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#### **DIAGNOSIS AND REPAIR WORK FLOW**

< BASIC INSPECTION >

## **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORK FLOW

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. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

## 4. IDENTIFY THE MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

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

>> GO TO 5.

## 5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

#### 6. FINAL CHECK

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

Are the malfunctions corrected?

YES >> INSPECTION END

NO >> GO TO 3.

#### INSPECTION AND ADJUSTMENT

#### < BASIC INSPECTION >

#### INSPECTION AND ADJUSTMENT

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000006259304

When battery negative terminal is disconnected, initialization is necessary.

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

- Power supply to the power window control unit is cut off by the removal f battery terminal or the battery fuse is blown.
- Disconnection and connection of power window control unit harness connector.
- Removal and installation of motor from regulator assembly.
- Operation of regulator assembly as an independent unit.
- Removal and installation of rear power window control unit.
- Removal and installation of door glass.
- Removal and installation of door glass run.

The operations as per the following cannot be performed while initialization is not complete.

- AUTO-UP operation
- Anti-pinch function
- Door key cylinder switch power window function

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement INFOID:0000000006259305

#### INITIALIZATION PROCEDURE

- 1. Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
- Turn ignition switch ON.
- 3. Operate power window switch to fully open door glass. (This operation is unnecessary if door glass is already fully open.)
- 4. Pull and hold power window switch UP (AUTO-UP operation). Even after door glass stops at the fully closed position, pull the switch for 2 seconds or more.
- 5. Initialization procedure is complete.
- 6. Inspect anti-pinch function.

#### CHECK ANTI-PINCH FUNCTION

- 1. Fully open door glass.
- Place a piece of wood near the fully closed position.
- 3. Close door glass completely using AUTO-UP.
- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.

#### **CAUTION:**

- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- It may switch to the fail-safe mode if open/close operation is performed continuously without fully closing door glass. Perform initialization in the above situation. Refer to PWC-80, "Fail Safe".
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- Anti-pinch function
- 3. Door key cylinder switch power window function

### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

When the control unit is replaced, initialization is necessary.

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

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#### INSPECTION AND ADJUSTMENT

#### < BASIC INSPECTION >

- Power supply to the power window control unit is cut off by the removal of battery terminal or the battery fuse is blown.
- Disconnection and connection of power window control unit harness connector.
- · Removal and installation of motor from regulator assembly.
- Disconnection and connection of battery negative terminal.
- Removal and installation of rear power window control unit.
- Removal and installation of door glass.
- Removal and installation of door glass run.

The following specified operations cannot be performed while initialization is not complete.

- AUTO-UP operation
- Anti-pinch function
- Door key cylinder switch power window function

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

#### INITIALIZATION PROCEDURE

- Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
- Turn ignition switch ON.
- Operate power window switch to fully open door glass. (This operation is unnecessary if door glass is already fully open.)
- 4. Pull and hold power window switch UP (AUTO-UP operation). Even after door glass stops at the fully closed position, pull the switch for 2 seconds or more.
- 5. Initialization procedure is complete.
- 6. Inspect anti-pinch function.

#### CHECK ANTI-PINCH FUNCTION

- 1. Fully open door glass.
- 2. Place a piece of wood near the fully closed position.
- 3. Close door glass completely using AUTO-UP.
- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.

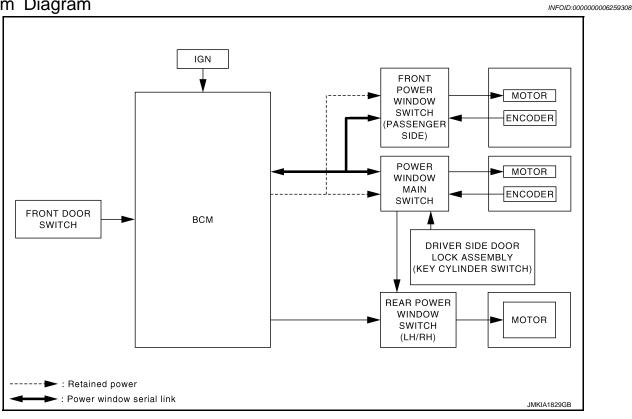
#### **CAUTION:**

- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- It may switch to the fail-safe mode if open/close operation is performed continuously without fully closing. Perform initialization in the above situation. Refer to PWC-80, "Fail Safe".
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder switch power window function

## SYSTEM DESCRIPTION

### POWER WINDOW SYSTEM

System Diagram



## System Description

INFOID:0000000006259309

#### POWER WINDOW SYSTEM

- Power window system is operable during the retained power operation timer after turning ignition switch OFF.
- Power window main switch can open/close door glass.
- Front and rear power window switch can open/close the corresponding door glass.
- AUTO UP/DOWN operation can be performed when front power window switch turns to AUTO.
- Power window lock switch can lock all power windows other than driver seat.
- Power window serial link transmits the signals from power window main switch to front power window switch (passenger side).
- If door glass receives resistance that is the specified value or more while power window of front seat is in AUTO-UP operation, power window of front seat operates in the reverse direction.
- Hold the door key cylinder to the LOCK or UNLOCK direction for 1.5seconds or more to OPEN or CLOSE from power window when ignition switch OFF.
- Front power windows open when pressing Intelligent Key unlock button for 3 seconds.

#### POWER WINDOW AUTO-OPERATION

- AUTO UP/DOWN operation can be performed when front 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 for 45 seconds after ignition switch turns OFF.

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PWC-7 Revision: 2011 November 2011 MURANO

#### **POWER WINDOW SYSTEM**

#### < SYSTEM DESCRIPTION >

#### RETAINED POWER FUNCTION CANCEL CONDITIONS

- Front door CLOSE (door switch OFF) → OPEN (door switch ON).
- When ignition switch turns ON again.
- When timer times out. (45 seconds)

#### POWER WINDOW LOCK FUNCTION

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 main switch.

#### POWER WINDOW SERIAL LINK

- Front power window switches and BCM transmit and receive the power window serial link.
- Power window serial link transmits the power window main switch operation signals and IGN signal to power window main switch module, front power window switch (passenger side) module.

#### ANTI-PINCH OPERATION

- Pinch the foreign matter in the door glass during AUTO-UP operation is the anti-pinch function that lowers the door glass 150 mm (5.9 in) 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 door glass for 150 mm (5.9 in) after it detects encoder pulse signal frequency change.

#### OPERATION CONDITION

• When front 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.

#### DOOR KEY CYLINDER SWITCH POWER WINDOW FUNCTION

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

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

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

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

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

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-57. "INTELLIGENT KEY: CONSULT-III Function (BCM - INTELLIGENT KEY)".

#### NOTE:

Use CONSULT-III to change settings.

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

## Component Parts Location

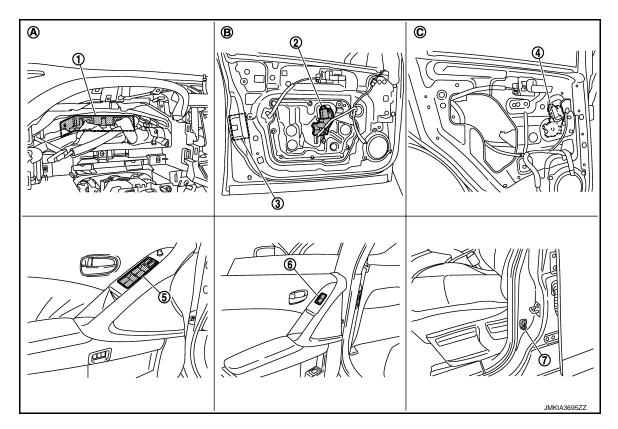
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- **BCM** M118, M119, M122, M123
- Rear power window motor LH D82
- 7. Front door switch (driver side)
- A. Behind the combination meter
- 2. Front power window motor (driver side)
- 5. Power window main switch D5, D6
- View with front door finisher removed. B.
- Front door lock assembly (driver
  - Door key cylinder switch D9
- 6. Rear power window switch LH D83

C. View with rear door finisher removed.

## **Component Description**

INFOID:0000000006259311

Component	Function		
BCM	Supplies power to power window switch     Controls retained power function		
Power window main switch	<ul> <li>Directly controls all power window motor of all doors</li> <li>Controls anti-pinch operation of power window</li> </ul>		
Front power window switch (passenger side)	<ul> <li>Controls power window motor of front passenger side door</li> <li>Controls anti-pinch operation of power window</li> </ul>		
Rear power window switch (LH & RH)	Controls power window motor of rear right and left doors		
Front power window motor (driver side)	<ul> <li>Integrates the encoder and power window motor</li> <li>Starts operating with signals from power window main switch</li> <li>Outputs front power window motor (driver side) rotation as a pulse signal to power window main switch</li> </ul>		
Front power window motor (passenger side)	<ul> <li>Integrates the encoder and power window motor</li> <li>Starts operating with signals from power window main switch &amp; front power window switch (passenger side)</li> <li>Outputs front power window motor (passenger side) rotation as a pulse signal to front power window switch (passenger side)</li> </ul>		

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## **POWER WINDOW SYSTEM**

## < SYSTEM DESCRIPTION >

Component	Function
Rear power window motor (LH & RH)	Starts operating with signals from power window main switch & rear power window switch (LH & RH)
Front door lock assembly (driver side) Door Key cylinder switch	Transmits operation condition of Key cylinder switch to power window
Front door switch	Door open/close condition and transmits to BCM

## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

## 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 Diagnostic Result	Displays the diagnosis results judged by BCM.		
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.		
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	<ul><li>Read and save the vehicle specification.</li><li>Write the vehicle specification when replacing BCM.</li></ul>		

#### 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.

×: Applicable item

System	Sub system selection item -	Diagnosis mode			
System		Work Support	Data Monitor	Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	
Interior room lamp timer	INT LAMP	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×* <sup>1</sup>	×	×	
Turn signal and hazard warning lamps	FLASHER	×	×	×	
_	AIR CONDITONER*2				
Intelligent Key system     Engine start system	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		
Body control system	ВСМ	×			
NVIS - NATS	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	
Back door opener system	TRUNK		×	×	
Vehicle security system	THEFT ALM	×	×	×	
RAP system	RETAINED PWR		×		
Signal buffer system	SIGNAL BUFFER		×	X	
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×	

#### NOTE:

- \*1: For models with rain sensor this mode is displayed, but is not used.
- \*2: This item is displayed, but is not used.

#### FREEZE FRAME DATA (FFD)

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## **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

CONSULT screen item	Indication/Unit	Description			
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected			
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*)		
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)		
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"		
	ACC>ON		While turning power supply position from "ACC" to "IGN"		
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)		
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)		
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)		
	ACC>OFF		While turning power supply position from "ACC" to "OFF"		
	OFF>LOCK	Power position status of the moment a particular DTC is detected	01 11 71		
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"		
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING		
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*) to low power consumption mode		
	LOCK		Power supply position is "LOCK"*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)		
	ACC		Power supply position is "ACC" (Ignition switch ACC)		
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)		
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)		
	CRANKING		Power supply position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	<ul> <li>The number of times that ignition switch is turned ON after DTC is detected</li> <li>The number is 0 when a malfunction is detected now.</li> <li>The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON.</li> <li>The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.</li> </ul>			

#### NOTE:

- \*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met.
- Closing door
- · Opening door
- · Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

#### RETAINED PWR

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

INFOID:0000000006259313

Data monitor

## **DIAGNOSIS SYSTEM (BCM)**

## < SYSTEM DESCRIPTION >

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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#### < DTC/CIRCUIT DIAGNOSIS >

## DTC/CIRCUIT DIAGNOSIS

## POWER SUPPLY AND GROUND CIRCUIT

**BCM** 

BCM : Diagnosis Procedure

INFOID:0000000006259314

### 1. CHECK FUSE AND FUSIBLE LINK

- 1.Turn ignition switch OFF.
- 2. Check that the following fuse and fusible link are not blown.

Terminal No.	Signal name	Fuse and fusible link No.
1	Battery power supply	L(40A)
11	Battery power supply	10 (10A)

#### Is the fuse fusing?

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

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connectors.
- Check voltage between BCM harness connector and ground.

(+) BCM		(-)	Voltage (Approx.)
Connector	Terminal		(ripprox.)
M118	1	Ground	Pottory voltage
M119	11	Giound	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity	
Connector Terminal		Ground	Continuity	
M119	13		Existed	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

#### POWER WINDOW MAIN SWITCH

#### POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000006259315

## 1. CHECK POWER SUPPLY

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

#### < DTC/CIRCUIT DIAGNOSIS >

Power windo	(+) Power window main switch		Voltage (V) (Approx.)	
Connector	Terminal		(, 44, 2, 11)	
D5	10	Ground	Pottory voltage	
D6	19	Ground	Battery voltage	

#### Is the inspection result normal?

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

## 2.CHECK POWER SUPPLY CIRCUIT

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

В	CM	Power window main switch		Power window main switch		Power window main switch		Continuity
Connector	Terminal	Connector Terminal		Continuity				
M118	2	D6	19	Existed				
M1118	3	D5	10	LAISIEU				

Check continuity between BCM harness connector and ground.

В	BCM		Continuity	
Connector	Terminal	Ground	Continuity	
M118	2	Ground	Not existed	
IVITIO	3		Not existed	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-85, "Exploded View".

>> Repair or replace harness. NO

## 3. CHECK GROUND CIRCUIT

Turn ignition switch OFF.

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

Power window		Continuity	
Connector Terminal		Ground	Continuity
D6	17		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

## 1. CHECK POWER SUPPLY

- Turn ignition switch OFF.
- 2. Disconnect front power window switch (passenger side) connector.
- Turn ignition switch ON.

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

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#### < DTC/CIRCUIT DIAGNOSIS >

(+)			Voltage (V) (Approx.)	
Front power window s	Front power window switch (passenger side)			
Connector	Connector Terminal		, , ,	
D45	10	Ground	Battery voltage	

#### Is the inspection result normal?

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

## 2.CHECK POWER SUPPLY CIRCUIT

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

В	ВСМ		Front power window switch (passenger side)	
Connector	Terminal	Connector Terminal		Continuity
M118	2	D45	10	Existed

4. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M118	2		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-85, "Exploded View".

NO >> Repair or replace harness.

## 3. CHECK GROUND CIRCUIT

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

Front power window sw		Continuity	
Connector Terminal		Ground	Continuity
D45	11		Existed

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

#### REAR POWER WINDOW SWITCH

## REAR POWER WINDOW SWITCH: Diagnosis Procedure

**1** 

INFOID:0000000006259317

## 1. CHECK POWER SUPPLY

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

(+) Rear power window switch			(–)	Voltage (V) (Approx.)	
Conr	Connector Terminal			(, 'bb.ow')	
LH	D83	1	Ground	Battony voltago	
RH	D103	· ·	Giouna	Battery voltage	

#### < DTC/CIRCUIT DIAGNOSIS >

#### Is the inspection result normal?

>> INSPECTION END

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT

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

В	BCM Rear power window switch		Rear power window switch				
Connector	Terminal	Connector		Terminal	Continuity		
M110	2	LH	D83	1	Existed		
WITO	M118 3	RH D103		RH D103		<b>I</b>	Existed

4. Check continuity between BCM harness connector and ground.

BCM			Continuity	
Connector	Connector Terminal		Continuity	
M118	3		Not existed	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-85, "Exploded View".

NO >> Repair or replace harness.

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#### **REAR POWER WINDOW SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

### REAR POWER WINDOW SWITCH

Description INFOID:0000000000259318

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

## Component Function Check

INFOID:0000000006259319

## 1. CHECK REAR POWER WINDOW SWITCH FUNCTION

Check rear power window motor operation with rear power window switch.

#### Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Refer to PWC-18, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000006259320

## 1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

Rea	(+)  Rear power window switch		(–) Condition		dition	Voltage (V) (Approx.)			
Conr	nector	Terminal							
		2	Power window main switch: LH	UP	Battery voltage				
1.11	D83			DOWN	0				
LH		2		main switch: LH	UP	0			
		3	Ground		DOWN	Battery voltage			
		2	2	2	2	Giouna		UP	Battery voltage
DII	D402						Power window	DOWN	0
RH	D103		•	•	•	†	main switch: RH	UP	0
		3					DOWN	Battery voltage	

#### Is the inspection result normal?

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

## 2.CHECK REAR POWER WINDOW SWITCH CIRCUIT

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

Power windo	w main switch	Rear power window switch		Rear power window switch		tch	Continuity
Connector	Terminal	Connector		Terminal	Continuity		
	1	LH	D83	2			
D5	3	LII	D63	3	Existed		
DS	5	RH	D103	3			
	7	IXΠ		2			

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

#### **REAR POWER WINDOW SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

Power windo	Power window main switch		Continuity	
Connector	Terminal		Continuity	
	1	Ground		
D5	3	Ground	Not existed	
Do	5		Not existed	
	7	1		

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> Repair or replace harness.

## 3.check rear power window switch

Check rear power window switch.

Refer to PWC-19, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window switch. Refer to <u>PWC-109</u>, "Removal and Installation".

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

### Component Inspection

1. CHECK REAR POWER WINDOW SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch connector.
- 3. Check rear power window switch terminals.

Rear power window switch	Terminal		Rear power window switch condition	Continuity
	1	5	UP	
	3	4	- Or	
D83 (LH)	3	4	NEUTRAL	Existed
D103 (RH)	2	5	NEOTIVAL	
	1	4	DOWN	
	2	5	DOWN	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace rear power window switch. Refer to PWC-109, "Removal and Installation".

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#### < DTC/CIRCUIT DIAGNOSIS >

## POWER WINDOW MOTOR

**DRIVER SIDE** 

DRIVER SIDE : Description

INFOID:0000000006259322

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

DRIVER SIDE: Component Function Check

INFOID:0000000006259323

## 1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) OPERATION

Check front power window motor (driver side) operation with power window main switch.

#### Is the inspection result normal?

YES >> Front power window motor (driver side) is OK.

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

### DRIVER SIDE : Diagnosis Procedure

INFOID:0000000006259324

## 1. CHECK POWER WINDOW MOTOR (DRIVER SIDE) INPUT SIGNAL

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

(+) Power window motor (driver side)		(–)	Condition		Voltage (V) (Approx.)	
Connector	Terminal				(	
	1		Power window main switch	UP	0	
D7	D7 2	Ground		DOWN	Battery voltage	
D1				UP	Battery voltage	
				DOWN	0	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK POWER WINDOW MOTOR CIRCUIT

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

Power windo	Power window main switch		Front power window motor (driver side)		
Connector	Terminal	Connector	Terminal	Continuity	
D5	8	D7	2	Existed	
D3	11		1	LXISIEU	

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

Power windo	w main switch		Continuity	
Connector	Connector Terminal		Continuity	
D5	8	Ground	Not existed	
DS	11		INOL EXISTED	

#### Is the inspection result normal?

YES >> Replace power window main switch.Refer to PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

#### < DTC/CIRCUIT DIAGNOSIS >

## 3.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check front power window motor (driver side).

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

#### Is the inspection result normal?

YES >> GO TO 4.

>> Replace power window motor (driver side). Refer to GW-21, "Removal and Installation". NO

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

### DRIVER SIDE: Component Inspection

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

- Turn ignition switch OFF.
- Disconnect front power window motor (driver side) connector.
- Check motor operate by connecting the battery voltage directly to front power window motor (driver side) terminals.

Front power			
Connector	Ter	minal	Motor condition
	(+)	(-)	
D7	1	2	DOWN
	2	1	UP

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front power window motor (driver side). Refer to GW-21, "Removal and Installation".

#### 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

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

Check front power window motor (passenger side) operation with power window main switch or front power window switch (passenger side).

#### Is the inspection result normal?

YES >> Power window motor (passenger side) is OK.

>> Refer to PWC-21, "PASSENGER SIDE : Diagnosis Procedure".

### PASSENGER SIDE : Diagnosis Procedure

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

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

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**PWC-21** 

#### < DTC/CIRCUIT DIAGNOSIS >

(+) Front power window motor (passenger side)		(–) Con		dition	Voltage (V) (Approx.)
Connector	Terminal				(11 - 7
	2	- Ground	Front power win- dow switch (passenger side)	UP	Battery voltage
D46				DOWN	0
D40				UP	0
				DOWN	Battery voltage

#### Is the inspection result normal?

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

## 2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT

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

Front power window switch (passenger side)		Front power window r	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
D45	9	D46	1	Existed
D43	8	540	2	LAISIGU

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

Front power window s	witch (passenger side)		Continuity	
Connector	Connector Terminal		Continuity	
 D45	9	Ground	Not existed	
D40	8		Not Calsted	

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

## 3.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

Check front power window motor (passenger side).

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

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front power window motor (passenger side). Refer to <u>GW-21, "Removal and Installation"</u>.

#### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

#### >> INSPECTION END

## PASSENGER SIDE: Component Inspection

INFOID:0000000006259329

## 1. CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)

- Turn ignition switch OFF.
- 2. Disconnect front power window motor (passenger side) connector.
- Check motor operate by connecting the battery voltage directly to front power window motor (passenger side) terminals.

#### < DTC/CIRCUIT DIAGNOSIS >

Front power v			
Connector	Ter	minal	Motor condition
Connector	(+)	(-)	
D46	2	1	DOWN
D46	1	2	UP

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front power window motor (passenger side). Refer to <u>GW-21, "Removal and Installation"</u>.

#### REAR LH

### **REAR LH: Description**

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

## **REAR LH: Component Function Check**

## 1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

Check rear power window motor LH operation with power window main switch or rear power window switch LH.

#### Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-23, "REAR LH : Diagnosis Procedure"

## REAR LH: Diagnosis Procedure

## ${\sf 1.}$ CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

`	(+) Rear power window motor LH		Con	Condition	
Connector	Terminal				(Approx.)
	4	Ground	Rear power window switch LH	UP	Battery voltage
D82	I			DOWN	0
D62	2			UP	0
	3			DOWN	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

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

Rear power wi	ndow switch LH	Rear power window motor LH  Connector Terminal		Continuity
Connector	Terminal			Continuity
D83	4	D82	3	Existed
	5	D02	1	LAISIEU

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#### < DTC/CIRCUIT DIAGNOSIS >

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

Rear power w	Rear power window switch LH		Continuity	
Connector	Terminal	Ground	Continuity	
D83	4	Ground	Not existed	
D03	5		NOT EXISTED	

#### Is the inspection result normal?

YES >> Replace rear power window switch LH.Refer to PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

## 3.CHECK REAR POWER WINDOW MOTOR LH

#### Check rear power window motor LH.

Refer to PWC-24, "REAR LH: Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window motor LH. Refer to <u>GW-26, "Removal and Installation"</u>.

#### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

#### >> INSPECTION END

## REAR LH: Component Inspection

INFOID:0000000006259333

#### COMPONENT INSPECTION

## 1. CHECK REAR POWER WINDOW MOTOR LH

- Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH connector.
- 3. Check motor operate by connecting the battery voltage directly to rear power window motor LH terminals.

Rear			
Connector	Teri	minal	Motor condition
Connector	(+)	(-)	
D82	3	1	DOWN
D02	1	3	UP

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace rear power window motor LH. Refer to <u>GW-26</u>, "Removal and Installation".

#### REAR RH

#### **REAR RH**: Description

INFOID:0000000006259334

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:0000000006259335

## 1. CHECK REAR POWER WINDOW MOTOR RH OPERATION

Check rear power window motor RH operation with power window main switch or rear power window switch RH.

#### Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Refer to PWC-25, "REAR RH: Diagnosis Procedure".

#### < DTC/CIRCUIT DIAGNOSIS >

## **REAR RH: Diagnosis Procedure**

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## 1. CHECK REAR POWER WINDOW MOTOR RH INPUT SIGNAL

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

(+) Rear power window motor RH		(-)		dition	Voltage (V) (Approx.)
Connector	Terminal				(, , , , , , , , , , , , , , , , , , ,
	4			UP	Battery voltage
D102	<b>'</b>	Cround	Rear power win- dow switch RH	DOWN	0
D102		Ground dow switch RH		UP	0
	3		DOWN	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

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

Rear power w	indow switch RH	Rear power window motor RH  Connector Terminal		Continuity
Connector	Terminal			Continuity
D103	4	D102	3	Existed
D103	5	D 102	1	LXISIEU

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

Rear power v	Rear power window switch RH		Continuity
Connector	Terminal	Cround	Continuity
D103	4	Ground	Not existed
D103	5		Not existed

#### Is the inspection result normal?

YES >> Replace rear power window switch RH.Refer to PWC-109, "Removal and Installation".

NO >> Repair or replace harness.

## 3.check rear power window motor RH

Check rear power window motor RH.

Refer to PWC-26, "REAR RH: Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window motor RH. Refer to <u>GW-26, "Removal and Installation"</u>.

#### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

>> INSPECTION END

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#### < DTC/CIRCUIT DIAGNOSIS >

## **REAR RH: Component Inspection**

INFOID:0000000006259337

#### COMPONENT INSPECTION

## 1. CHECK REAR POWER WINDOW MOTOR RH

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor RH connector.
- Check motor operation by connecting the battery voltage directly to rear power window motor RH terminals.

Rear p			
Connector	Teri	minal	Motor condition
Connector	(+)	(-)	
D102	3	1	DOWN
D102	1	3	UP

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace rear power window motor RH. Refer to <u>GW-26, "Removal and Installation"</u>.

#### < DTC/CIRCUIT DIAGNOSIS >

## **ENCODER CIRCUIT**

### **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:0000000006259339

### 1. CHECK ENCODER OPERATION

Check driver side door glass perform AUTO open/close operation normally by power window main switch.

### Is the inspection result normal?

YES >> Encoder is OK.

NO >> Refer to PWC-27, "DRIVER SIDE : Diagnosis Procedure".

## DRIVER SIDE: Diagnosis Procedure

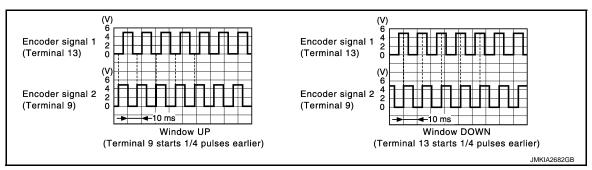
INFOID:0000000006259340

### 1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.

2. Check signal between power window main switch harness connector and ground using oscilloscope.

	(+)		Cianal	
Power windo	ow main switch	(–)	Signal (Reference value)	
Connector	Terminal		(	
	9	Ground	Refer to following signal	
D3	13	Giodila	ixerer to following signal	



#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-109, "Removal and Installation".

NO >> GO TO 2.

## 2.CHECK ENCORDER SIGNAL CIRCUIT

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 harness connector and front power window motor (driver side) harness connector.

Power windo	w main switch	Front power window motor (driver side)  Connector Terminal		Continuity
Connector	Terminal			
D5	9	D7	3	Existed
	13	וט	5	LAISTEU

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

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#### < DTC/CIRCUIT DIAGNOSIS >

Power wind	Power window main switch		Continuity
Connector	Terminal	Ground	Continuity
	9	Ground	Not existed
DS	13		NOT EXISTED

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.check encorder power supply

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

(+) Front power window motor (driver side)		(–)	Voltage (V) (Approx.)	
Connector	Terminal		(11 - )	
D7	4	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

### 4. CHECK ENCORDER POWER SUPPLY CIRCUIT

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

Power windo	w main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D5	15	D7	4	Existed

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	15		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> Repair or replace harness.

## 5. CHECK GROUND CIRCUIT 1

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

Power windo	Power window main switch		Front power window motor (driver side)	
Connector	Terminal	Connector Terminal		Continuity
D5	2	D7	6	Existed

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### 6.CHECK GROUND CIRCUIT 2

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Connect power window main switch connector.
- 2. Check continuity between power window main switch harness connector and ground.

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D5	2		Existed

#### Is the inspection result normal?

YES >> Replace front power window motor (driver side). Refer to <u>GW-21, "Removal and Installation"</u>.

NO >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

### PASSENGER SIDE

### PASSENGER SIDE: Description

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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

INFOID:0000000006259342

### 1. CHECK ENCODER OPERATION

Check passenger side door glass perform AUTO open/close operation normally by power window main switch or front power window switch (passenger side).

#### Is the inspection result normal?

YES >> Encoder is OK.

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

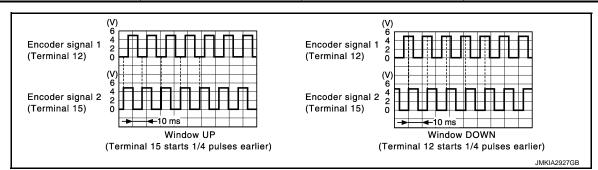
## PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000006259343

## 1. CHECK ENCODER SIGNAL

- 1. Turn ignition switch ON.
- Check signal between front power window switch (passenger side) harness connector and ground using oscilloscope.

(	+)		Cianal	
Front power window s	switch (passenger side)	(–)	Signal (Reference value)	
Connector	Terminal		,	
	12	Ground	Refer to following signal	
D40	15	Ground	Neier to following signal	



#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> GO TO 2.

## 2. CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

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#### < DTC/CIRCUIT DIAGNOSIS >

- 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) harness connector and front power window motor (passenger side) harness connector.

Front power window switch (passenger side)		Front power window motor (passenger side)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
D45	12	D46	5	Existed	
	15		3	LXISTEU	

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

Front power window s	witch (passenger side)		Continuity
Connector	Terminal	Ground	Continuity
 D45	12		Not existed
D43	15		NOT GXISTED

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.CHECK ENCORDER POWER SUPPLY

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

Front power window r	+) motor (passenger side)	(-)	Voltage (V) (Approx.)	
Connector	Terminal		, , ,	
D46	4	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

## 4. CHECK ENCODER POWER SUPPLY 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) harness connector and front power window motor (passenger side) harness connector.

Front power window s	switch (passenger side)	Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D45	4	D46	4	Existed

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

Front power window s	witch (passenger side)		Continuity	
Connector	Terminal	Ground	Continuity	
D45	4		Not existed	

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation"

NO >> Repair or replace harness.

### CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

#### < DTC/CIRCUIT DIAGNOSIS >

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

Front power window s	switch (passenger side)	Front power window motor (passenger side)  Connector Terminal		Continuity	
Connector	Terminal			Continuity	
D45	3	D46	6	Existed	

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

## 6. CHECK GROUND CIRCUIT 2

- Connect front power window switch (passenger side) connector.
- 2. Check continuity between front power window switch (passenger side) harness connector and ground.

Front power window switch (passenger side)		Continuity	
Connector	Terminal	Ground	Continuity
D45	3		Existed

#### Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to GW-21, "Removal and Installation".

NO >> Replace front power window switch (passenger side). Refer to PWC-109, "Removal and Installation".

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#### < DTC/CIRCUIT DIAGNOSIS >

# POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

### POWER WINDOW MAIN SWITCH: Description

INFOID:0000000006259344

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, 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:00000000006259345

## 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

#### (III) With CONSULT-III

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to DLK-55, "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-32, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

## POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000006259346

## 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

(+)  Power window main switch  Connector Terminal		(-)	Signal (Reference value)	
D5	14	Ground	(V) 15 10 5 0 10 ms  JPMIA0013GB	

#### Is the inspection result normal?

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

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

#### < DTC/CIRCUIT DIAGNOSIS >

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

(+)			Voltage (V) (Approx.)	
Power window main switch		(–)		
Connector	Terminal		, , , , , , , , , , , , , , , , , , ,	
D5	14	Ground	Battery voltage	

#### Is the measurement value within the specification?

YES >> Replace power window main switch. Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> GO TO 3.

## ${f 3.}$ CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

В	CM Power windo		w main switch	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M123	132	D5	14	Existed

4. Check continuity between BCM connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M123	132		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-85, "Exploded View".

NO >> Repair or replace harness.

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-44, "Intermittent Incident".

#### >> INSPECTION END

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Description

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, 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

Revision: 2011 November

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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#### < DTC/CIRCUIT DIAGNOSIS >

#### (P) With CONSULT-III

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT-III. Refer to DLK-55, "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 SVV	UNLOCK	: ON	

#### Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-34</u>, "<u>FRONT POWER WINDOW SWITCH (PASSENGER SIDE)</u>: <u>Diagnosis Procedure</u>".

### FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

INFOID:0000000006259349

## 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

(+)  Front power window switch (passenger side)  Connector Terminal		(-)	Signal (Reference value)
D45	16	Ground	(V) 15 10 5 0 10 ms  JPMIA0013GB

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-109">PWC-109</a>, "Removal and Installation".

NO >> GO TO 2.

## 2.CHECK POWER WINDOW SERIAL LINK SIGNAL

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

(+) Front power window switch (passenger side)		(-)	Voltage (V) (Approx.)	
Connector	Terminal		( 11. 51.9)	
D45	16	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-109, "Removal and Installation".

NO >> GO TO 3.

## 3.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.

#### < DTC/CIRCUIT DIAGNOSIS >

В	CM	Front power window s	witch (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M123	132	D45	16	Existed

4. Check continuity between BCM connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M123	132		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-85, "Exploded View".

NO >> Repair or replace harness.

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## **BCM (BODY CONTROL MODULE)**

< ECU DIAGNOSIS INFORMATION >

## **ECU DIAGNOSIS INFORMATION**

## BCM (BODY CONTROL MODULE)

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
TIX WIF LIXTII	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
FR WIPER IN I	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
RR WIPER ON	Other than rear wiper switch ON	Off
KK WIF LIX ON	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
KK WIFEK IIVI	Rear wiper switch INT	On
RR WASHER SW	Rear washer switch OFF	Off
KK WASHEK SW	Rear washer switch ON	On
RR WIPER STOP	Rear wiper is in STOP position	Off
RR WIPER STOP	Rear wiper is not in STOP position	On
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 LAMD CW/	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
LI DEVIN 200	Lighting switch HI	On
LIEAD LAMD CW/4	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
HEAD LAMD CW 2	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
DA CCINIC CIVI	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
ALITO LICHT CM	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On
ED EOC CW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On

Monitor Item	Condition	Value/Status	
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off	
	Driver door closed	Off	
DOOR SW-DR	Driver door opened	On	
DOOR SW-AS	Passenger door closed	Off	
DOOR SW-AS	Passenger door opened	On	
DOOR SW-RR	Rear RH door closed	Off	
DOOR SW-RR	Rear RH door opened	On	
DOOD CIW DI	Rear LH door closed	Off	
DOOR SW-RL	Rear LH door opened	On	
DOOR SW-BK	Back door closed	Off	
DOOR SW-BK	Back door opened	On	
CDL LOCK SW	Other than power door lock switch LOCK	Off	
ODL LOOK SW	Power door lock switch LOCK	On	
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off	
ODE UNEOOK SW	Power door lock switch UNLOCK	On	
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	Off	
	Driver door key cylinder LOCK position	On	
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	Off	
	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 OFF	Off	
NAZARD SW	Hazard switch is ON	On	
REAR DEF SW  NOTE: For models with BOSE audio system	Rear window defogger switch OFF	Off	
For models with BOSE audio system this item is not monitored.	Rear window defogger switch ON	On	F
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off	
TR/BD OPEN SW	Back door opener switch OFF	Off	
	While the back door opener switch is turned ON	On	
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off	
RKE-LOCK	LOCK button of Intelligent Key is not pressed	Off	
TAKE LOOK	LOCK button of Intelligent Key is pressed	On	
RKE-UNLOCK	UNLOCK button of Intelligent Key is not pressed	Off	
ININE-UNLOUN	UNLOCK button of Intelligent Key is pressed	On	
RKE-TR/BD	BACK DOOR OPEN button of Intelligent Key is not pressed	Off	
IXIXL-111/DD	BACK DOOR OPEN button of Intelligent Key is pressed	On	
RKE-PANIC	PANIC button of Intelligent Key is not pressed	Off	
INNETANIO	PANIC button of Intelligent Key is pressed	On	
RKE-P/W OPEN	UNLOCK button of Intelligent Key is not pressed	Off	
INLEF/W OF LIN	UNLOCK button of Intelligent Key is pressed and held	On	

Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	Off
RRE-WODE CHG	LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OF HOAL SENSOR	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
NEQ 3W -DIN	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
NEW OW THO	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -BD/TR	Back door request switch is not pressed	Off
ILM OAA -DD/ II/	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
FUSH SW	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
IGN KLTZ -F/D	Ignition switch in ON position	On
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
CLUCH SW	NOTE: The item is indicated, but not monitored.	Off
	The brake pedal is depressed when No. 7 fuse is blown	Off
BRAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is normal	On
BRAKE SW 2	The brake pedal is not depressed	Off
DRANE SW Z	Stop lamp switch 1 signal circuit is normal	On
DETE/CANCL SW	Selector lever in P position	Off
DETE/CANGE SW	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
51 1 1 W/W 5W	Selector lever in P or N position	On
S/L -LOCK	NOTE: The item is indicated, but not monitored.	Off
S/L -UNLOCK	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-F/B	NOTE: The item is indicated, but not monitored.	Off
UNLK SEN -DR	Driver door is unlocked	Off
CITEL OLIV DIX	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
ON INCLUITUD	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On

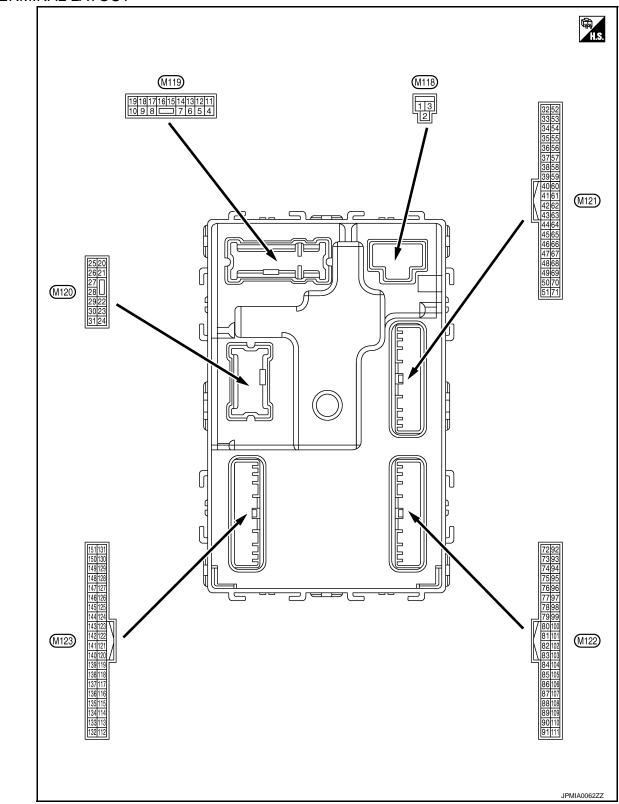
### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
SET DN JDDM	Selector lever in any position other than P and N	Off
SFT PN -IPDM	Selector lever in P or N position	On
SFT P -MET	Selector lever in any position other than P	Off
SFI F-WEI	Selector lever in P position	On
DET N. MET	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
	At engine cranking	Crank
	Engine running	Run
S/L LOCK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L UNLK-IPDM	NOTE: The item is indicated, but not monitored.	Off
S/L RELAY-REQ	NOTE: The item is indicated, but not monitored.	Off
VEH SPEED 1	While driving	Equivalent to speed- ometer reading
VEH SPEED 2	While driving	Equivalent to speed- ometer reading
DOOR STAT-DR	Driver door is locked	LOCK
	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door is unlocked	UNLOCK
D OK FLAG	Power supply position in LOCK position	Reset
D OK FLAG	Power supply position in any position other than LOCK	Set
DDMT ENC CTDT	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
ZEV SW. SLOT	Intelligent Key is not inserted into key slot	Off
KEY 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.	_
CONEDM ID ALL	The Intelligent Key ID that the key slot receives is not recognized by any Intelligent Key ID registered to BCM.	Yet
CONFRM ID ALL	The Intelligent Key ID that the key slot receives is recognized by any Intelligent Key ID registered to BCM.	Done
CONFIDM ID4	The Intelligent Key ID that the key slot receives is not recognized by the fourth Intelligent Key ID registered to BCM.	Yet
CONFIRM ID4	The Intelligent Key ID that the key slot receives is recognized by the fourth Intelligent Key ID registered to BCM.	Done

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Monitor Item	Condition	Value/Status
CONFIRM ID3	The Intelligent Key ID that the key slot receives is not recognized by the third Intelligent Key ID registered to BCM.	Yet
CONFIRM ID3	The Intelligent Key ID that the key slot receives is recognized by the third Intelligent Key ID registered to BCM.	Done
CONFIDM ID2	The Intelligent Key ID that the key slot receives is not recognized by the second Intelligent Key ID registered to BCM.	Yet
CONFIRM ID2	The Intelligent Key ID that the key slot receives is recognized by the second Intelligent Key ID registered to BCM.	Done
CONFIRM ID1	The Intelligent Key ID that the key slot receives is not recognized by the first Intelligent Key ID registered to BCM.	Yet
CONFINITION	The Intelligent Key ID that the key slot receives is recognized by the first Intelligent Key ID registered to BCM.	Done
TD 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
TP 4	The ID of fourth Intelligent Key is registered to BCM	Done
TD 0	The ID of third Intelligent Key is not registered to BCM	Yet
P 2	The ID of third Intelligent Key is registered to BCM	Done
P 2	The ID of second Intelligent Key is not registered to BCM	Yet
IP 2	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECCT EL 4	ID of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID DECOT ED4	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
ID DECCT DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCT DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAMP	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

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Term	inal No.	Description				
(Wire	e color)	Signal name	Input/		Condition	Value (Approx.)
+	_	Oignai name	Output			` ' '
(W)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
(GR)	Ground	P/W power supply (BAT)	Output	Ignition switch OF	F	Battery voltage
3 (L)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		Battery voltage
4					battery saver is activated. oom lamp power supply)	0 V
4 (P)	Ground	Interior room lamp power supply	Output	ed.	battery saver is not activat- or room lamp power supply)	Battery voltage
5	Ground	Passenger door UN-	Output	Passenger door	UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground	Step lamp	Output	rasseriger door	Other than UNLOCK (Actuator is not activated)	0 V
7	Ground	Sten lamn	Output	Step lamp	ON	0 V
(Y)	Ground	Otop lamp	Output	Otop lamp	OFF	Battery voltage
8	Ground	All doors I OCK	Output	All doors	LOCK (Actuator is activated)	Battery voltage
(V)	Oround		Output	711 00013	Other than LOCK (Actuator is not activated)	0 V
9	0	Driver de la LINII OOK	Outrout	D.i d	UNLOCK (Actuator is activated)	Battery voltage
(G)	Ground Driver door UNLOCK	Output	Driver door	Other than UNLOCK (Actuator is not activated)	0 V	
10	01	Rear RH door and	0.1.1	Rear RH door	UNLOCK (Actuator is activated)	Battery voltage
(P)	Ground	rear LH door UN- LOCK	Output	and rear LH door	Other than UNLOCK (Actuator is not activated)	0 V
11 (LG)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0 V
					OFF	0 V
14 (O)	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 (L)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK and ON indicator lamps are not illuminated.)	Battery voltage
					ACC	0 V

	inal No.	'		•		Value	
+ (Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	
					Turn signal switch OFF	0 V	
17 (G) Ground Turn signal RH	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E		
					Turn signal switch OFF	6.5 V 0 V	
18 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s	
		5	Output Interior roo		OFF	6.5 V  Battery voltage	
19 (Y)	Ground	Room lamp timer control			ON	0 V	
00					OPEN (Back door opener actuator is activated)	Battery voltage	
23 (BR)	Ground	Back door open	Output	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V	
26	Ground	Rear wiper	Output	Rear wiper	OFF (Stopped)	0 V	
(G)	Orodria	real wiper	Output	rtour wipor	ON (Operated)	Battery voltage	
34		Luggage room anten-		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 JMKIA0062GB	
34 (B) Ground	round Luggage room anten- na (-)	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB			

	inal No.	Description				Value	
+	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
35	Rear bumper anten	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(W)	Clound	na (+)	Cutput	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
38	Ground Rear bumper antenna (-)	Ground Rear burn		Output	When the back door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0  JMKIA0062GB
(L)		Сири	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB		
39		Rear bumper anten-		When the back door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s  JMKIA0062GB	
(BR)		Output		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	
47 (L)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage 0 V	

	ninal No.	Description				Value
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)
				Ignition switch	When selector lever is in P or N position	Battery voltage
52 (R)	Ground	Starter relay control	Output	ON	When selector lever is not in P or N position	0.3 V
				Ignition switch OF	F	0 V
60		Push-button ignition		Push-button igni-	Pressed	0 V
(BR)	(BR) Ground switch (push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage	
					ON (Pressed)	0 V
61 (R)	Ground	d Back door request switch	Input	Back door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
64			Outrot 1		Sounding	0 V
(GR)	Ground	Warning buzzer	Output	Warning buzzer	Not sounding	Battery voltage
65 (O)			Rear wiper	In stop position	(V) 15 10 5 0 10 ms JPMIA0016GB	
					Not in stop position	0 V
66 (Y)		Back door switch	Back door switch Input	Back door switch	OFF (When back door closes)	(V) 15 10 5 0 10 ms  JPMIA0011GB 11.8 V
					ON (When back door opens)	0 V
					Pressed	0 V
67 (LG)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0011GB
	Ground		Input		opens) Pressed	(V) 15 10 5

	ninal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
68 (W)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (When rear RH door opens)	0 V
69 (R)	Ground	Rear LH door switch	Input	t Rear LH door switch	OFF (When rear LH door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB
					ON (When rear LH door opens)	0 V
72	Ground	Ground Room antenna (-) (Center console)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(B)	Ground			ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB

	inal No.	Description				Value	Λ
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
73	Ground	Room antenna (+)	0.4.4	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	ВС
(W)	(Center console)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	E F	
74	Ground	Passenger door an-	Output	When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0062GB	G H I
(Y)	Clound	tenna (-)	Cutput		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	PWC
75	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	M
(LG)	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 1   S   JMKIA0063GB	O P

	inal No.	Description	II.			Value	
+	e color)	color) Signal name Input/	Condition	(Approx.)			
76	Ground		Input/Output  Ina Output  Input/Output  Input/Output  Input/Output  Input/Output  Input/Output  Input/Output		door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(V)	(around)	•	ed with ignition	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB		
77	Ground	Driver door antenna	Quitout	tput When the driver door request switch is operated with ignition	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s  JMKIA0062GB	
(P)	Clound	(+)	Сара		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
80 (SB)	Ground	NATS antenna amp.		During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
81 (O)	Ground	NATS antenna amp.		During waiting	Ignition switch is pressed while inserting Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
82 (BR)	Ground	Ignition relay [fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V	
(BK)		DIOCK (J/D)] COULIO			ON	Battery voltage	

	inal No. e color)	Description	Г		O andition	Value		
+	- COIOI)	Signal name	Input/ Output		Condition	(Approx.)		
92		Remote keyless entry	Input/	During waiting		(V) 15 10 5 1 ms JMKIA0064GB		
83 (P) Ground	receiver communica- tion	Output	When operating either button on Intelligent Key		(V) 15 10 5 1 ms  JMKIA0065GB			
		d Combination switch INPUT 5				All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
87 (P)	Ground		Input	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V		
87 (R) Gro				SWITCH	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V		
					Any of the conditions below with all switches 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 1.3 V		

	inal No. e color)	Description			Condition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0036GB 1.3 V
88 (GR)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 0 2 ms JPMIA0037GB 1.3 V
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 0 2 ms JPMIA0039GB 1.3 V
					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
90 (P)	Ground	CAN - L	Input/ Output		_	_
91 (L)	Ground	CAN - H	Input/ Output		_	_

					Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					OFF	0 V
92 (R)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB
					ON	Battery voltage
93 (P)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK and ACC indicator lamps are not illuminated.)	Battery voltage
					ON	0 V
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(L)	Cidana		Caipat	.g.maon ownon	ACC or ON	Battery voltage
96 (Y)	Ground	CVT shift selector (detention switch) power supply	Output		-	Battery voltage
99	Ground	Selector lever P posi-	Input	Selector lever	P position	0 V
(V)	Giodila	tion switch	IIIput	Selector level	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (P)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (W)	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	1.0 V 0 V
(Y)	Giodila	lay control	Output	ignition switch	ON	Battery voltage
103 (L)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage

	inal No.	Description	T			Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
107 (O)	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
					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 INFORMATION >

Terminal No.	Description	1			Value	
(Wire color)	Signal name	Input/ Output		Condition	(Approx.)	
				All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	
				Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB	
(P) Ground	Combination switch INPUT 4	Input	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB	
				Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0040GB	P
				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	

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	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (SB)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	(V) 15 10 2 ms 1.3 V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V
-					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V

### < ECU DIAGNOSIS INFORMATION >

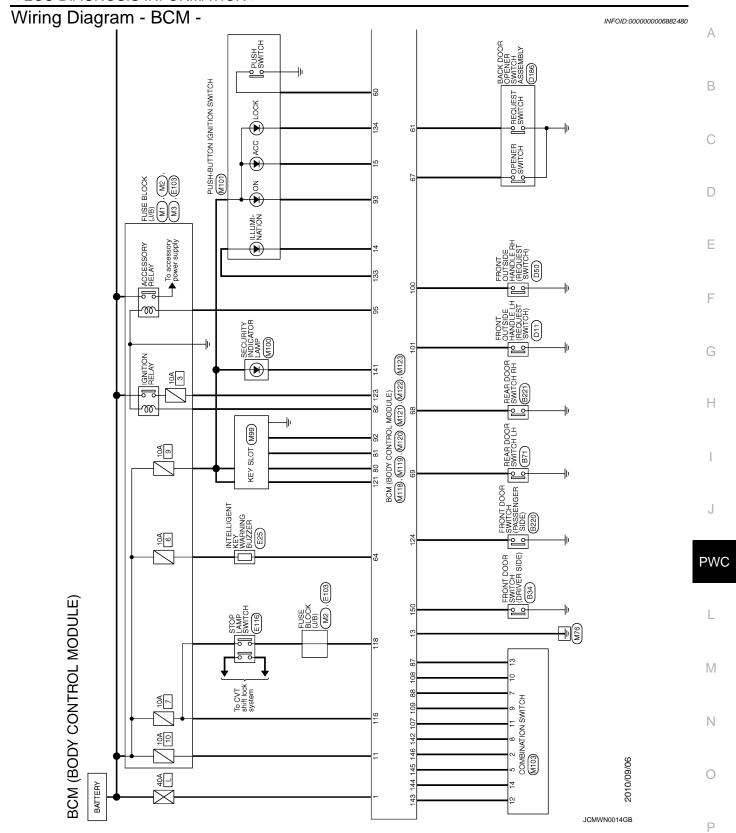
	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 JPMIA0156GB 8.7 V
113	Ground	Optical sensor	loout	Ignition switch	When bright outside of the vehicle	Close to 5 V
(O)	Giouria	Optical serisor	Input	ON	When dark outside of the vehicle	Close to 0 V
116 (GR)	Ground	Stop lamp switch 1	Input		_	Battery voltage
118 (L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
(L)					ON (Brake pedal is depressed)	Battery voltage
119 (W)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (unlock sensor switch OFF)	(V) 15 10 5 10 ms  JPMIA0012GB
					UNLOCK status (unlock	1.1 V
					sensor switch ON)	0 V
121 (Y)	Ground	Key slot switch	Input	_	Key is inserted into key slot	Battery voltage
				vvnen inteiligent K	ey is not inserted into key slot	0 V 0 V
123 (G)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	Battery voltage
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (When passenger door opens)	0 V

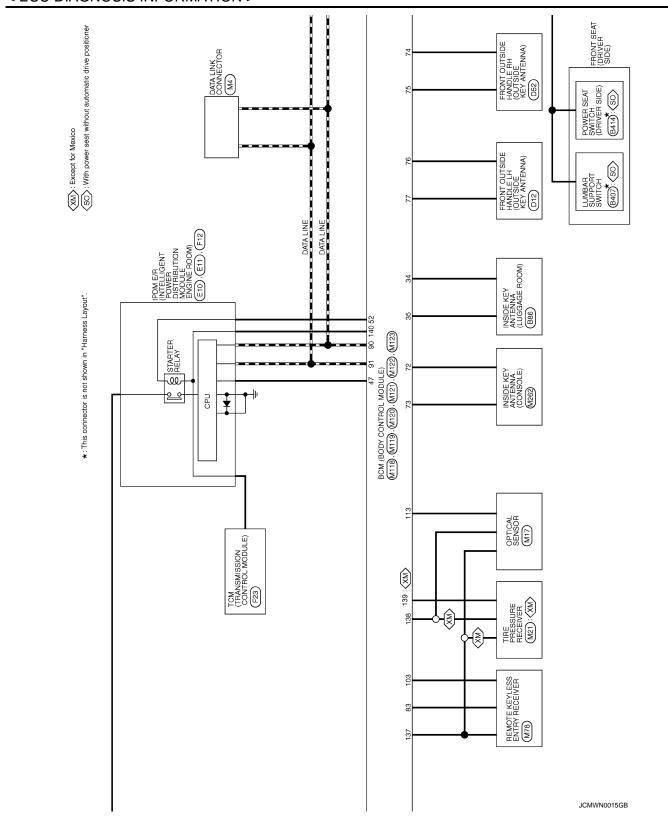
Revision: 2011 November PWC-55 2011 MURANO

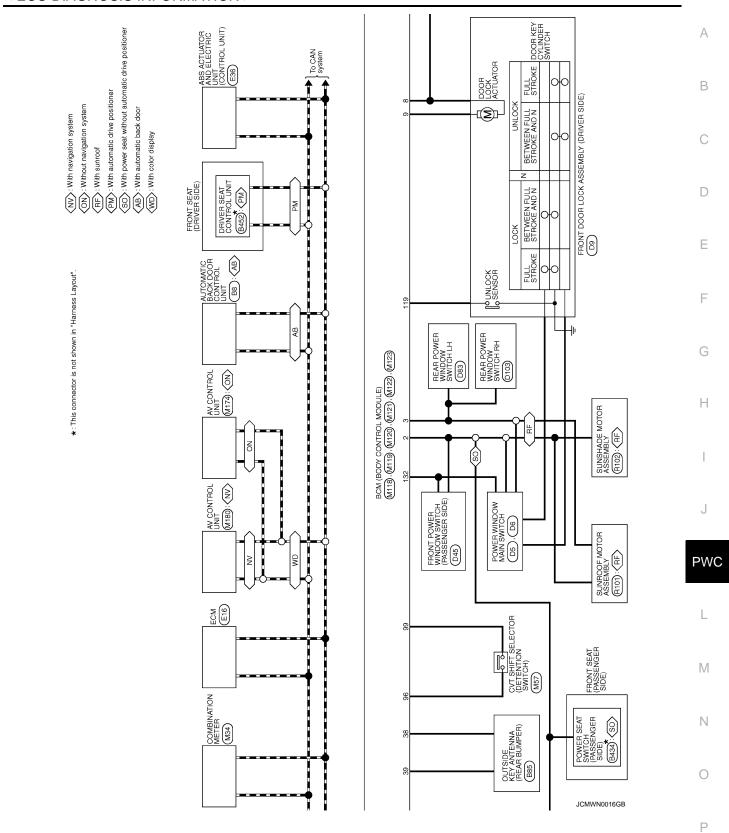
	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
130 (BR)	Ground	Rear window defog- ger switch	Input	Ignition switch ON	Rear window defogger switch OFF	(V) 15 10 5 0 10 ms JPMIA0012GB
					Rear window defogger switch ON	0 V
132 (G)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB 10.2 V
				Ignition switch OF	F or ACC	Battery voltage
					ON (When tail lamps OFF)	9.5 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (When tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5
					OFF	JPMIA0159GB
					OFF (ACC and ON indica-	0 V
134 (R)	Ground	LOCK indicator lamp	Output	LOCK indicator lamp	tor lamps are not illuminated.)	Battery voltage
137		Receiver and sensor			ON	0 V
(P)	Ground	ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(V)		power supply	•		ACC or ON	5.0 V

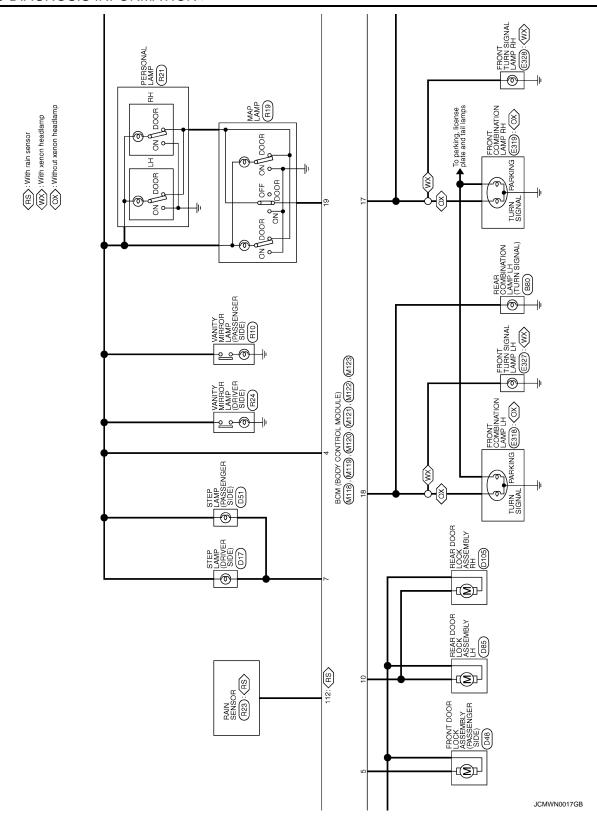
	inal No.	Description				Value	Λ
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
139		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 ••• 0.2s	В
(O)	Ground	er communication	Output	ÖN	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s	E
140		Selector lever P/N			P or N position	Battery voltage	G
(GR)	Ground	position	Input	Selector lever	Except P and N positions	0 V	
					ON	0 V	Н
141 (O)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0  JPMIA0014GB 11.3 V	J
142 (L)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper intermit- tent dial 4)	OFF All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND Turn signal switch RH	Battery voltage  0 V  (V) 15 10 5 0  JPMIA0031GB  10.7 V	L M
143 (W)	Ground	Combination switch OUTPUT 1	Output	Combination switch	All switches OFF (Wiper intermittent dial 4) Front wiper switch HI (Wiper intermittent dial 4) Rear wiper switch INT (Wiper intermittent dial 4) Any of the conditions below with all switches OFF  Wiper intermittent dial 1  Wiper intermittent dial 2  Wiper intermittent dial 3  Wiper intermittent dial 6  Wiper intermittent dial 7	0 V  (V) 15 10 5 0 2 ms  JPMIA0032GB 10.7 V	O

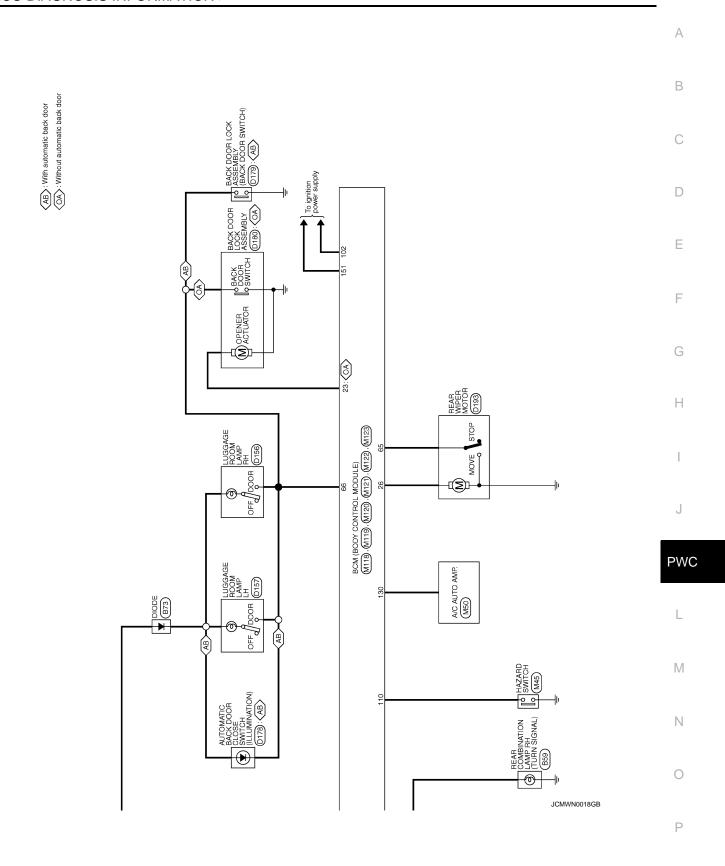
	inal No. e color)	Description	I		0 110	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	0 V
					Front washer switch ON (Wiper intermittent dial 4)	
144	01	Combination switch	0 11 1	Combination	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 10
(P)	Ground	OUTPUT 2	Output	switch	Rear washer switch ON (Wiper intermittent dial 4)	5 0
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	2 ms JPMIA0033GB
					All switches OFF	0 V
					Front wiper switch INT/ AUTO	(V)
145		Combination switch	_	Combination switch	Front wiper switch LO	15
(V)	Ground	OUTPUT 3	Output	(Wiper intermit- tent dial 4)	Lighting switch AUTO	2 ms JPMIA0034GB
					All switches OFF	0 V
					Front fog lamp switch ON	<u> </u>
				O a mala imagati a m	Lighting switch 2ND	(V)
146	Cround	Combination switch	Output	Combination switch	Lighting switch PASS	10
(Y)	Ground	OUTPUT 4	Output	(Wiper intermit- tent dial 4)	Turn signal switch LH	0
150 (SB)	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		Rear window defog-	0	Rear window de-	Active	0 V
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage











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읾		:				
Connector No. M103	Connector No. M119	Connector No.	M121	82	H (	IGN RELAY (F/B) CONT
Connector Name COMBINATION SWITCH	Connector Name BCM (BODY CONTROL MODULE)	Connector Name	BCM (BODY CONTROL MODULE)	83	a a	COMBLEW INDIT 5
Connector Type TH16FW-NH	Connector Type NS16FW-CS	Connector Type	TH40FGY-NH	88	- E	COMBI SW INPUT 3
1	1			06	۵	CAN-L
	6	Œ		16	٦	CAN-H
7	- C	Ě		92	ч	KEY SLOT ILL
	4 5 6 7 0 8 9 10	2		93	Ь	ON IND
2 3 4	11 12 13 14 15 16 17 18 19	51 50 49	48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32	92	٦	ACC RELAY CONT
7 8 9 10 11 12 13 14	2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2	80 07 17	00 00 00 00 00 00 00 00	96	<b>≻</b> :	CVT SHIFT SELECTOR POWER SUPPLY
				66	> 0	DASSENCED DOOD DECLIEST SW
Torminal	Torminal Color	Torminal		3 5	1 3	PASSENGER DOOR REGUEST SW
	_	_	Signal Name [Specification]	9	>	BI OWER FAN MOTOR REI AY CONT
T	t	t	LUGGAGE ROOM ANT 1-	103	ŀ	KEYLESS ENTRY RECEIVER POWER SUPPLY
.no	5 G PASSENGER DOOR UNLOCK OUTPUT	H	LUGGAGE ROOM ANT 1+	107	0	COMBI SW INPUT 1
3 0 FR	7 Y STEP LAMP OUTPUT	38 L	REAR BUMPER ANT-	108	Ь	COMBI SW INPUT 4
	8 V ALL DOOR, FUEL LID LOCK OUTPUT	39 BR	REAR BUMPER ANT+	109	SB	COMBI SW INPUT 2
01	G DRIVE	47 L	IGN RELAY IPDM E/R CONT	110	g	HAZARD SW
В	10 P REAR DOOR UNLOCK OUTPUT	$\dashv$	STARTER RELAY CONT			
GR	LG BA	7	EXTRA IN 2			
7	В	+	BACK DOOR OPENER REQUEST SW			
+	O PUSH-BUTTO	+	REQUEST SW BUZZER			
	7	+	KEAK WIPER STOP POSITION			
0 ;	9 E	+	BACK DOOR SW			
+	¥ :	+	BACK DOOK OPENER SW			
	19 Y ROOM LAMP TIMER CONTROL	+	REAR RH DOOR SW			
14 P OUIPUL 2		H 69	REAR LH DOOR SW			
	Connector No. MI20					
Connector No. M118	П	Connector No.	M122			
Connector Name BCM (BODY CONTROL MODULE)	. 1	Connector Name	BCM (BODY CONTROL MODULE)			
Т	Connector Type NS12FW-CS					
Connector Type M03FB-LC		Connector Type	TH40FB-NH			
		42				
	H.S.	-				
1 3	26 27 28 29 30	(6)	7			
		111 110 100	104 103 102			
]	L					
200	Terminal Golor Signal Name [Specification]	Tominal				
No. of Wire Signal Name [Specification]	t	_	Signal Name [Specification]			
i W BAT (F/L)	9	72 B	ROOM ANT 2-			
2 GR POWER WINDOW POWER SUPPLY (BAT)		73 W	ROOM ANT 2+			
3 L POWER WINDOW POWER SUPPLY (RAP)		+	PASSENGER DOOR ANT-			
		75 LG	PASSENGER DOOR ANT+			
		0 / L	DRIVER DOOR ANT-			
		╀	IMMOBI ANTENNA CONTROL			
		H	IMMOBI ANTENNA SIGNAL			

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## Fail-safe

#### FAIL-SAFE CONTROL BY DTC

BCM (BODY CONTROL MODULE)

BCM performs fail-safe control when any DTC are detected.

#### < ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
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
B2195: ANTI SCANNING	Inhibit engine cranking	Ignition switch $ON \rightarrow OFF$
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent  • Starter control relay signal  • Starter relay status signal
B2607: S/L RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following CAN signal communication status becomes consistent</li> <li>Steering lock relay signal (Request signal)</li> <li>Steering lock relay signal (Condition signal)</li> </ul>
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)
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
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
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization

#### HIGH FLASHER OPERATION

BCM detects the turn signal lamp circuit status by the current value.

BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

#### NOTE:

The blinking speed is normal while activating the hazard warning lamp.

#### FAIL-SAFE CONTROL BY RAIN SENSOR MALFUNCTION

- BCM judges the rain sensor serial link error by the rain sensor serial link condition and detects the rain sensor malfunction by rain sensor malfunction signal.
- When BCM detects the rain sensor serial link error or the rain sensor malfunction while front wiper AUTO operation, BCM operates a fail-safe control.

#### NOTE:

If rain sensor malfunction is detected when ignition switch is turned OFF  $\Rightarrow$  ON and front wiper switch is INT/AUTO position, BCM operates a fail-safe control.

#### REAR WIPER MOTOR PROTECTION

BCM detects the rear wiper stopping position according to the rear wiper stop position signal.

When the rear wiper stop position signal does not change for more than 5 seconds while driving the rear wiper, BCM stops power supply to protect the rear wiper motor.

#### Condition of cancellation

- 1. More than 1 minute is passed after the rear wiper stop.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

#### < ECU DIAGNOSIS INFORMATION >

### DTC Inspection Priority Chart

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Α

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	
2	U1000: CAN COMM     U1010: CONTROL UNIT(CAN)	(
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI SCANNING	
4	<ul> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SW</li> <li>B2605: PNP SW</li> <li>B2605: PNP SW</li> <li>B2608: STARTER RELAY</li> <li>B2607: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> <li>B2618: BCM</li> <li>B2616: VEHICLE TYPE</li> <li>B26262: VEHICLE TYPE</li> <li>B26262: VEHICLE SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>	P
5	<ul> <li>C1704: LOW PRESSURE FL</li> <li>C1705: LOW PRESSURE FR</li> <li>C1706: LOW PRESSURE RR</li> <li>C1707: LOW PRESSURE RL</li> <li>C1708: [NO DATA] FL</li> <li>C1709: [NO DATA] FR</li> <li>C1710: [NO DATA] RR</li> <li>C1711: [NO DATA] RL</li> <li>C1716: [PRESSDATA ERR] FL</li> <li>C1717: [PRESSDATA ERR] FR</li> <li>C1718: [PRESSDATA ERR] RR</li> <li>C1719: [PRESSDATA ERR] RR</li> <li>C1734: CONTROL UNIT</li> </ul>	1
6	B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA	(

DTC Index

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Р

#### NOTE:

The details of time display are as follows.

- CRNT: A malfunction is detected now.
- PAST: A malfunction was detected in the past.

IGN counter is displayed on Freeze Frame Data. For details of Freeze Frame Data, refer to <u>BCS-18</u>, "COM-MON ITEM: CONSULT-III Function (BCM - COMMON ITEM)".

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condi-	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected.		tion			
further testing may be required.	_	_	_	_	_
U1000: CAN COMM	_	_	_	_	BCS-38
U1010: CONTROL UNIT(CAN)	_	_	_	_	BCS-39
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-40
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-42
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-45
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-46
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-48
B2195: ANTI SCANNING	×	_	_	_	SEC-49
B2553: IGNITION RELAY	_	×	_	_	PCS-48
B2555: STOP LAMP	_	×	_	_	SEC-50
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-52
B2557: VEHICLE SPEED	×	×	×	_	SEC-54
B2560: STARTER CONT RELAY	×	×	×	_	SEC-55
B2562: LOW VOLTAGE	_	×	_	_	BCS-41
B2601: SHIFT POSITION	×	×	×	_	SEC-56
B2602: SHIFT POSITION	×	×	×	<del>_</del>	SEC-59
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-61
B2604: PNP SW	×	×	×	_	SEC-64
B2605: PNP SW	×	×	×	_	SEC-66
B2608: STARTER RELAY	×	×	×	_	SEC-68
B260A: IGNITION RELAY	×	×	×	_	PCS-50
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-70
B2614: ACC RELAY CIRC	_	×	×	_	PCS-52
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-55
B2616: IGN RELAY CIRC	_	×	×	_	PCS-58
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-72
B2618: BCM	×	×	×	_	PCS-61
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-75
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-78
B2622: INSIDE ANTENNA		×		_	DLK-91
B2623: INSIDE ANTENNA	_	×	_	_	DLK-93
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	SEC-71
C1704: LOW PRESSURE FL	_	_	_	×	
C1705: LOW PRESSURE FR	_	_	_	×	-
C1706: LOW PRESSURE RR	<del>_</del>	_	_	×	<u>WT-23</u>
C1707: LOW PRESSURE RL		_	_	×	-

### < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Freeze Frame Data •Vehicle Speed •Odo/Trip Meter •Vehicle Condition	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page	
C1708: [NO DATA] FL	_	_	<u> </u>	×		
C1709: [NO DATA] FR	_	_	_	×	WT-25	
C1710: [NO DATA] RR	_	_	_	×	<u>vv 1-25</u>	
C1711: [NO DATA] RL	_	_	_	×		
C1716: [PRESSDATA ERR] FL	_	_	_	×		
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-28	
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>	
C1719: [PRESSDATA ERR] RL	_	_	_	×		
C1729: VHCL SPEED SIG ERR	_	_	_	×	WT-29	
C1734: CONTROL UNIT	_	_	_	×	WT-30	

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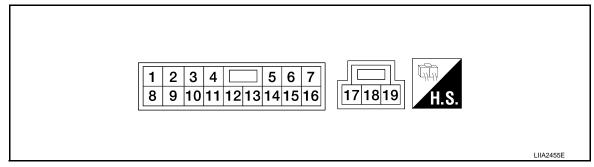
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### **POWER WINDOW MAIN SWITCH**

# POWER WINDOW MAIN SWITCH

Reference Value

#### **TERMINAL LAYOUT**



#### PHYSICAL VALUES

#### POWER WINDOW MAIN SWITCH

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

### **POWER WINDOW MAIN SWITCH**

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (V)	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
				Ignition switch ON	Battery voltage	
10	Ground	round Retained power signal	Input	Within 45 seconds after ignition switch is turned to OFF	Battery voltage	
(V)				When driver side or passenger side door is opened during retained power operation	0	
11 (LG)	Ground	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated	Battery voltage	
13 (Y)	Ground	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
14 (O)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating	(V) 15 10 5 0 10 ms JPMIA0013GB	
15 (R)	Ground	Encoder power supply	Output	Ignition switch ON	Battery voltage	
17 (B)	Ground	Ground	_	_	0	
19 (LG)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage	

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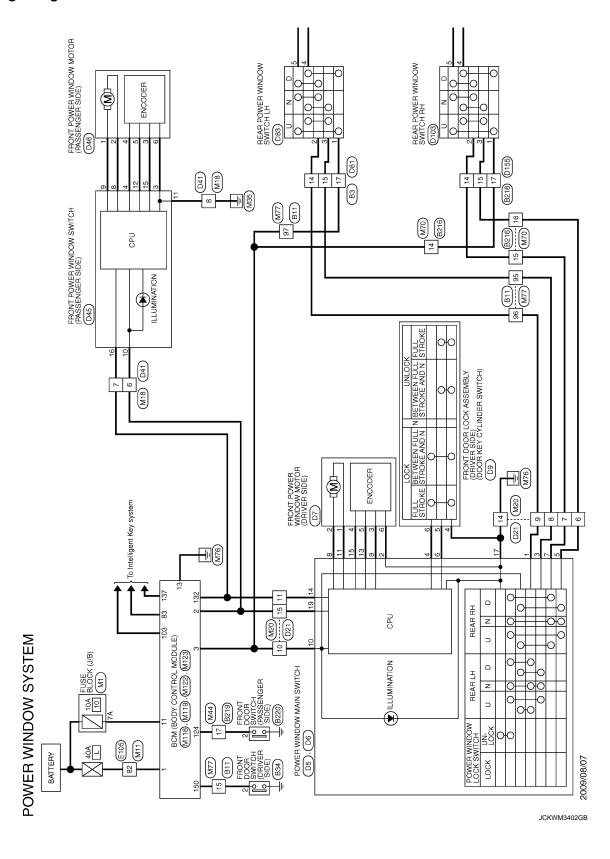
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Wiring Diagram - POWER WINDOW SYSTEM -

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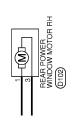
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PWC-73

Revision: 2011 November

JCKWM3403GB

POWER WINDOW SYSTEM						
Connector No. B3	11	// A		71 B/R		Connector No. B216
OT DOWN	12	M/F		72 Y	1	O T SUM OT SUM O
	13	- 1		73 LG	1	Connector Name WIRE TO WIRE
Connector Type TK10FW-NS8	14	BR		74 SB	1	Connector Type NS16MBR-CS
	12	BS		J 22	1	
	_	BR -		D 94	1	IB
	H	- ^		H	1	
109876 54321	18	- as		79 B	-	1 2 3 4 5 6 7
7 16 16 17 10 10	19	-		L	11	- 0
18 17 16 15 14 13 12 11	20	-		H	1	8 9 10 11 12 13 14 15 16
	21			L	1	
	22			83 BR	ı	
nal Color	23	· -		H	1	
	24	GR -		H	1	_
- 1	25			L	1	- 5
+	27	_ ^		H	1	4 B/P
H	28	M/L		ŀ	1	0
F	┝	-		89 GR	1	H
	H			H	1	>
- 38	┝			91	1	8
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>	35 S	0		H	1	0
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Connector No. B11	┪	SB -				
Connector Name WIRE TO WIRE	48 SI	SHIELD -				
	Н	B	0	Connector No.	B34	
Connector Type TH80MW-CS19	20	R/W =		Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)	
á	-	R/L –				
	52		0	Connector Type	A03FW	
	53	Υ -		ó		
	Н	T		修	E	
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nal Color	S 69	SHIELD -			8	
	09	- 8				
1 SHIELD	H	R/L		Terminal Colo		
2 8 -	H			No. of Wire	Signal Name [Specification]	
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H	92	- BB				
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SHED	╀	, i	Τ			
+	Т		Ι			
- 0/2	80 22		Τ			
1/0	┨		]			

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Connector No.   Connector No.   Connector Name   Connector Type   Connector Type   Color   C	D
Tifeation]	Е
DOF POWER WINDOW MAIN SWITCH NSIGNEY-CS Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	F
	G
1   1   1   1   1   1   1   1   1   1	Н
	I
220   10   10   10   10   10   10   10	J
1   0   0   0   0   0   0   0   0   0	PWC
	L
N SYSTEM	M
WINDOW SYST   WINDOW SYST   WINE TO WIRE   WINE TO WIRE   WINDOW SYST	Ν
Connector Name   Conn	0
JCKWM5124GB	Р
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POWER Connector No.	R WI	POWER WINDOW SYSTEM Connector No.   D21	53	_	- [With automatic drive positioner]	Connector No.	D45	Connector No. D81
Connector Name	Name	WIRE TO WIRE	53	R S	- [Without automatic drive positioner] - [With automatic drive positioner]	Connector Name	FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	Connector Name WIRE TO WIRE
nnector	Type	Connector Type TH40FW-CS15	54 55	5 E	Щ	Connector Type	NS16FW-CS	Connector Type TK10MW-NS8
国 H.S.	15 14 15	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	92	0	- [Without automatic drive positioner]	H.S.	7	[18]
	46454443 555453	10   10   10   10   10   10   10   10	Connector No. Connector Name	or No.		<del></del> 1	10 11 12 13 14	3
L	ļ		Connector Type	уг Туре	TH40FW-CS15	L		Į.
Terminal No.	Color of Wire	Signal Name [Specification]	偃			Terminal Color No. of Wire	Signal Name [Specification]	Terminal Color Signal Name [Specification]
- -	> 0	1 1	H.S.	<u>_</u>	15   4   5   8   7   8   9   11   12   12   12   12	≥ a	1 1	- M
3 6	, a	ı		464544	26 25 24 23 22 21 20 19	ł	1	F
4	В	1		55 54	555453525156494847 355433323130292827	9 FG	-	Н
5	м	1			-	$\dashv$	1	10 B –
9	g	1		L		+	1	<b>*</b>
۲ ،	۵ ۵	1 1	Terminal	Color	Signal Name [Specification]	12	1 1	12 G
	6 8	1	-	6		+		> 0
01	5 >		- 5	>	1	┨		SB
=	0	1	4	В	1			H
14	В	1	5	Μ	1	Connector No.	D46	18 GR –
15	ار ا	1	9	۵	1	Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)	
91	<u></u>	1	7	0	1	,		ſ
2 9	<u>}</u>	1 1	æ 9	m (	1 1	Connector Type	NS06FW-CS	Т
0 5	£ 8		17	5 >		1		Connector Name REAR POWER WINDOW MOTOR LH
20	FG	_	18	GR	1	2		Connector Type RS06FG
24	Ь	I	18	BR	ı	11.0	1	q
25	> ;	1	5 50	9			3 4 5 6	HAT
0,0	>	1 1	24	2 3	1 1			TEN SEE
98	. g	1	56	0	1			(123)
31	HR.	ı	53	>	ı	la!	6	<u>(4   5   6)</u>
32	ч	-	30	SB	1	No. of Wire		)
33	5	I	31	æ	1	- LG	1	
34	> .	1	35	~ (	1	+	1	Terminal Color Signal Name [Specification]
8 2	١,	II I	8 2	5 >	ı	+		
40	<u>۾</u>	1 1	5 58	-	1 1	+ 10		- e
43	-	1				╀	1	ł
44	W	-						
45	SB	-						
46	۳	1						
22	> 1	-						
51	0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						
25 52	- ا	- [With automatic drive positioner]						
1	1	<ul> <li>[Without automatic drive postuorier]</li> </ul>						

JCKWM5125GB

# < ECU DIAGNOSIS INFORMATION >

Revision: 2011 November

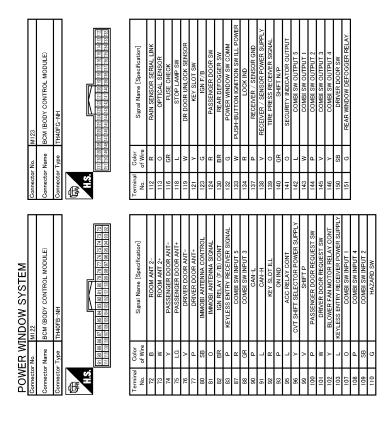
	A B
Nume   FUSE BLOOK (J/B)     Type	С
Connector No.	D
on system] avigation system] avigation system]	Е
- [With navigation system] - [With navigation system] - [Without Ibod and navigation system] -   -   -   -   -   -   -   -   -   -	F
C   X   X   C   C   C   C   C   C   C	G
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Н
Signal Name [Specification]   R   R   R   R   R   R   R   R   R	J
Terminal   Color   No.   Col	PWC
	L
NDOW SYSTEM  DB8  REAR POWER WINDOW SWITCH LIH  NSGRFW-CS  Signal Name [Specification]	M
MINDOW S  REAR POWER  REAR POW	N
POWER WI Connector No Connector Name Connector Type 1 R 2 B 3 SB 3 SB 4 LG 5 L L Connector No Co	0
JCKWM5126GB	Р

PWC-77 2011 MURANO

JCKWM5127GB

# < ECU DIAGNOSIS INFORMATION >

Connector No.   MI19	A B C
MODULE) MODULE)  MODULE)  FEE SUPPLY (BAT)  FEE SUPPLY (RAP)	Е
MIIB  Signal Name [Speerfication]  Signal Name [Speerfication]  POWER WINDOW POWER SUPPLY (RAZ)  POWER WINDOW POWER SUPPLY (RAZ)	F
70 L 71 R R 73 LG 74 R R 75 P P R 76 R 84 R R 83 W B8 83 W W B8 84 R R R 85 G R B8 86 G B8 87 R R 88 G G R 89 C C O O O O O O O O O O O O O O O O O	G
	Н
	I
	J
	PW
2 1 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	FVV
WIRE -CSS   13   12   1   10   9   8   13   13   14   15   14   15   14   15   15   15	M
WINDOW SYSTE WINE TO WINE NATIONAL SIGNAL Name (Sp. Sig	Ν
Connector Name   Conn	0
JCKWM5128GB	_
	Р



JCKWM5129GB

# 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.

### < ECU DIAGNOSIS INFORMATION >

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 front power window motor.

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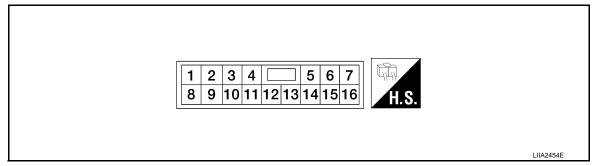
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< ECU DIAGNOSIS INFORMATION >

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Reference Value

### **TERMINAL LAYOUT**



### PHYSICAL VALUES

### FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Termi	nal No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
3 (W)	Ground	Encoder ground	_	_	0
4 (R)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	Battery voltage
8 (L)	Ground	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
9 (LG)	Ground	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
10 (P)	Ground	Battery power supply	Input	_	Battery voltage
11 (B)	Ground	Ground	_	_	0
12 (Y)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

# < ECU DIAGNOSIS INFORMATION >

Ī	Termi	nal No.	Description			Voltage [V]
	+	-	Signal name	Input/ Output	Condition	(Approx.)
	15 (G)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
	16 (O)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms

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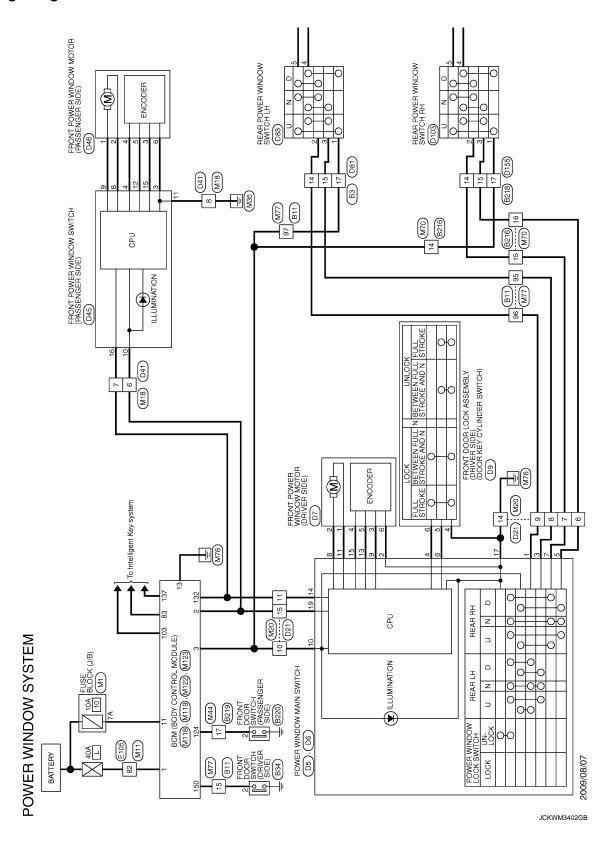
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Wiring Diagram - POWER WINDOW SYSTEM -

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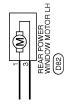
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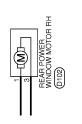
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Revision: 2011 November

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# < ECU DIAGNOSIS INFORMATION >

POWE	POWER WINDOW SYSTEM									
Connector No.	4o. B3	1	J/Y	_	71	B/R	_	Connector No.	B216	
Connector Name	WIRE TO WIRE	12	M/L	-	72	٨	1	Connector Name	WIRE TO WIRE	
	Т	13	4	1	73	ΓC	1		П	
Connector Type	fype TK10FW−NS8	14	띪	1	74	SB	1	Connector Type	NS16MBR-CS	
q		12	$\dashv$	1	75	٦	I	ą		
厚		91	BR	1	16	9	1	厚		
Ę		17	4	-	77	ď	1	Ě		
=	10 9 8 7 6 5 4 3 2 1	18	SB SB	_	79	В	-	į	1 2 3 - 4 5 6 7	
	7 16 15 11 13 13	18	Н	_	80	W	-		10 11 10 10 17	
_	17 10 13 14 13 12	20	а (	1	18	Я	1		0 8 10 11 17 19 10	
		21	רפ	1	82	7	1			
		22	╀	1	83	æ	1			
		23	H	1	84	L	1	Terminal Col		
No.	of Wire Signal Name [Specification]	24	┞	-	82	H	1	No. of Wire	Signal Name [Specification]	
	- 7	25	┝	1	98	H	1	-	1	
4	- 51	27	>	1	87	H	1	4 B/P	-	
2	- 0	28	3 W/L	1	88	H	1	H		
7	T	8	⊦	1	88	L	ı		1	
10		33	⊦		06	>	1	H	1	
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Connector	٦.	2 2	+	1 1	Connec	Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)			
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- S	SHIELD -	19	R/L	1	Terminal	al Color	G			
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3	R/L -	63	3 FG	-	2	SB	1			
4	R/W -	64	٨ ١	-						
5	SB -	99	BR BR	_						
9		99	4	1						
Ħ	- ^	67	_	1						
$\dashv$		89	П							
6	BR/L –	69	3 SHIELD							
		70								

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# < ECU DIAGNOSIS INFORMATION >

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Frowtrook Assewalty Drayer SIDE)  Signal Name (Specification)	В
S Color No. Color Type	C
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eofficiation]	Е
DO POWER WINDOW MAIN SWITCH NSOGFW-CS Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]  Signal Name [Specification]	F
	G
1   1   1   1   1   1   1   1   1   1	Н
	I
22 SIBEW	J
	PWC
1   0   0   0   0   0   0   0   0   0	
	L
MINDOW SYSTEM   MIRE   MIRE	M
Color   Signal Name   Specimentary   Specimentary   Signal Name   Specimentary   Signal Name   Specim	N
Name   WINE   Name	
Connector No.   Connector No.	0
JCKWM5124GB	
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# < ECU DIAGNOSIS INFORMATION >

POW	ER W	POWER WINDOW SYSTEM					
Connector No.	or No.	D21	53	+	Connector No. D45	Connector No. D81	
Connecto	Connector Name	WIRE TO WIRE	53	P - [Without automatic drive positioner] SB - [With automatic drive positioner]	Connector Name FRONT POWER WINDOW SMITCH (PASSENGER SIDE)	Connector Name WIRE TO WIRE	
Connector Type	r Type	TH40FW-CS15	54	Ľ	Connector Type NS16FW-CS	Connector Type TK10MW-NS8	
Œ			55 55	LG — [With automatic drive positioner]     O — [Without automatic drive positioner]			
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			Connector Type	or Type TH40FW-CS15			
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# < ECU DIAGNOSIS INFORMATION >

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# < ECU DIAGNOSIS INFORMATION >

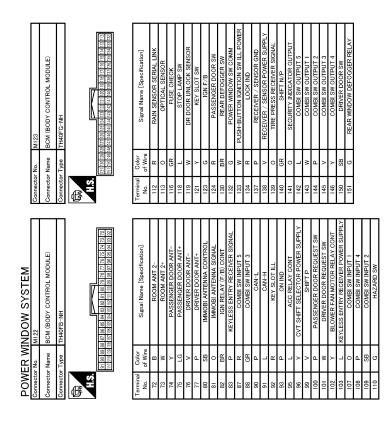
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JCKWM5129GB

# 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.

### < ECU DIAGNOSIS INFORMATION >

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 front power window motor.

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# POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

< SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS

# POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

# Diagnosis Procedure

INFOID:0000000006259361

# 1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to PWC-14, "BCM: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window main switch power supply and ground circuit.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

# DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >		
DRIVER SIDE POWER WINDOW DOES NOT OPERATE		Α
Diagnosis Procedure	INFOID:0000000006259362	
1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)		В
Check power window motor.  Refer to <a href="PWC-20">PWC-20</a> , "DRIVER SIDE: Component Function Check".  Is the inspection result normal?  YES >> GO TO 2.		С
NO >> Repair or replace the malfunctioning parts.		
2.CONFIRM THE OPERATION		D
Confirm the operation again.  Is the result normal?  YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".  NO >> GO TO 1.		Е
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### FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

# FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000006259363

# 1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT

Check front power window switch (passenger side) serial link circuit.

Refer to PWC-33, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

# WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED: Diagnosis Procedure

4

1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

Refer to PWC-109, "Removal and Installation"

### >> INSPECTION END

WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED

WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED: Diagnosis Procedure

 $1.\mathsf{CHECK}$  FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT

Check front power window switch (passenger side) power supply and ground circuit.

Refer to PWC-14, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

# 2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit.

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

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

# REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS >
REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE WHEN POWER WINDOW MAIN SWITCH IS OPERATED
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure
1. CHECK REAR POWER WINDOW SWITCH
Check rear power window switch .  Refer to PWC-18, "Component Function Check".
Is the inspection result normal?
YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.
2.CONFIRM THE OPERATION
Confirm the operation again.
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-44, "Intermittent Incident"</u> .
NO >> GO TO 1.
WHEN REAR POWER WINDOW SWITCH LH IS OPERATED
WHEN REAR POWER WINDOW SWITCH LH IS OPERATED: Diagnosis Procedure
1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT
Check rear power window switch power supply and ground circuit.  Refer to PWC-16, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".
Is the inspection result normal?
YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.
2.REPLACE REAR POWER WINDOW SWITCH LH
Replace rear power window switch LH. Refer to PWC-109, "Removal and Installation". PV
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED
WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED : Diagnosis Procedure
1. CHECK REAR POWER WINDOW MOTOR LH
Check rear power window motor LH. Refer to PWC-23, "REAR LH: Component Function Check".
Is the inspection result normal?
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.
2.CONFIRM THE OPERATION
Confirm the operation again.
Is the result normal?  YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".
YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".  NO >> GO TO 1.

### REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

# REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE WHEN POWER WINDOW MAIN SWITCH IS OPERATED

# WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000006259369

# 1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-18, "Component Function Check".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

### WHEN REAR POWER WINDOW SWITCH RH IS OPERATED

# WHEN REAR POWER WINDOW SWITCH RH IS OPERATED: Diagnosis Procedure

INFOID:0000000006259370

# 1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check rear power window switch power supply and ground circuit.

Refer to PWC-16, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.

Refer to PWC-109, "Removal and Installation".

#### >> INSPECTION END

# WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED

# WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED: Diagnosis Procedure

# 1. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-24, "REAR RH: Component Function Check".

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CONFIRM THE OPERATION

### Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

# AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY

# < SYMPTOM DIAGNOSIS >

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY DRIVER SIDE	А
DRIVER SIDE : Diagnosis Procedure	В
1.PERFORM INITIALIZATION PROCEDURE	С
Initialization procedure is executed and operation is confirmed.  Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".	D
Is the inspection result normal?  YES >> INSPECTION END  NO >> GO TO 2.	D E
2.CHECK ENCODER (DRIVER SIDE) CIRCUIT	_
Check encoder (driver side) circuit.  Refer to <a href="PWC-27">PWC-27</a> , "DRIVER SIDE : Component Function Check".  Is the inspection result normal?	F
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	G
3.CONFIRM THE OPERATION  Confirm the energtion again	
Confirm the operation again.  Is the result normal?  YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".  NO >> GO TO 1.  PASSENGER SIDE	Н
PASSENGER SIDE : Diagnosis Procedure	J
1.PERFORM INITIALIZAITON PROCEDURE	
Initialization procedure is executed and operation is confirmed.  Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".	PWC
Is the inspection result normal?  YES >> INSPECTION END  NO >> GO TO 2.	L
2.CHECK ENCODER (PASSENGER SIDE) CIRCUIT	M
Check encoder (passenger side) circuit.  Refer to <a href="PWC-29">PWC-29</a> , "PASSENGER SIDE : Component Function Check".	
Is the inspection result normal?  YES >> GO TO 3.	N
NO >> Repair or replace the malfunctioning parts.  3.CONFIRM THE OPERATION	0
Confirm the operation again.	
Is the result normal?  YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".  NO >> GO TO 1.	Р

### ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY

### < SYMPTOM DIAGNOSIS >

# ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY DRIVER SIDE

# DRIVER SIDE: Diagnosis Procedure

INFOID:0000000006259374

### 1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-99, "DRIVER SIDE : Diagnosis Procedure".

# 2.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

### PASSENGER SIDE

# PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000006259375

# 1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

### Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-99, "PASSENGER SIDE : Diagnosis Procedure".

# 2.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

### POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE **PROPERLY**

# < SYMPTOM DIAGNOSIS > POWER WINDOW RETAINED POWER OPERATION DOES NOT OPER-Α ATE PROPERLY Diagnosis Procedure INFOID:0000000006259376 В 1. CHECK DOOR SWITCH Check door switch. Refer to DLK-97, "WITH AUTOMATIC BACK DOOR: Component Function Check". Is the inspection result normal? YES >> GO TO 2. D >> Repair or replace the malfunctioning parts. NO 2.CONFIRM THE OPERATION Е Confirm the operation again. Is the result normal? >> Check intermittent incident. Refer to GI-44, "Intermittent Incident". YES F NO >> GO TO 1. Н J **PWC**

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### DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

# DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

### Diagnosis Procedure

INFOID:0000000006259377

# 1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement"

### Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

# 2.CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (DOOR KEY CYLINDER SWITCH)

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

Refer to <u>DLK-112</u>, "Component Function Check".

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

# 3.CONFIRM THE OPERATION

Confirm the operation again.

### Is the result normal?

YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".

NO >> GO TO 1.

# **KEYLESS POWER WINDOW DOWN DOES NOT OPERATE**

< SYMPTOM DIAGNOSIS >		
KEYLESS POWER WINDOW DOWN DOES NOT OPERATE Diagnosis Procedure		А
1. CHECK INTELLIGENT KEY FUNCTION	INFOID:0000000006259378	В
Check Intelligent Key function.		D
Refer to DLK-129, "Component Function Check".  Is the inspection result normal?		С
YES >> GO TO 2.  NO >> Replace BCM. Refer to <u>BCS-85, "Exploded View"</u> .		D
2. CONFIRM THE OPERATION  Confirm the operation again.		
Is the inspection result normal?  YES >> Check intermittent incident. Refer to GI-44, "Intermittent Incident".  NO >> GO TO 1.		Е
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### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

# POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000006259379

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer to PWC-109, "Removal and Installation".

### POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

# < SYMPTOM DIAGNOSIS > POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE Α Diagnosis Procedure INFOID:0000000006259380 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. C >> Refer to PWC-109, "Removal and Installation". D Е F G Н J PWC L M Ν 0

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# **PRECAUTION**

# PRECAUTIONS FOR USA AND CANADA

FOR USA AND CANADA: 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 AIR BAG" and "SEAT BELT" of this Service Manual.

### **WARNING:**

Always observe the following items for preventing accidental activation.

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

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

#### WARNING:

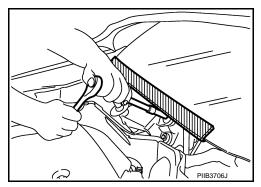
Always observe the following items for preventing accidental activation.

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

FOR USA AND CANADA: Precaution for Procedure without Cowl Top Cover

INFOID:0000000006259382

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR USA AND CANADA: Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

### **CAUTION:**

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

 Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.

### **PRECAUTIONS**

### < PRECAUTION >

- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

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

### **OPERATION PROCEDURE**

1. Connect both battery cables.

#### NOTE:

Supply power using jumper cables if battery is discharged.

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

### FOR MEXICO

FOR MEXICO: 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. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

#### WARNING:

Always observe the following items for preventing accidental activation.

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

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

#### **WARNING:**

Always observe the following items for preventing accidental activation.

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

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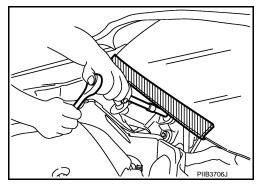
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### FOR MEXICO: Precaution for Procedure without Cowl Top Cover

INFOID:0000000006259385

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



FOR MEXICO: Precautions Necessary for Steering Wheel Rotation After Battery Disconnection

#### **CAUTION:**

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

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

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

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

### **OPERATION PROCEDURE**

Connect both battery cables.

### NOTE:

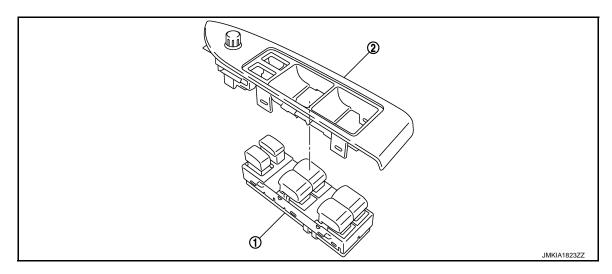
Supply power using jumper cables if battery is discharged.

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

# REMOVAL AND INSTALLATION

### POWER WINDOW MAIN SWITCH

Exploded View



1. Power window main switch

2. Power window main switch finisher

#### NOTE:

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

Refer to removal and installation procedure. Refer to PWC-109, "Removal and Installation".

### Removal and Installation

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### **REMOVAL**

- Remove the power window main switch finisher (2).
   Refer to <u>INT-12</u>, "<u>FRONT DOOR FINISHER</u>: <u>Exploded View</u>" and <u>INT-12</u>, "<u>FRONT DOOR FINISHER</u>: <u>Removal and Installation</u>".
- 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).

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#### INSTALLATION

Install in the reverse order of removal.

### NOTE:

Power window main switch is exchanged or is detached it is necessary to do the initialization procedure. Refer to <a href="PWC-6">PWC-6</a>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

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