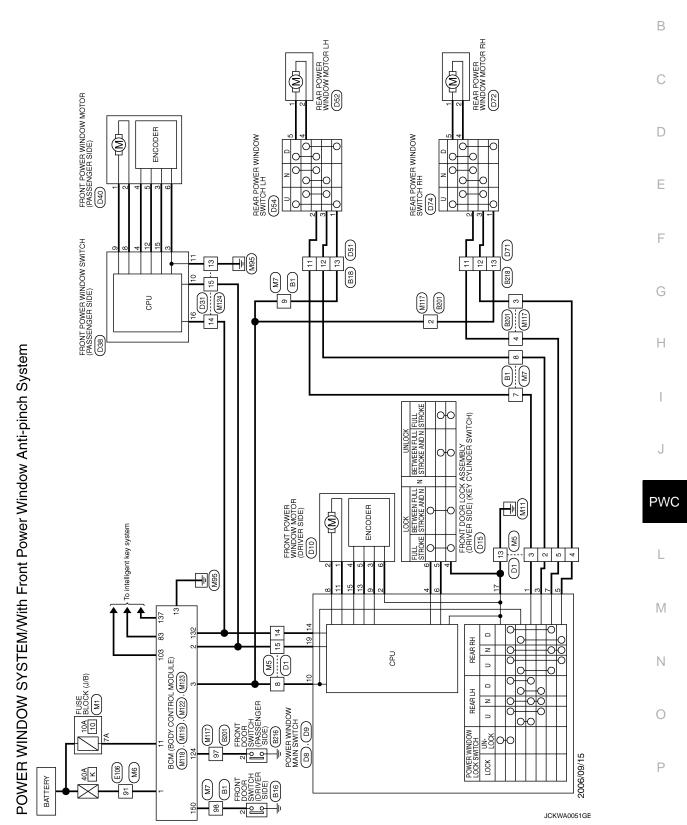
NO >> Check intermittenrt incident. Refer to GI-39, "Intermittent Incident".

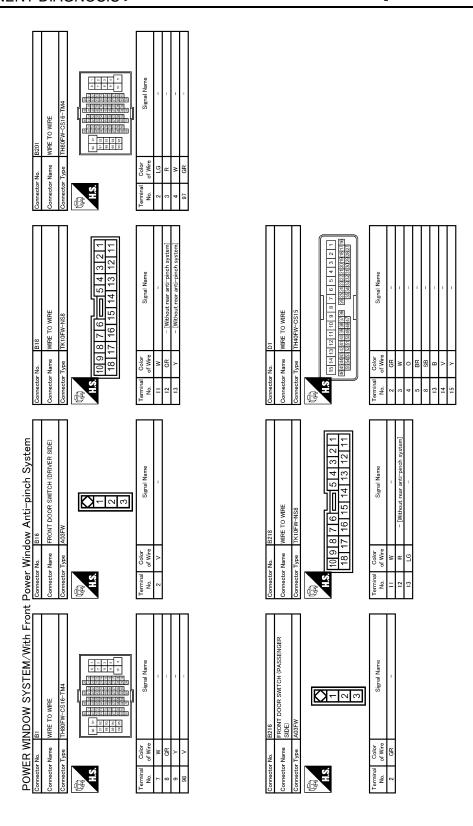
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REAR POWER WINDOW SWITCH

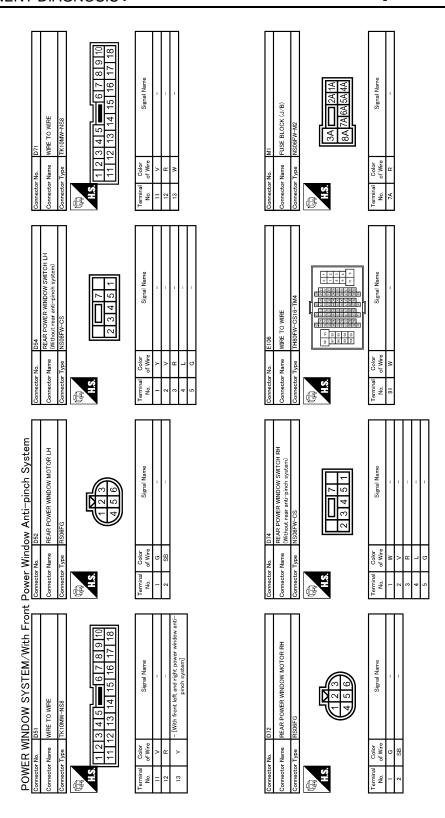
Wiring Diagram— POWER WINDOW SYSTEM —





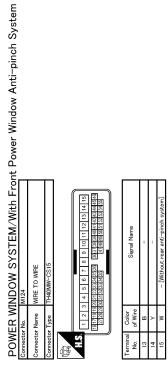
JCKWA0052GE

Cornector No. D10 Cornector Name SIDE) Cornector Type NSORPY-CS Terminal Color No. of Wire Signal Name Signal Name Signal Name Signal Name			Terminal Color No. of Wire Signal Name 1		A B C
tor No. D9 Tor Type NSGSFW-CS Tor Type NSGSFW-CS TTT 18 19 Of Wire Signal Name	800	Name PRONT POWER WINDOW SWITCH PASSE WASTERVINGS NS16FW-CS 1 2 3 4 5 5 7 8 9 10 11 12 13 14 15 16	Terminal Color Signal Name No. of Wive Signal Name Signal Name		E F G
Power Window Anti-pinch System		Name WIRE TO WIRE Type TH40PW-CS15 Th40PW-CS15 Th40PW-CS15 Th41P Th41P	No. Odor Signal Name No. Odor Signal Name 13 B December 14 V Company C	F	J
MINDOW SYSTEM/With Front D8	титити п		Norman Color Signal Name Norman Color Signal Name 4 B Color Color		M N
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SS (Sgral Name	MI23 BCM (BODY CONTROL MODULE) TH40FG-NH TH40FG-NH TH40FG-NH SERVICE TO THE SERVICE SERVICE TO THE SERVICE SERVICE SERVICE DOOR SW (AS) POWER WINDOW SERVICE DOOR SW (DR)		АВ
Commettor No. Military	Connector No. M123		C
MAT TO WIRE TO	MI22 BCM (BODY CONTROL MODULE) TH40FB-NH SI SEE SEE SEE SEE SEE SEE SEE SEE SEE S		E F
Connector No. Connector Name Connector Type Terminal Color No. Of Wire 7 W 98 P 98 CR P 98 CR P 98 CR P 98 CR P P P P P P P P P	Connector No. Mi Connector Name BC Connector Type TH. H.A. Framinal Color No. of Wire 83 V 103 LG		G
Power Window Anti-pinch System Cornector Nue Cornector Type TH80MW-GS16-TM4 TH80MW-GS16-TM4 TH80MW-GS16-TM4 Signal Name 91 W	MI19 BCM (BODY CONTROL MODULE) NS16FW-CS 1 6 7	_	J
Tront Power Wind Comector No Commerce Name Commerce Name Commerce Name Sample S	Connector No. Connector Name Connector Type H.S. H.S. H.S. H.S. H.S. H.S. H.S. H.		PWC
Name WIRE TO WIRE	MOSFB-LC MOSFB-LC Signal Name Signal Name BOWER WINDOW POWER SUPPLY(RAP) POWER WINDOW POWER SUPPLY(RAP)		M
Connector Number Mistage Connector Number Mistage Connector Number Mistage Connector Number Mistage Connector Number Connector	Connector No. M118 Connector Name BCM (BOD) Connector Type M03FB-LC Connector Name of Wire 1 W POWER 2 Y POWER 3 O POWER		N O
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JCKWA0056GE

Α

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status	
ED WIDED III	Other than front wiper switch HI	OFF	
FR WIPER HI	Front wiper switch HI	ON	D
ED WIDED LOW	Other than front wiper switch LO	OFF	
FR WIPER LOW	Front wiper switch LO	ON	
ED WACHED OW	Front washer switch OFF	OFF	— E
FR WASHER SW	Front washer switch ON	ON	
FR WIPER INT	Other than front wiper switch INT	OFF	F
FR WIPER INT	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	G
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position	
TUDNI CIONAL D	Other than turn signal switch RH	OFF	— Н
TURN SIGNAL R	Turn signal switch RH	ON	
TURN SIGNAL L	Other than turn signal switch LH	OFF	
TURN SIGNAL L	Turn signal switch LH	ON	
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	OFF	
TAIL LAWIP SVV	Lighting switch 1ST or 2ND	ON	
LI DEAM CW	Other than lighting switch HI	OFF	
HI BEAM SW	Lighting switch HI	ON	
HEAD LAMP SW 1	Other than lighting switch 2ND	OFF	PV
HEAD LAIVIP SW 1	Lighting switch 2ND	ON	
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF	_
TILAD LAWI OW Z	Lighting switch 2ND	ON	
PASSING SW	Other than lighting switch PASS	OFF	_
FASSING SW	Lighting switch PASS	ON	N
AUTO LIGHT SW	Other than lighting switch AUTO	OFF	
AUTO LIGITI SW	Lighting switch AUTO	ON	
FR FOG SW	Front fog lamp switch OFF	OFF	_ N
1 K 1 OG 3W	Front fog lamp switch ON	ON	
RR FOG SW	NOTE: The item is indicated, but not monitored.	OFF	0
D00D 0W DD	Driver door closed	OFF	
DOOR SW-DR	Driver door opened	ON	P
DOOD SW AS	Passenger door closed	OFF	_
DOOR SW-AS	Passenger door opened	ON	
DOOD OW DD	Rear RH door closed	OFF	_
DOOR SW-RR	Rear RH door opened	ON	<u></u> -

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	OFF
CDL LOCK SW	Other than power door lock switch LOCK	OFF
ODE EGGIN GW	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
ODE ONEOOK OW	Power door lock switch UNLOCK	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
KET OTE EK OW	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
KET OTE ON OW	Driver door key cylinder UNLOCK position	ON
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	OFF
HAZARD SW	Hazard switch is not pressed	OFF
HALAND SW	Hazard switch is pressed	ON
REAR DEF SW	NOTE: The item is indicated, but not monitored.	OFF
H/L WASH SW	NOTE: The item is indicated, but not monitored.	OFF
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
IN/BD OPEN 3W	While the trunk lid opener switch is turned ON	ON
TRNK/HAT MNTR	Trunk lid closed	OFF
TICHIOTIAL WHATIC	Trunk lid opened	ON
RKE-LOCK	LOCK button of Intelligent Key is not pressed	OFF
KKE-LOOK	LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	OFF
KKE-ONLOOK	UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	TRUNK OPEN button of Intelligent Key is not pressed	OFF
KKE-TK/DD	TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	PANIC button of Intelligent Key is not pressed	OFF
MINE-I AINIO	PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	OFF
NNL-F/W OFEN	UNLOCK button of Intelligent Key is pressed and held	ON
DKE WODE OHO	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
ODTICAL SENSOR	Outside of the vehicle bright	Close to 5 V
OPTICAL SENSOR	Outside of the vehicle dark	Close to 0 V
DEO SW DD	Driver door request switch is not pressed	OFF
REQ SW-DR	Driver door request switch is pressed	ON
DEO SW AS	Passenger door request switch is not pressed	OFF
REQ SW-AS	Passenger door request switch is pressed	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
REQ SW-BD/TR	Trunk request switch is not pressed	OFF
REQ SW-DD/TR	Trunk request switch is pressed	ON
PUSH SW	Push-button ignition switch (push switch) is not pressed	OFF
703H 3W	Push-button ignition switch (push switch) is pressed	ON
ICN DLV2 F/D	Ignition switch in OFF or ACC position	OFF
IGN RLY2 -F/B	Ignition switch in ON position	ON
ACC DLV E/D	Ignition switch in OFF position	OFF
ACC RLY -F/B	Ignition switch in ACC or ON position	ON
CLUCU CW	The clutch pedal is not depressed	OFF
CLUCH SW	The clutch pedal is depressed	ON
DDAKE OWA	The brake pedal is not depressed	ON
BRAKE SW 1 DETE/CANCL SW	The brake pedal is depressed	OFF
DETE (OANOL OW)	Selector lever in P position	OFF
JETE/CANCL SW	Selector lever in any position other than P	ON
OFT DAI/A! OVA/	Selector lever in any position other than P and N	OFF
SFT PN/N SW	Selector lever in P or N position	ON
0/1 1 0 0 1 /	Steering is locked	OFF
S/L -LOCK	Steering is unlocked	ON
	Steering is unlocked	OFF
S/L -UNLOCK	Steering is locked	ON
	Ignition switch is OFF or ACC position	OFF
S/L RELAY-F/B	Ignition switch is ON position	ON
	Driver door is unlocked	OFF
UNLK SEN-DR	Driver door is locked	ON
	Push-button ignition switch (push-switch) is not pressed	OFF
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	ON
	Ignition switch is OFF or ACC position	OFF
IGN RLY1 -F/B	Ignition switch is ON position	ON
	Selector lever in P position	OFF
DETE SW -IPDM	Selector lever in any position other than P	ON
	Selector lever in any position other than P and N	OFF
SFT PN -IPDM	Selector lever in P or N position	ON
	Selector lever in any position other than P	OFF
SFT P -MET	Selector lever in P position	ON
	Selector lever in any position other than N	OFF
SFT N -MET	Selector lever in N position	ON
	Engine stopped	STOP
	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
	Steering is locked	OFF
S/L LOCK-IPDM	Steering is inlocked	ON
	Steering is unlocked	OFF
S/L UNLK-IPDM	Steering is locked	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

St. RELAY-REQ Ignition switch in OFF or ACC position OFF	Monitor Item	Condition	Value/Status
Ignition switch in ON position ON	S/I DELAV DEO	Ignition switch in OFF or ACC position	OFF
While driving	3/L RELAT-REQ	Ignition switch in ON position	ON
Driver door is locked Wait with selective UNLOCK operation (5 seconds) Passenger door is unlocked DOOR STAT-AS Wait with selective UNLOCK operation (5 seconds) Passenger door is unlocked DOOR STAT-AS Wait with selective UNLOCK operation (5 seconds) Passenger door is unlocked UNLK Passenger door is unlocked UNLK Ignition switch in ACC or ON position RESET Ignition switch in OFF position PRMT ENG STRT PRMT ENG STRT The engine start is prohibited The engine start is unlocked The engine start is prohibited The engine start is engistered Th	VEH SPEED 1	While driving	Equivalent to speedometer reading
DOOR STAT-DR Wait with selective UNLOCK operation (5 seconds) Driver door is unlocked Passenger door is locked UNLK UNLK Wait with selective UNLOCK operation (5 seconds) Passenger door is locked UNLK Passenger door is unlocked UNLK ID OK FLAG Ignition switch in ACC or ON position RESET Ignition switch in ACC or ON position RESET PRMT ENG STRT PRMT ENG STRT PRMT ENG STRT Intelligent Key is port inserted into key slot Intelligent Key is not inserted into key slot ON RKE OPE COUN1 AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) ID REGST FL1 ID of front LH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is not registe	VEH SPEED 2	While driving	Equivalent to speedometer reading
Driver door is unlocked UNLK Passenger door is locked LCOCK Wait with selective UNLCCK operation (5 seconds) READY Passenger door is unlocked UNLK Ignition switch in ACC or ON position RESET Ignition switch in ACC or ON position SET PRMT ENG STRT The engine start is prohibited RESET PRMT RKE STRT The instanction of the time is indicated, but not monitored. RESET RESET RESET RESET Intelligent Key is not inserted into key slot OFF Intelligent Key is inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key RKE OPE COUN2 The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received ONE ID of front LH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered YET ID of rear RH tire transmit		Driver door is locked	LOCK
Passenger door is locked Wait with selective UNLOCK operation (5 seconds) READY Passenger door is unlocked UNLK ID OK FLAG Ignition switch in ACC or ON position RESET Ignition switch in ACC or ON position RESET PRMT ENG STRT The engine start is prohibited The engine start is prohibited The engine start is prohibited RESET PRMT RKE STRT RESET The item is indicated, but not monitored. RESET Intelligent Key is not inserted into key slot Intelligent Key is inserted into key slot Intelligent Key is inserted into key slot Intelligent Key is inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR ID of front LH tire transmitter is registered DONE ID of front LH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE Tire pressure indicator OFF Tire pressure indicator OFF Tire pressure indicator ON	DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
DOOR STAT-AS Wait with selective UNLOCK operation (5 seconds) Passenger door is unlocked UNLK Ignition switch in ACC or ON position RESET Ignition switch in OFF position RESET The engine start is primited RESET PRMT ENG STRT NOTE: The item is indicated, but not monitored. Intelligent Key is inserted into key slot Intelligent Key is inserted into key slot Intelligent Key is inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received DONE ID of front RH tire transmitter is registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID		Driver door is unlocked	UNLK
Passenger door is unlocked UNLK ID OK FLAG Ignition switch in ACC or ON position RESET Ignition switch in OFF position SET The engine start is prohibited RESET The engine start is prohibited SET The tem is indicated, but not monitored. RESET Intelligent Key is not inserted into key slot OFF Intelligent Key is inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL ID of front LH tire transmitter is registered DONE DONE ID of front RH tire transmitter is registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE The ressure indicator OFF Tire pressure indicator OFF Tire pressure indicator OFF Tire pressure indicator ON ON OFF		Passenger door is locked	LOCK
ID OK FLAG	DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
Ignition switch in OFF position SET		Passenger door is unlocked	UNLK
Ignition switch in OFF position SET	ID OK ELAC	Ignition switch in ACC or ON position	RESET
The engine start is permitted SET PRMT RKE STRT NOTE: The item is indicated, but not monitored. RESET NOTE: The item is indicated, but not monitored. RESET OFF Intelligent Key is not inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) ID of front LH tire transmitter is registered ID of front LH tire transmitter is registered ID of front LH tire transmitter is not registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmiter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered ID of rear LH	ID OK FLAG	Ignition switch in OFF position	SET
The engine start is permitted NOTE: The item is indicated, but not monitored. RESET RESET RESET RESET NOTE: Intelligent Key is not inserted into key slot Intelligent Key is inserted into key slot RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received of rear RH tire clived) DONE ID of front LH tire transmitter is registered DONE ID of front LH tire transmitter is not registered DONE ID of front RH tire transmitter is registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE DONE Tre pressure indicator OFF Tire pressure indicator OFF Tire pressure warning alarm is not sounding OFF	DDMT ENC STDT	The engine start is prohibited	RESET
The item is indicated, but not monitored. KEY SW - SLOT Intelligent Key is not inserted into key slot ON RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL ID of front LH tire transmitter is registered DONE ID of front LH tire transmitter is registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE Tire pressure indicator OFF Tire pressure indicator ON Tire pressure warning alarm is not sounding Tire pressure warning alarm is not sounding	PRIVIT ENG STRT	The engine start is permitted	SET
Intelligent Key is inserted into key slot RKE OPE COUN1 During the operation of Intelligent Key NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL ID of front LH tire transmitter is registered ID of front LH tire transmitter is registered ID of front LH tire transmitter is registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is not registered ID of front RH tire transmitter is registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding	PRMT RKE STRT		RESET
RKE OPE COUN1 During the operation of Intelligent Key RKE OPE COUN2 NOTE: The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received Air pressure of rear LH tire ceived) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received PONE ID of front LH tire transmitter is registered DONE ID of front LH tire transmitter is not registered PONE ID of front RH tire transmitter is not registered PONE ID of rear RH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rear LH tire transmitter is not registered PONE ID of rea	KEY OW OLOT	Intelligent Key is not inserted into key slot	OFF
RKE OPE COUN2 Note The item is indicated, but not monitored.	KEY SW -SLOT	Intelligent Key is inserted into key slot	ON
The item is indicated, but not monitored. AIR PRESS FL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RR Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) AIR PRESS RL Ignition switch ON (Only when the signal from the transmitter is received) Air pressure of rear RH tire ceived Air pressure of rear RH tire the pressure of rear LH tire than pressure of rear LH tire to pone. ID of front LH tire transmitter is registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered WARNING LAMP Tire pressure indicator OFF Tire pressure warning alarm is not sounding OFF	RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
AIR PRESS FR Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) Ignition switch ON (Only when the signal from the transmitter is received) ID of front LH tire transmitter is registered DONE ID of front LH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of front RH tire transmitter is not registered DONE ID of rear RH tire transmitter is registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered OFF IT is pressure indicator OFF OFF It is pressure indicator ON ON It is pressure warning alarm is not sounding OFF It is pressure of front RH tire Air pressure of front RH tire Air pressure of front RH tire Air pressure of rear RH tire Air pressure	RKE OPE COUN2		_
AIR PRESS PR ceived) All pressure of rear RH tire lignition switch ON (Only when the signal from the transmitter is received) Air pressure of rear RH tire Air pressure of rear RH tire Air pressure of rear RH tire Air pressure of rear LH tire Air pressure of rear LH tire DONE ID of front LH tire transmitter is registered ID of front LH tire transmitter is not registered ID of front RH tire transmitter is registered DONE ID of front RH tire transmitter is not registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered DONE ID of rear RH tire transmitter is registered DONE ID of rear RH tire transmitter is not registered DONE ID of rear LH tire transmitter is not registered DONE ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered DONE Tire pressure indicator OFF Tire pressure indicator ON Tire pressure warning alarm is not sounding OFF	AIR PRESS FL		Air pressure of front LH tire
AIR PRESS RK ceived) All pressure of rear LH tire ID REGST FL1 ID of front LH tire transmitter is registered ID of front LH tire transmitter is registered ID of front LH tire transmitter is registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not registered WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON Tire pressure warning alarm is not sounding OFF	AIR PRESS FR		Air pressure of front RH tire
ID REGST FL1 ID of front LH tire transmitter is registered ID of front LH tire transmitter is not registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is not registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not reg	AIR PRESS RR		Air pressure of rear RH tire
ID REGST FL1 ID of front LH tire transmitter is not registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is not registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	AIR PRESS RL	, ,	Air pressure of rear LH tire
ID of front LH tire transmitter is not registered ID of front RH tire transmitter is registered ID of front RH tire transmitter is not registered ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered VET ID of rear LH tire transmitter is not registered VET Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID DECST EL 1	ID of front LH tire transmitter is registered	DONE
ID REGST FR1 ID of front RH tire transmitter is not registered ID of rear RH tire transmitter is registered ID of rear RH tire transmitter is not registered ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not registered VET ID of rear LH tire transmitter is not registered VET Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID REGOT FLT	ID of front LH tire transmitter is not registered	YET
ID of front RH tire transmitter is not registered YET ID of rear RH tire transmitter is registered DONE ID of rear RH tire transmitter is not registered YET ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is registered YET ID of rear LH tire transmitter is not registered YET ID of rear LH tire transmitter is not registered YET Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID DECCT ED4	ID of front RH tire transmitter is registered	DONE
ID REGST RR1 ID of rear RH tire transmitter is not registered ID of rear LH tire transmitter is registered ID of rear LH tire transmitter is not registered ID of rear LH tire transmitter is not registered YET WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID REGST FRT	ID of front RH tire transmitter is not registered	YET
ID of rear RH tire transmitter is not registered YET ID of rear LH tire transmitter is registered DONE ID of rear LH tire transmitter is not registered YET WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON Tire pressure warning alarm is not sounding OFF	ID DECCE DD4	ID of rear RH tire transmitter is registered	DONE
ID REGST RL1 ID of rear LH tire transmitter is not registered WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID REGST RRT	ID of rear RH tire transmitter is not registered	YET
WARNING LAMP Tire pressure indicator OFF Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID DECCT DI 4	ID of rear LH tire transmitter is registered	DONE
Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF	ID REGST RL1	ID of rear LH tire transmitter is not registered	YET
Tire pressure indicator ON ON Tire pressure warning alarm is not sounding OFF BUZZER	MARNING LAND	Tire pressure indicator OFF	OFF
BUZZER	WAKNING LAMP	Tire pressure indicator ON	ON
Tire pressure warning alarm is sounding ON	DUZZED	Tire pressure warning alarm is not sounding	OFF
	BUZZEK	Tire pressure warning alarm is sounding	ON

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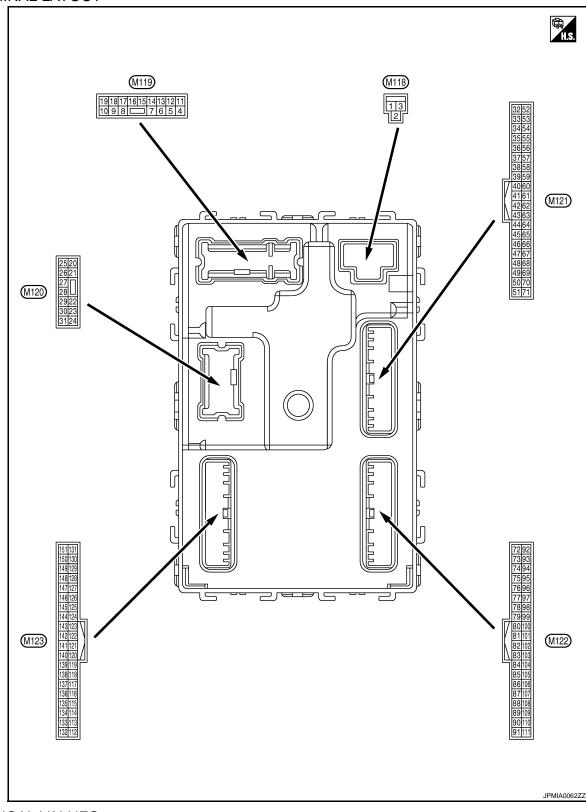
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TERMINAL LAYOUT



PHYSICAL VALUES

Term	inal No.	Description				
(Wire	e color)	-	Input/		Condition	Value (Approx.)
+	_	Signal name	Output			(Αρρισχ.)
1 (W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (O)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Output	After passing the ir er operation time	nterior room lamp battery sav-	0 V
(LG)	Ground	power supply	Output	Any other time after lamp battery save	er passing the interior room roperation time	Battery voltage
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(V)	Ground	LOCK	Output	rasseriger door	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(Y)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Ground	All doors, fuel lid	Output	t All doors, fuel lid	LOCK (Actuator is activated)	Battery voltage
(V)	Ground	LOCK	Output		Other than LOCK (Actuator is not activated)	0 V
9	9 Ground Driver doo	Driver door, fuel lid	Output	Output Driver door, fuel Iid vated) Other than	UNLOCK (Actuator is activated)	Battery voltage
(G)	Cround	UNLOCK	NLOCK		Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(BR)	Ordana	LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON	1	0 V
					OFF	0 V
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position (V) 10 2 ms JSNIA0010GB
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
(Y)		'	·	-	ACC or ON	0 V

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

		Description	Description			Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	
17 (W)	Ground	Turn signal (front RH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch RH	0 V (V) 15 10 5 0 1 S S S S S S S S S	
18 (O)	Ground	Turn signal (front LH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch LH	6.5 V 0 V (V) 15 10 1	
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF ON	Battery voltage 0 V	
20 (V)	Ground	Turn signal (rear RH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch RH	(V) 15 10 5 0 PKID0926E	
23 (G)	Ground	Trunk lid opening.	Output	Trunk lid	Open (Trunk lid opener actuator is activated) Close (Trunk lid opener actuator is not activated)	Battery voltage 0 V	
25 (G)	Ground	Turn signal (rear LH)	Output	Ignition switch ON	Turn signal switch OFF Turn signal switch LH	0 V (V) 15 10 5 0 1 s PKID0926E 6.5 V	
30	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0 V	
(R)				and the same	OFF	Battery voltage	

	inal No.	Description				Value	
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
34	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(SB)	Clound	1 (-)	Cutput	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
35	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	
(V)	Cidana				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0063GB	
38	Ground	und Rear bumper anten- na (-) Output		When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(B)	Ground		is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB		

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

< ECU DIAGNOSIS >

Terminal No. Description (Wire color)				Value	A				
+	- -	Signal name	Input/ Output		Condition	(Approx.)			
39		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			
39 (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 JMKIA0063GB	E		
47	_	Ignition relay (IPDM	_		OFF or ACC	Battery voltage			
(Y)	Ground	E/R) control	Output	Ignition switch	ON	0 V			
50 (R)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB	ŀ		
					ON (Trunk is open)	0 V			
				Ignition switch OFF (M/T mod-	When the clutch pedal is depressed	Battery voltage	P۱		
				els)	When the clutch pedal is not depressed	0 V	L		
52 (SB)	Ground Star	Starter relay control	Starter relay control	und Starter relay control	Output	Output Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage	
				ON (A/T models)	When selector lever is in P or N position and the brake is not depressed	0 V	N		
					ON (Pressed)	0 V	1		
61 (W)	Ground	Trunk request switch	Input	Trunk request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	F		
64	Ground	Request switch buzz-	Output	Request switch	Sounding	0 V			

	inal No.	Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid opener switch	Pressed Not pressed	0 V (V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes) ON (When rear RH door opens)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes) ON (When rear LH door opens)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V	
72	Ground	Room antenna 2 (-)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
(R)	Cidulia	(center console)			ut OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS >

	inal No.	Description				Value	Λ
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
73		Room antenna 2 (+)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	В
(G)	Ground	(center console)	Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	E
74	Ground	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	G H
(SB)	Glound				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	J PW
75	Cround	Passenger door antenna (+)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	M
(BR)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 1	O

	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
76	Ground	Driver door antenna (-)	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(V)	Clound			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
77	Ground	Driver door antenna (+)	Output	When the driver door 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
(LG)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
78	Ground	Room antenna (-) (instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB
(Y)					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB

< ECU DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

	ninal No.	Description				Value	
(vvir	e color)	Signal name	Input/ Output		Condition	(Approx.)	
79 (BR) Grour	Commit	Room antenna (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
	Ground	(instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
80 (GR)	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.	
81 (W)	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.	
82 (R)	Ground	Ignition relay (relay box) control	Output	Ignition switch	OFF or ACC	0 V Battery voltage	
83	Ground	Remote keyless entry	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB	
(Y)	Giodila	receiver signal	Output	When operating e	either button on Intelligent Key	(V) 15 10 5 0 1 ms	

PWC-183

< 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
87 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
					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

Signal name Output All switch OFF (Wiper intermittent dial 4) Lighting switch HI (Wiper intermittent dial 4) Lighting switch HI (Wiper intermittent dial 4) Lighting switch AND (Wiper intermittent dial 4) Lighting switch AND (Wiper intermittent dial 4) Any of the conditions below with all switches OFF 13 13 13 13 13 13 13 13 13 13 13 13 13		inal No.	Description				Value
All switch OFF (Wiper intermittent dial 4) Lighting switch HI (Wiper intermittent dial 4) Lighting switch HI (Wiper intermittent dial 4) Lighting switch 2ND (Wiper intermittent dial 4) Ary of the conditions below with all switches OFF Wiper intermittent dial 3 Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 4) The conditions below with all switches OFF Wiper intermittent dial 3 James Consumers 1.3 V Ary of the conditions below with all switches OFF Wiper intermittent dial 4) The conditions below with all switches OFF Wiper intermittent dial 4) The conditions below with all switches OFF Wiper intermittent dial 4) The conditions below with all switches OFF Wiper intermittent dial 4) The conditions below with all switches OFF Wiper intermittent dial 4 The conditions below with all switches OFF Wiper intermittent dial 3 The conditions below with all switches OFF Wiper intermittent dial 4 The conditions below with all switches OFF Wiper intermittent dial 4 The conditions below with all switches OFF Wiper intermittent dial 4 The conditions below with all switche		e color)	Signal name			Condition	
Region Ground Combination switch INPUT 3 Combination switch Input							15 10 5 0 2 ms JPMIA0041GB
Lighting switch 2ND Wiper intermittent dial 4	88	O	Combination switch		Combination		2 ms JPMIA0036GB
Wiper intermittent dial 2 Wiper intermittent dial 2 Wiper intermittent dial 3	(V)	Ground		Input	switch		15 10 5 0 2 ms JPMIA0037GB
Barry Push-button ignition switch (push switch) Input Push-button ignition switch (push switch) Input Push-button ignition switch (push switch) Input Pressed O V						with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2	2 ms
BR) Ground switch (push switch) Imput Iton switch (push switch) Not pressed Battery voltage 90 Ground CAN - L Input/ Output — — — — — — — — — — — — — — — — — — —	90		Puch button ignition		Push-button igni-	Pressed	
Ground CAN - H Input/	BR)	Ground		Input		Not pressed	Battery voltage
Ground CAN - H Output OFF OV Second Ground Key slot illumination Output Key slot illumination Output Ition Second Ground Key slot illumination Ition Second Ground Key slot illumination Output Ition Second Ground Key slot illumination Ition Second Ground Ground Ition Second Ground Ground Ition Secon		Ground	CAN - L			_	_
92 LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking Output Figure 15 Output Figure 25		Ground	CAN - H			_	_
92 LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking JPMIA0015GB 6.5 V						OFF	0 V
	92 (LG) Gr	Ground	Key slot illumination	Output		Blinking	15 10 5 0 1 s
1 10.1						ON	6.5 V Battery voltage

	inal No.	Description	1			Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
93	Cround	ON indicator lamp	Output	Ignition quitab	OFF or ACC	0 V
(V)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(O)	Ground	Acc relay control	Output	ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T device (detention switch) power supply	Output		_	Battery voltage
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)	Cround	tion No. 1	mpat	Citeding look	UNLOCK status	Battery voltage
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	Battery voltage
(P)		tion No. 2			UNLOCK status	0 V
99	Ground	Selector lever P position switch	Input	Selector lever	P position	0 V
(R)			'		Any position other than P	Battery voltage
		Passenger door request switch			ON (Pressed)	0 V
100 (G)	Ground		Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 10 ms 10 ms JPMIA0016GB
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V
(O)	Cround	lay control	Catput	ignition switch	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage
106		Steering wheel lock	Output	Ignition switch	OFF or ACC	Battery voltage
(W) Groun	Cround	unit power supply	Output	ignition switch	ON	0 V

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[FRONT WINDOW ANTI-PINCH]

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	inal No.	Description				Value	٨
+ (Wire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C D
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
107 (LG)	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 1.3 V	G H
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	PWC
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	M N
				1			\circ

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

	inal No.	Description				Value	Λ
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	B C
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	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	J PW(
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB	M
					Pressed	0 V	0
110 (G)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB	Р

Term	inal No.	Description				.,.
	e color)	Signal name	Input/		Condition	Value (Approx.)
+	_		Output		LOCK status	Battery voltage
111 (Y) Grour	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 50 ms JMKIA0066GB
					For 15 seconds after UN- LOCK	Battery voltage
					15 seconds or later after UNLOCK	0 V
113	113 (P) Ground Optical sensor sign	Ontical sensor signal	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)		Optical School signal	mpat	ON	When dark outside of the vehicle	Close to 0 V
114 Groupe	Ground	Clutch interlock	Input	Clutch interlock	OFF (Clutch pedal is not depressed)	0 V
(R)	Ground	switch	input	switch	ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage
		Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
118 (P)	Ground				ON (Brake pedal is depressed)	Battery voltage
				ICC brake hold relay (With ICC)	OFF	0 V
					ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (unlock sensor)	Input	Driver door	LOCK status	(V) 15 10 5 0 10 ms JPMIA0011GB
					UNLOCK status	0 V
121	Ground	Key slot switch	Input	When Intelligent Key is inserted into key slot		Battery voltage
(R)	Cidana	. 10) dist switch	put	When Intelligent K	ey is not inserted into key slot	0 V
122	Ground	ACC feedback signal	Input	Ignition switch	OFF	0 V
(V)		Ŭ		-	ACC or ON	Battery voltage
123 (W)	Ground	IGN feedback signal	Input	Ignition switch	OFF or ACC	0 V
(۷۷)	.	•		ON	Battery voltage	

< ECU DIAGNOSIS >

	inal No.	Description	T		O 184	Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (When passenger door opens)	11.8 V 0 V
129 (O)	Ground	Trunk lid opener cancel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB
					ON	1.1 V
132 (V)	Ground	Power window switch communication Out				(V) 15 10 5 0 10 ms
				Ignition switch OFF or ACC		10.2 V
				ignition switch OF	T	0 V
					ON (When tail lamps OFF)	5.5 V NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps ON)	(V) 15 10 5 0 JPMIA0159GB
					OFF	0 V
134	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0 V
(GR)	Ciound	LOOK III GIGOT IAIIIP	Output	lamp	OFF	Battery voltage
137 (O)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(V)	Cround	power supply output	Japat	-gradon switch	ACC or ON	5.0 V

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
139		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 ** 0.2s OCC3881D
(L)	Ground	er signal	Output	ÓN	When receiving the signal from the transmitter	(V) 6 4 2 0 • • 0.2s OCC3880D
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	12.0 V
(GR)	Cround	position signal	mpat	Colodior level	Except P and N positions	0 V
141 (G)	Ground	Security indicator signal	Output	Security indicator	ON Blinking	0 V (V) 15 10 5 0 1 s JPMIA0014GB
					OFF	Battery voltage
142 (O)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	All switch OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	0 V (V) 15 10 5 0 2 ms JPMIA0031GB
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switch OFF (Wiper intermittent dial 4) Front wiper switch HI (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	10.7 V 0 V (V) 15 10 5 0 2 ms JPMIA0032GB

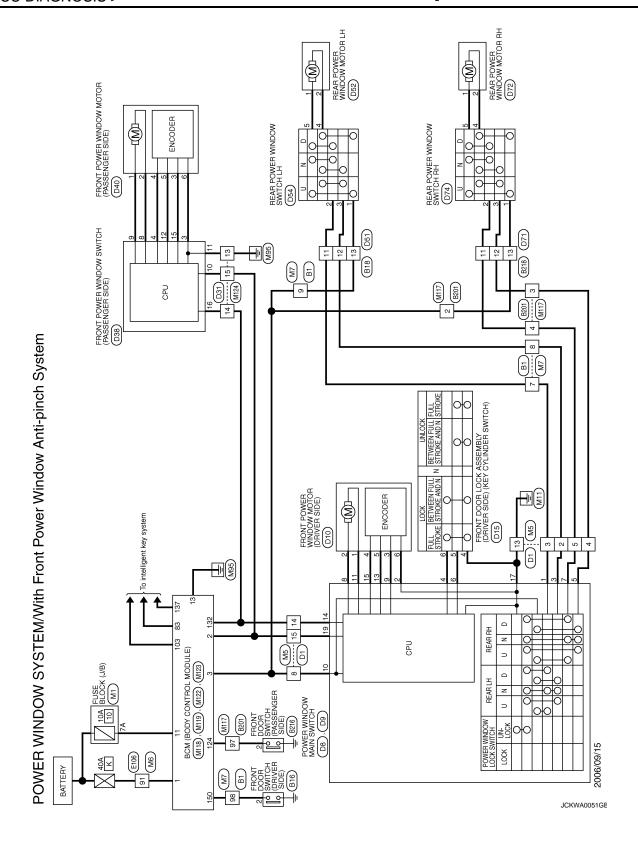
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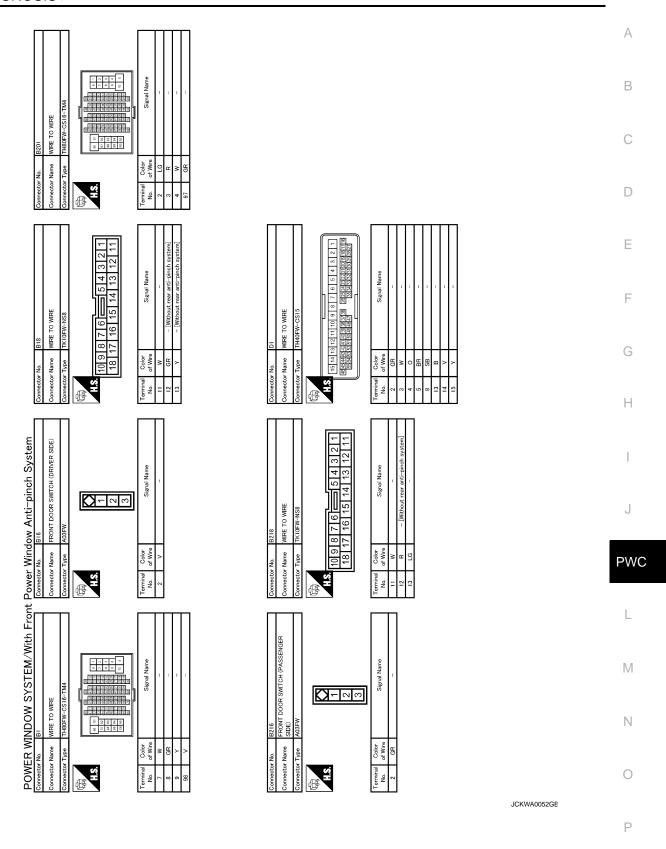
[FRONT WINDOW ANTI-PINCH]

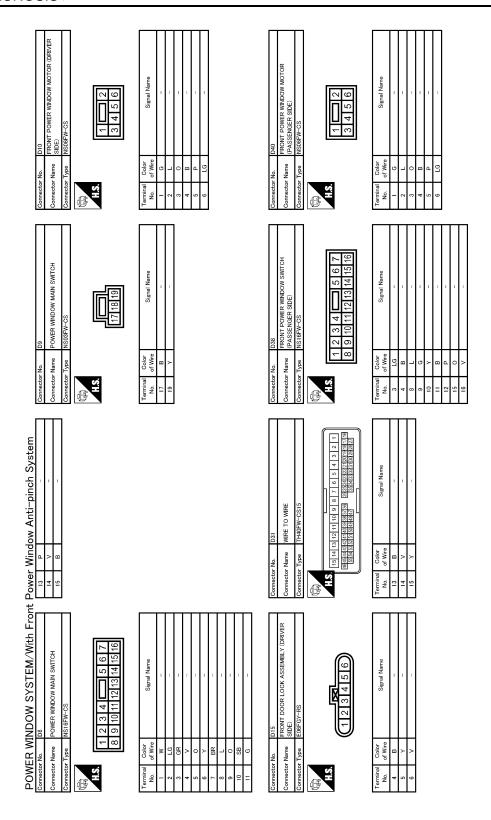
	inal No.	Description				Volue	Α
(Wire	e color) –	Signal name	Input/ Output		Condition	Value (Approx.)	А
					All switch OFF (Wiper intermittent dial 4) Front washer switch ON (Wiper intermittent dial 4)	0 V	В
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switches OFF • Wiper intermittent dial 1 • Wiper intermittent dial 5 • Wiper intermittent dial 6	(V) 15 10 2 ms JPMIA0033GB	C D
					All switches OFF	0 V	Е
					Front wiper switch INT		
145 (L)	Ground	Combination switch OUTPUT 3	Output	Combination switch (Wiper intermit-	Front wiper switch LO	(V) 15 10 5 0	F
			tent	tent dial 4)	Lighting switch AUTO	2 ms JPMIA0034GB	G
					All switch OFF	0 V	Н
		Combination switch		Front fog lamp switch ON			
			itch	Combination switch	Lighting switch 2ND	(V)	
146					Lighting switch PASS	15	'
(SB)	Ground	OUTPUT 4	Output	(Wiper intermit- tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GB	J
						10.7 V	PWC
149 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5 V	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	L M
					ON (M/han driver deer	11.8 V	Ν
					ON (When driver door opens)	0 V	
151	Ground	Rear window defog-	Output	Rear window de-	Active	0 V	O
(G)	Giouria	ger relay	Output	fogger	Not activated	Battery voltage	

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

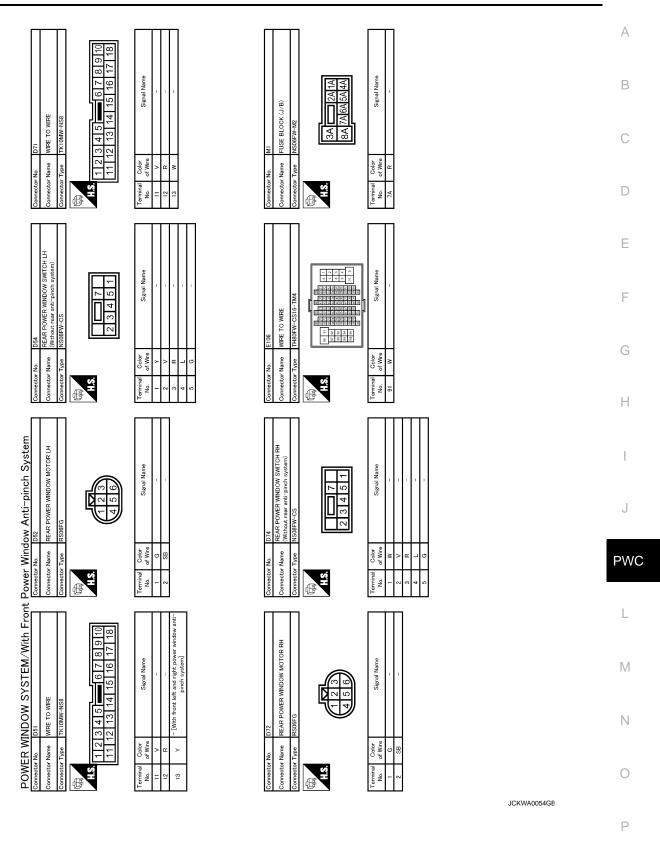
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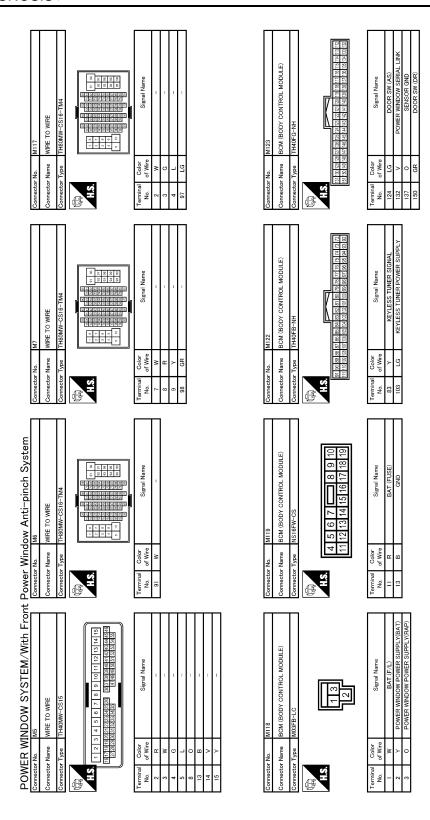






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Fail Safe

POWER WINDOW SYSTEM/With Front Power Window Anti-pinch System

WIRE TO WIRE

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS ANTTENA AMP	Inhibit engine cranking	Erase DTC

< ECU DIAGNOSIS >

Display contents of CONSULT	Fail-safe	Cancellation
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals have been received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Starter control relay signal • Starter relay status signal
B2563: HI VOLTAGE	Inhibit engine crankingInhibit steering lock	500 ms after the power supply voltage decreases to less than 18 V
B2601: SHIFT POSITION	Inhibit steering lock	500 ms after the following signal reception status becomes consistent • Selector lever P position switch signal • P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Vehicle speed: 4 /h or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (battery voltage) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions is fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (battery voltage) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP SW	Inhibit steering lock	500 ms after any of the following BCM recognition conditions is fulfilled • Ignition switch is in the ON position - Power position: IGN - Selector lever P/N position signal: Except P and N positions (0 V) - Interlock/PNP switch signal (CAN): OFF • Status 2 - Ignition switch is in the ON position - Selector lever P/N position signal: P or N position (battery voltage) - PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent • Steering lock relay signal (Request signal) • Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has become consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)

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[FRONT WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent • Starter motor relay control signal • Starter relay status signal (CAN)
B2609: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (Battery voltage) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2612: S/L STATUS	Inhibit engine cranking Inhibit steering lock	When any of the following conditions is fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control inside BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions is fulfilled • Power position changes to ACC • Receives engine status signal (CAN)

DTC Inspection Priority Chart

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If some DTCs are displayed at the same time, perform inspections one by one based on the following priority chart.

Priority	DTC
1	B2562: LOW VOLTAGE B2563: HI VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTTENA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

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Priority		DTC	
4	B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP SW B2605: PNP SW B2606: S/L RELAY B2607: S/L RELAY B2609: S/L STATUS B2609: S/L STATUS B2609: S/L STATUS B2600: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2601: ACC RELAY B2611: ACC RELAY B2611: ACC RELAY B2615: BLOWER RELAY CIRC B2615: BLOWER RELAY CIRC B2616: IGN RELAY CIRC B2616: IGN RELAY CIRC B2617: STARTER RELAY CIRC B2618: BCM B2619: BCM B2619: BCM B2619: BCM CTOCK OR CIV		
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [CODE ERR] FR C1720: [CODE ERR] FR C1721: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1734: CONTROL UNIT 		
6	 B2621: INSIDE ANTENNA B2622: INSIDE ANTENNA B2623: INSIDE ANTENNA 		

NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases like 1
 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
 remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
 OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-33
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-34
U0415: VEHICLE SPEED SIG	_	_	_	BCS-35
B2013: ID DISCORD BCM-S/L	×	_		SEC-43
B2014: CHAIN OF S/L-BCM	×	_	_	SEC-44
B2190: NATS ANTTENA AMP	×	_	_	SEC-37
B2191: DIFFERENCE OF KEY	×	_	_	SEC-40
B2192: ID DISCORD BCM-ECM	×	_	_	<u>SEC-41</u>
B2193: CHAIN OF BCM-ECM	×	_	_	<u>SEC-42</u>
B2553: IGNITION RELAY	_	_	_	PCS-48
B2555: STOP LAMP	_	_	_	SEC-47
B2556: PUSH-BTN IGN SW	_	×	_	SEC-49
B2557: VEHICLE SPEED	×	×	_	SEC-51
B2560: STARTER CONT RELAY	×	×	_	<u>SEC-52</u>
B2562: LOW VOLTAGE	_	_	_	BCS-36
B2563: HI VOLTAGE	×	×	_	BCS-37
B2601: SHIFT POSITION	×	×	_	SEC-53
B2602: SHIFT POSITION	×	×	_	<u>SEC-56</u>
B2603: SHIFT POSI STATUS	×	×	_	<u>SEC-58</u>
B2604: PNP SW	×	×	_	SEC-61
B2605: PNP SW	×	×	_	SEC-63
B2606: S/L RELAY	×	×	_	SEC-65
B2607: S/L RELAY	×	×	_	SEC-66
B2608: STARTER RELAY	×	×	_	SEC-68
B2609: S/L STATUS	×	×	_	SEC-70
B260A: IGNITION RELAY	×	×	_	PCS-50
B260B: STEERING LOCK VNIT	_	×	_	SEC-74
B260C: STEERING LOCK VNIT	_	×		SEC-75
B260D: STEERING LOCK VNIT	_	×		SEC-76
B260F: ENG STATE SIG LOST	×	×		SEC-77
B2611: ACC RELAY	_	_		PCS-52
B2612: S/L STATUS	×	×	_	SEC-79
B2614: ACC RELAY CIRC	_	×		PCS-54
B2615: BLOWER RELAY CIRC	_	×	-	PCS-57

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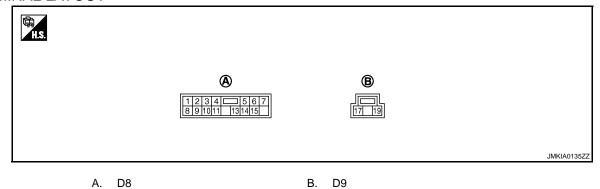
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CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2616: IGN RELAY CIRC	_	×	_	PCS-60
B2617: STARTER RELAY CIRC	×	×	_	SEC-83
B2618: BCM	×	×	_	PCS-63
B2619: BCM	×	×	_	<u>SEC-85</u>
B261A: PUSH-BTN IGN SW	_	×	_	<u>SEC-86</u>
B261E: VEHICLE TYPE	×	× (Turn ON for 15 seconds)	_	<u>SEC-88</u>
B2621: INSIDE ANTENNA	_	_	_	DLK-58
B2622: INSIDE ANTENNA	_	_	_	<u>DLK-60</u>
B2623: INSIDE ANTENNA	_	_	_	<u>DLK-62</u>
B26E1: ENG STATE NO RES	×	×	_	<u>SEC-78</u>
C1704: LOW PRESSURE FL	_	_	×	<u>WT-14</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-14</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-14</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-14</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-16</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-16</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-16</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-16</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-19</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-19</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-19</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-19</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-22</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-22</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-22</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-22</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-24</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-24</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-24</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-24</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-27</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-27</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-27</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-27</u>
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-30</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-31</u>

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW MAIN SWITCH

Tern	ninal No.	Wire	Description			Voltage [V]
+	-	color	Signal name	Signal name Input/ Condition Output		(Approx.)
1	Ground	W	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is UP at operated.	Battery voltage
2	Ground	LG	Encoder ground	_	_	0
3	Ground	GR	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	Battery voltage
4	Ground	Υ	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5	Ground	0	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	Battery voltage
6	Ground	Υ	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7	Ground	BR	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	Battery voltage
8	11	L	Front driver side power win- dow motor UP signal	Output	When front LH switch in power window main switch is UP at operated.	Battery voltage
9	2	0	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

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POWER WINDOW MAIN SWITCH

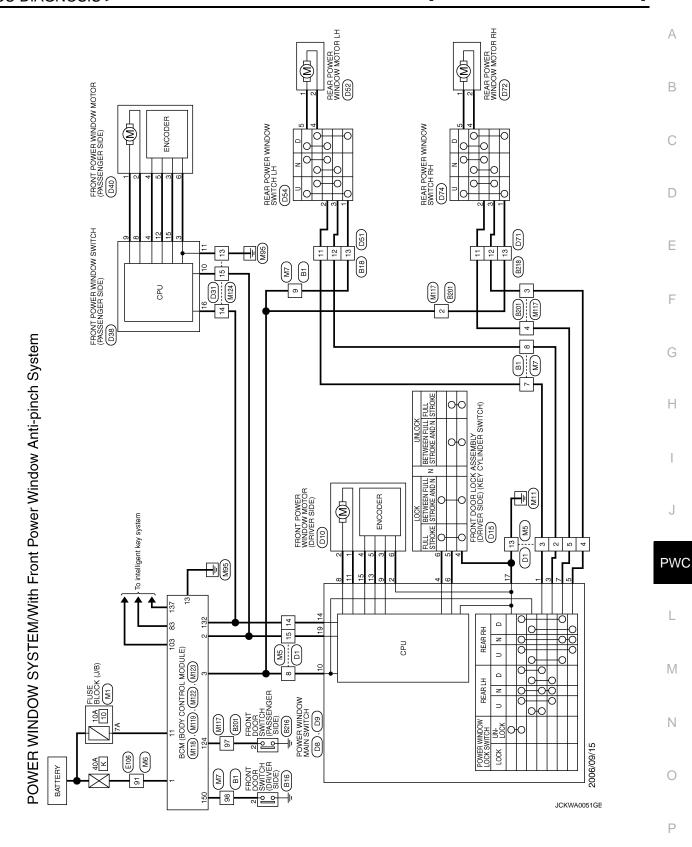
[FRONT WINDOW ANTI-PINCH]

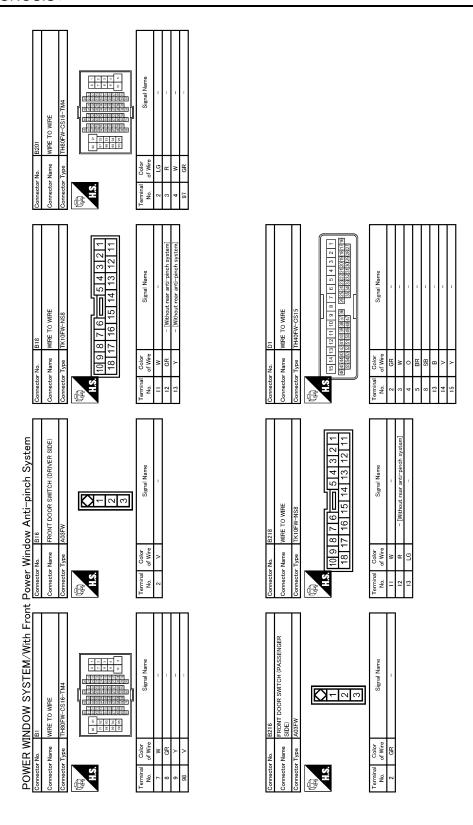
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Tern	ninal No.	Wire	Description			Voltogo [V]		
+	-	color	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)		
					IGN SW ON	Battery voltage		
10	Ground	SB	Rap signal	Input	Within 45 second after ignition switch is turned to OFF	Battery voltage		
					OD Trap Signal		When driver side or pas- senger side door is opened during retained power op- eration	0
11	8	G	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	Battery voltage		
13	2	Р	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms		
14	Ground	V	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB		
15	Ground	В	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10		
17	Ground	В	Ground	_	_	0		
19		Υ	Battery power supply	Input	_	Battery voltage		

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

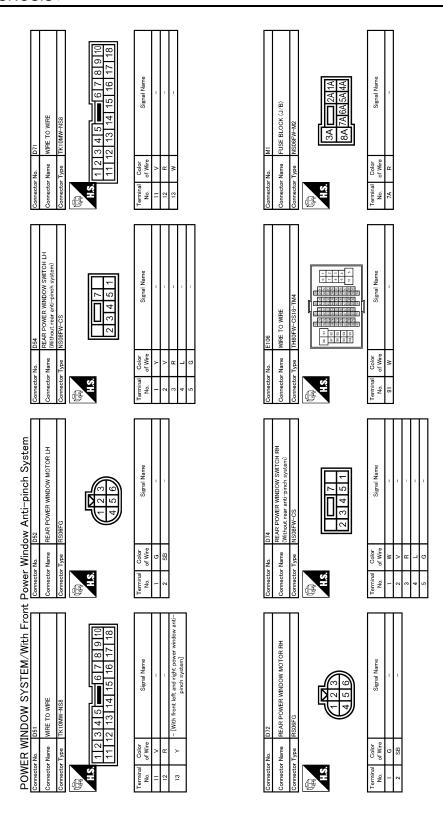
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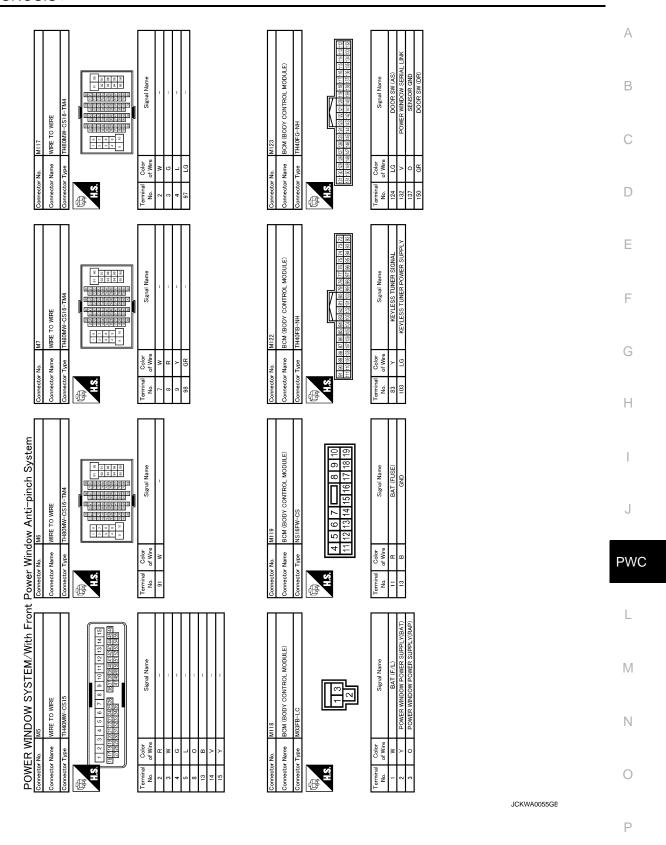


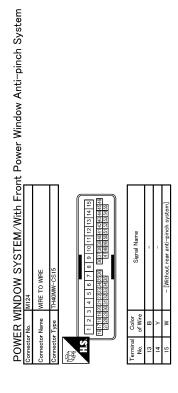
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Connector No. D10 Connector Name RROWT POWER WINDOW MOTOR (DRIVER SIDE) Connector Type NSOBFW-CS H.S. 1	No. of Wire Signal Name No. of Wire Signal Name 1	Connector No. D40 Connector Name FROMT POWER WINDOW MOTOR (PASSENDER SIDE) Connector Type MS06FW-CS ##\$ 1	Color Signal Name Color Name Color		A B C
Connector Name POWER WINDOW MAIN SWITCH Connector Type NSOSPW-CS ALS 17 18 19	Terminal Color Signal Name No. of Ware 17	Connector No. D38 Connector Name (PASSINGER SIDE) Connector Type (NS16FW-CS Connector Type (NS16FW-CS T 2 3 4 5 5 6 7 1 2 3 4 5 5 6 7	Terminal Color No. of Wire Signal Name No. of Wire Signal Name A B C Color Col		E F G
Power Window Anti-pinch System		Corrector Name WIRE TO WIRE	Terminal Color Signal Name No. Oliver Signal Name Oliver Ol		J PWC
DOWER WINDOW SYSTEM/With Front Connector No. D8 Connector No. D8 Connector No. D8 D9 D9 D9 D9 D9 D9 D9	Terminal Color No. of Wire 1	Connector No. D15 Connector Name FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) Connector Type E08FGY-RS H.S.	Terminal Color Nume Signal Name Nume Nu	ICKWWW.	M N
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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

< ECU DIAGNOSIS >

[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 fail-safe control.

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

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

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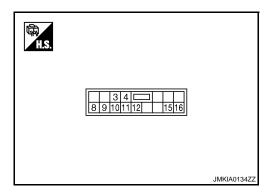
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FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

FRONT POWER WINDOW SWITCH

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

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

7	Terminal No.		Wire	Description			Voltago IVI
	+	-	color	Signal name	Input/ Output	Condition	Voltage [V] (Approx.)
	15	3	0	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
	16	Groun d	V	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

Wiring Diagram— POWER WINDOW CONTROL SYSTEM —

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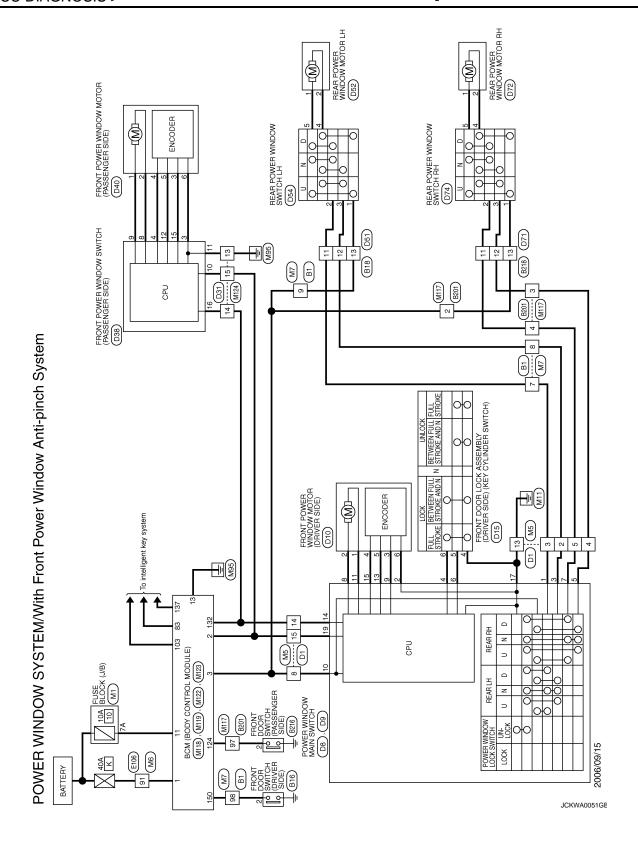
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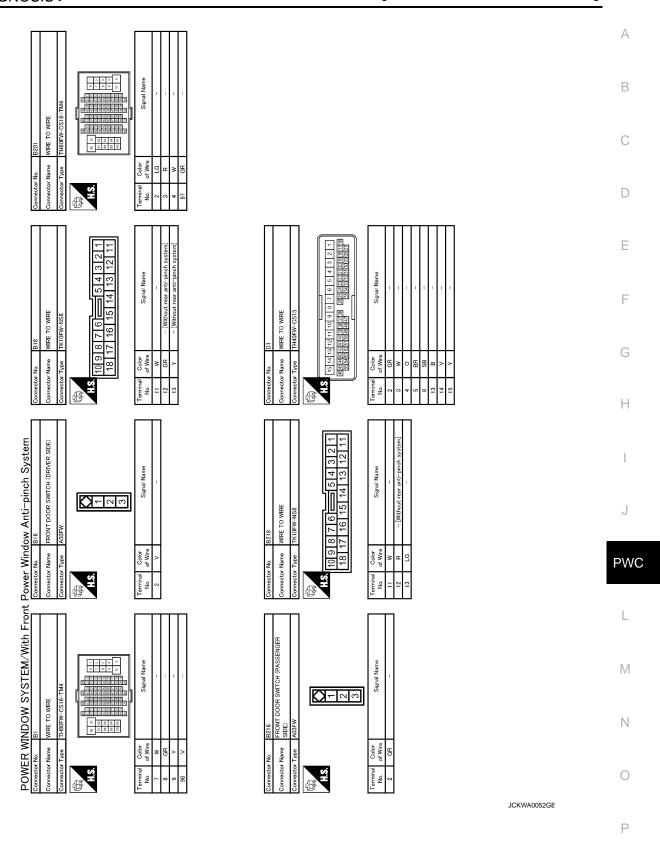
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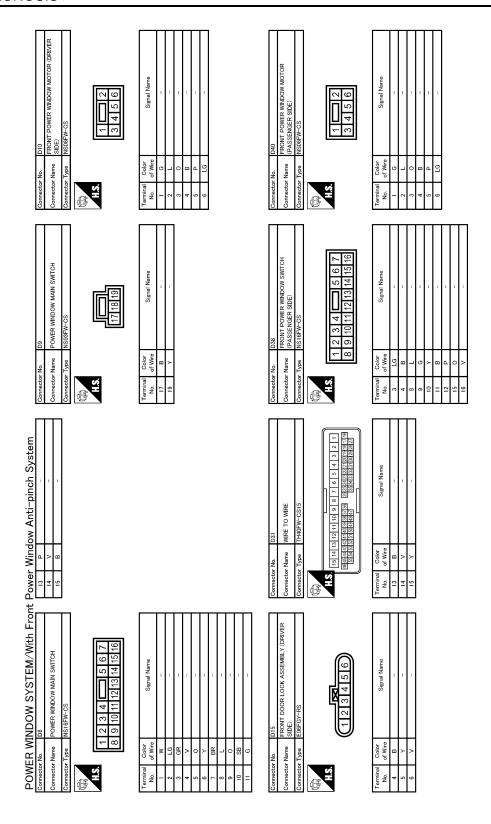
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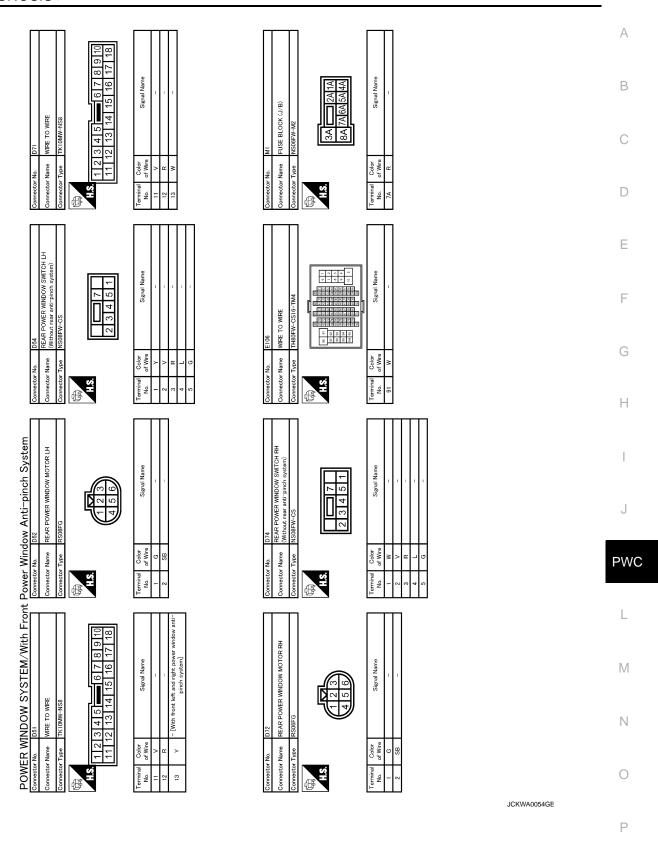
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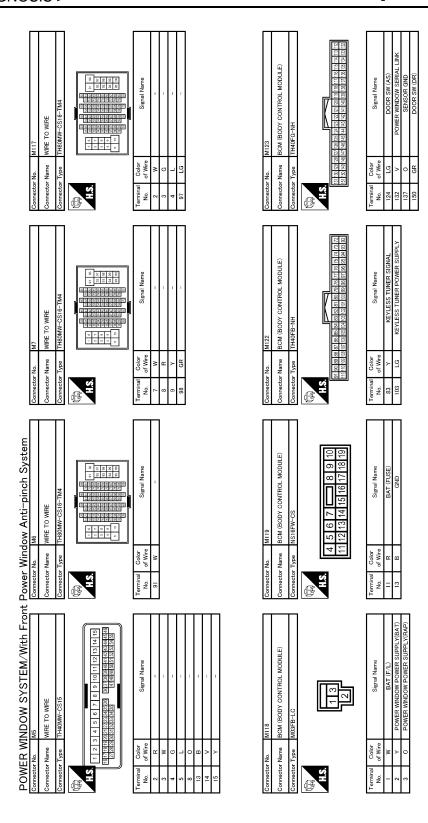




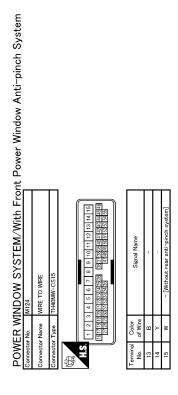


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FAIL-SAFE CONTROL

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 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.

NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH В **Diagnosis Procedure** INFOID:0000000000961725 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-38, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT Check power window switch main power supply and ground circuit. Refer to PWC-136, "POWER WINDOW MAIN SWITCH: Component Function Check". F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.check power window main switch serial circuit Check power window main switch serial circuit. Н Refer to PWC-136, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. 4.CHECK POWER WINDOW MAIN SWITCH Check power window main switch. Refer to PWC-136, "POWER WINDOW MAIN SWITCH: 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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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000000961726

 ${\bf 1.}{\sf CHECK}\;{\sf FRONT}\;{\sf POWER}\;{\sf WINDOW}\;{\sf MOTOR}\;({\sf DRIVER}\;{\sf SIDE})$

Check front power window motor.

Refer to PWC-144, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

SYMPTOM DIAGNOSIS >

IFRONT WINDOW ANTI-PINCH

< SYMPTOM DIAGNOSIS > [FRONT WIN	DOW ANTI-PINCH]	
FRONT PASSENGER SIDE POWER WINDOW ALONE DOE ATE	S NOT OPER-	Α
Diagnosis Procedure	INFOID:0000000000961727	В
1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)		
Check front power window switch (passenger side). Refer to PWC-140, "FRONT POWER WINDOW SWITCH: Component Function Check"		С
Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.		D
2.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CII Check front power window switch (passenger side) serial link circuit. Refer to PWC-162, "FRONT POWER WINDOW SWITCH: Component Function Check"	_	Е
Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.		F
3. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT		0
Check front power window motor (passenger side) circuit. Refer to PWC-145, "PASSENGER SIDE: Component Function Check".		G
Is the inspection result normal? YES >> Inspection end. NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".		Н
NO >> Oneok intermittent inoldent. Noter to one of the intermittent inoldent.		
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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000000961728

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-142, "REAR POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

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

Is the inspection result normal?

YES >> Inspection end.

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α Diagnosis Procedure INFOID:0000000000961729 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power winodw switch RH. Refer to PWC-142, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. D 2.CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. Refer to PWC-149, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Inspection end. >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". NO F Н J **PWC** L M Ν

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000000961730

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-151, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER Α SIDE) **Diagnosis Procedure** INFOID:0000000000961731 В 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement". Is the inspection result normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CHECK DOOR WINDOW SLIDING PART Е · A foreign material adheres to window glass or glass run rubber. Glass run rubber wear or deformation. · Sash is tilted too much or not enough. F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3. CHECK ENCODER CIRCUIT Check encoder circuit. Н Refer to PWC-153, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? YES >> Inspection end. NO >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

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

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000000961732

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-128, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-151, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-128</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-153, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:0000000000961734

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-156, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

DOES NOT OPERATE BY KEY CYLINDER SWITCH

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

DOES NOT OPERATE BY KEY CYLINDER SWITCH

Diagnosis Procedure

INFOID:0000000000961735

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-128</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) (KEY CYLINDER SWITCH)

Check front door lock assembly (driver side) (key cylinder switch).

Refer to PWC-158, "Component Function Check".

Is the inspection result normal?

YES >> Inspection end.

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

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000000961736

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to DLK-107, "Component Function Check".

Is the inspection result normal?

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

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000000961737

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to PWC-238, "Removal and Installation". After that, PWC-139, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

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

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
 injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
 Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRE-INSPECTION FOR DIAGNOSTIC

< ON-VEHICLE MAINTENANCE >

[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.

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ON-VEHICLE REPAIR

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

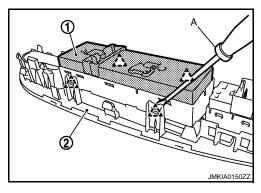
- 1. Remove the power window main switch finisher (2). Refer to INT-10, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

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



INSTALLATION

Install in the reverse order of removal.