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WHEN BOTH POWER WINDOW MAIN SWITCH

**POWER WINDOW LOCK SWITCH DOES** 

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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.

## ${f 3.}$ IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

### 4. IDENTIFY 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.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

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:0000000010596566

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.

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

- 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 power window function

#### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement INFOID:0000000010596567

#### INITIALIZATION PROCEDURE

- 1. Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
- 2. 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.
- 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.
- 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-89, "Fail-safe".
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder 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.

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PWC-5 **Revision: February 2015** 2015 QX50

#### INSPECTION AND ADJUSTMENT

#### < BASIC INSPECTION >

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

Refer to PWC-6, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

- 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 power window function

# ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

#### INITIALIZATION PROCEDURE

- 1. Disconnect battery negative terminal or power window control unit connector. Reconnect it after a minute or more.
- 2. 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.
- 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.

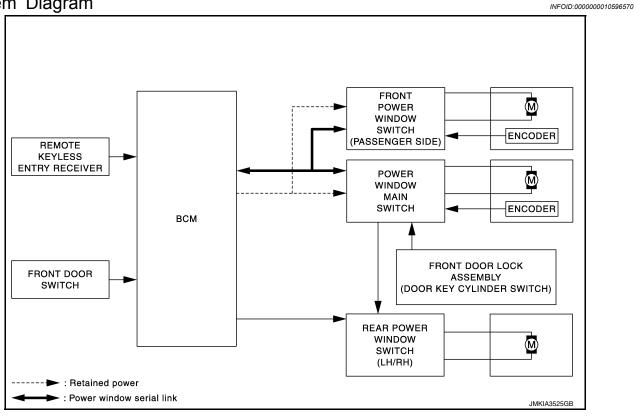
#### **CAUTION:**

- 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 <a href="PWC-89">PWC-89</a>, "Fail-safe".
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder power window function

### SYSTEM DESCRIPTION

### POWER WINDOW SYSTEM

System Diagram



### System Description

INFOID:0000000010596571

#### 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 second or more to OPEN or CLOSE front power windows 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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#### 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 OPERATION

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

#### OPERATION CONDITION

- · Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1.5 seconds or more to perform CLOSE operation of the door glass.
- 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-51. "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".

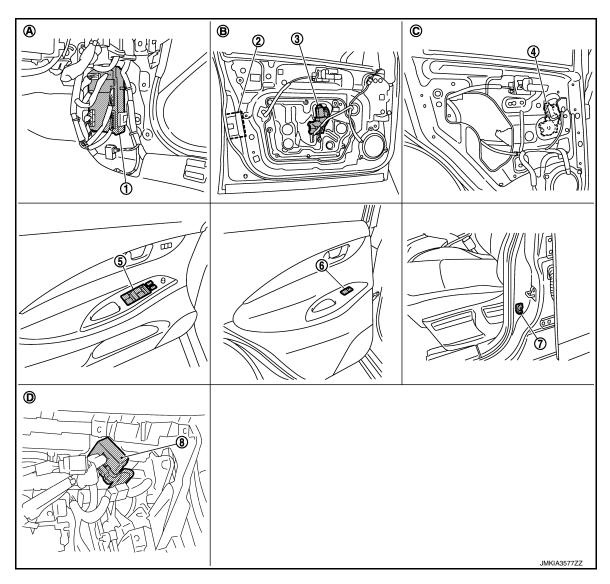
#### NOTE:

Use CONSULT to change settings.

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

### Component Parts Location

INFOID:0000000010596572



- 1. BCM M118,M119,M122,M123
- 4. Rear power window motor LH D52
- 7. Front door switch (driver side) B16
- A. View with dash side lower (passenger side)
- D. View with instrument lower panel (passenger side) removed
- Front door lock assembly (driver side) (key cylinder switch) D15
- 5. Power window main switch D8,D9
- 8. Remote keyless entry receiver
- $\mbox{B.} \quad \mbox{View with front door finisher removed} \quad \mbox{C.}$
- Front power window motor (driver side) D10
- 6. Rear power window switch LH D54

View with rear door finisher removed

### **Component Description**

Component	Function	
BCM	<ul><li>Supplies power supply to power window switch.</li><li>Controls retained power function.</li></ul>	
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	<ul><li>Controls anti-pinch operation of power window.</li><li>Controls power window motor of passenger door.</li></ul>	

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### **POWER WINDOW SYSTEM**

## < SYSTEM DESCRIPTION >

Component	Function	
Rear power window switch	Controls power window motor of rear right and left doors.	
Power window motor	<ul> <li>Integrates the ENCODER and WINDOW MOTOR.</li> <li>Starts operating with signals from each power window switch.</li> <li>Transmits power window motor rotation as a pulse signal to power window switch.</li> </ul>	
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.	
Front door switch	Detects door open/close condition and transmits to BCM.	
Remote keyless entry receiver	Receives lock/unlock signal from the intelligent Key, and then transmits to BCM.	

### **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

## DIAGNOSIS SYSTEM (BCM)

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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#### APPLICATION ITEM

CONSULT 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.		
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

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

#### NOTE:

#### FREEZE FRAME DATA (FFD)

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

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<sup>\*:</sup> This item is displayed, but is not used.

### **DIAGNOSIS SYSTEM (BCM)**

#### < SYSTEM DESCRIPTION >

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" (Except emergency stop operation)	
	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 supply position status of the moment a	While turning power supply position from "OFF" to "LOCK"*	
Vehicle Condition	OFF>ACC	particular DTC is de-	While turning power supply position from "OFF" to "ACC"	
	ON>CRANK	tected*	While turning power supply position from "IGN" to "CRANK	
	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".

#### RETAIND PWR

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

INFOID:0000000010596575

#### Data monitor

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

## **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:0000000010596576

### 1. CHECK FUSE AND FUSIBLE LINK

Check that the following fuse and fusible link are not blown.

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

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

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

#### Is the measurement value normal?

YES >> GO TO 3.

NO >> Repair harness or connector.

### 3.CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M119	13		Existed

#### Does continuity exist?

YES >> INSPECTION END

NO >> Repair harness or connector.

#### POWER WINDOW MAIN SWITCH

### POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000010596577

### 1. CHECK POWER SUPPLY CIRCUIT 1

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

#### < DTC/CIRCUIT DIAGNOSIS >

(+) Power window main switch		(–)	Voltage (V) (Approx.)	
Connector	Terminal		(лрыох.)	
D8	10	Ground	Pattony voltago	
D9	19	Giouna	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

## 2. CHECK POWER SUPPLY CIRCUIT 2

- 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		Continuity
Connector	Terminal	Connector Terminal		Continuity
M118	2	D9	19	Existed
IVITIO	3	D8	10	LAISIEU

Check continuity between BCM harness connector and ground.

ВСМ			Continuity
Connector	Terminal	Ground	Continuity
M118	2	Giouna	Not existed
WITO	3	-	Not existed

#### Is the inspection result normal?

>> Replace BCM. Refer to BCS-97, "Removal and Installation". YES

NO >> Repair or replace harness.

## 3. CHECK GROUND CIRCUIT

Turn ignition switch OFF.

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D9	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 CIRCUIT 1

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

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#### < DTC/CIRCUIT DIAGNOSIS >

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

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

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT 2

- 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	
M118	2	D38	10	Existed

3. Check continuity between BCM harness connector and ground.

В	CM		
Connector	Terminal	Ground	Continuity
M118	2		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-97, "Removal and Installation".

NO >> Repair or replace harness.

## 3. CHECK GROUND CIRCUIT

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

Front power window switch (passenger side)			Continuity
Connector	Terminal	Ground	
D38	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

INFOID:0000000010596579

### 1. CHECK POWER SUPPLY CIRCUIT 1

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

(+)				V-11 (A.)	
Rear power window switch			(–)	Voltage (V) (Approx.)	
Conr	Connector Terminal			( 11 - 7	
LH	D54	1	Ground	Battery voltage	
RH	D74	ľ	Sibulia	Battery Voltage	

#### < DTC/CIRCUIT DIAGNOSIS >

### Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.CHECK POWER SUPPLY CIRCUIT 2

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

В	CM	Rear power window switch		Continuity	
Connector	Terminal	Connector		Terminal	Continuity
M118	2	LH	D54	1	Existed
IVITIO	3	RH	D74	<b>I</b>	Existed

4. Check continuity between BCM harness connector and ground.

ВС	СМ		Continuity
Connector	Terminal	Ground	Continuity
M118	3		Not existed

#### Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-97</u>, "Removal and Installation".

NO >> Repair or replace harness.

## 3. CHECK GROUND CIRCUIT

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

Rear power window switch				Continuity	
Connector		Terminal	Ground	Continuity	
LH	D54	7	Ground	Existed	
RH	D74	,		LAISIGU	

#### Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

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#### REAR POWER WINDOW SWITCH

#### < DTC/CIRCUIT DIAGNOSIS >

### REAR POWER WINDOW SWITCH

**Description** 

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

### Component Function Check

INFOID:0000000010596581

### 1. CHECK REAR POWER WINDOW OPERATION

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:0000000010596582

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

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

Rear	(+) Rear power window switch		(–) Condition			Voltage (V) (Approx.)		
Conn	ector	Terminal				(/ ipprox.)		
		2			UP	Battery voltage		
LH	D54	2	Orang	Power window main switch (rear LH)	DOWN	0		
LΠ	LH   D34	3			UP	0		
					DOWN	Battery voltage		
	RH D74		2	2	— Ground		UP	Battery voltage
ДЦ		2		Power window main switch (rear RH)	DOWN	0		
IXII		3			UP	0		
		3			DOWN	Battery voltage		

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

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

## 2.CHECK REAR POWER WINDOW SWITCH CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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		Continuity	
Connector	Terminal	Connector		Terminal	Continuity
	1	LH	D54	2	
D8	3	LΠ	554	3	Existed
Бо	5	RH	D74	3	LXISIGU
	7	IXII	D74	2	

Check continuity between power window main switch connector and ground.

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

#### < DTC/CIRCUIT DIAGNOSIS >

Power window main switch			Continuity	
Connector	Terminal		Continuity	
	1	Ground	Not oviete d	
DO	3	Ground		
D8	5		Not existed	
	7			

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-118">PWC-118</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 <a href="PWC-118">PWC-118</a>, "Removal and Installation".

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident"

>> INSPECTION END

### Component Inspection

1. CHECK REAR POWER WINDOW SWITCH

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

Rear power window switch	Terminal		Power window switch condition	Continuity
	1	5	UP	_
	3	4	OF .	
D54 (LH)	3	4	NEUTRAL	Existed
D74 (RH)	5	2	NEOTIVAL	
	1	4	DOWN	
	5	2	DOWN	

#### Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to <a href="PWC-118">PWC-118</a>, "Removal and Installation".

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#### < DTC/CIRCUIT DIAGNOSIS >

### **POWER WINDOW MOTOR**

**DRIVER SIDE** 

**DRIVER SIDE**: Description

INFOID:0000000010596584

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

DRIVER SIDE: Component Function Check

INFOID:0000000010596585

### 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 >> Power window motor (driver side) is OK.

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

### DRIVER SIDE : Diagnosis Procedure

INFOID:0000000010596586

### $1.\mathsf{check}$ front power window motor 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 front power window motor (driver side) harness connector and ground.

(+) Front power window motor (driver side)		(–) Condition			Voltage (V) (Approx.)
Connector	Terminal				(* .pp. 67)
	2			UP	Battery voltage
D10	2	Ground	Power window main switch	DOWN	0
1	Ground	Fower window main switch	UP	0	
	•			DOWN	Battery voltage

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

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

## 2.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE) 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		window motor er side)	Continuity	
Connector	Terminal	Connector	Terminal		
D8	8	D10	2	Existed	
Do	11	010	1	LAISIEU	

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D8	8	Ground	Not existed
	11		Not existed

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".

#### < DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness.

## $3.\mathtt{check}$ 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.

NO >> Replace front power window motor (driver side). Refer to GW-20, "Removal and Installation".

### 4.CHECK INTERMITTENT INCIDENT

Refer to GI-45, "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 operation by connecting the battery voltage directly to front power window motor (driver side)

Front power window motor	Terr	Motor operation	
(driver side) connector	(+)	(–)	ivioloi operation
D10	1	2	DOWN
	2	1	UP

#### Is the inspection result normal?

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

NO >> Replace front power window motor (driver side). Refer to GW-20, "Removal and Installation".

### PASSENGER SIDE

### PASSENGER SIDE : Description

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

### PASSENGER SIDE : Component Function Check

## 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.

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

#### PASSENGER SIDE : Diagnosis Procedure

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

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

**Revision: February 2015** 

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

**PWC-21** 

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#### < DTC/CIRCUIT DIAGNOSIS >

(	+)				
Front power window motor (passenger side)		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				
	1			UP	Battery voltage
D40	D40	Ground	Front power window switch (passenger side)	DOWN	0
D40		Ground		UP	0
	2			DOWN	Battery voltage

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

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

## 2.check power window motor (passenger side) circuit

- 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	Front power window switch (passenger side)		Front power window motor (passenger side)	
Connector	Terminal	Connector	Terminal	Continuity
D38	9	D40	1	Existed
D36	8	D40	2	LXISIEU

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

Front power window switch (passenger side)			Continuity	
Connector	Terminal	Ground	Continuity	
D38	8	Ground	Not existed	
	9		NOT EXISTED	

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-118">PWC-118</a>, "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-20, "Removal and Installation"</u>.

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

#### >> INSPECTION END

### PASSENGER SIDE : Component Inspection

INFOID:0000000010596591

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

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

#### < DTC/CIRCUIT DIAGNOSIS >

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

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Is the inspection result normal?

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

>> Replace front power window motor (passenger side). Refer to GW-20, "Removal and Installation". NO

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?

YFS >> Power window motor LH is OK.

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

REAR LH: Diagnosis Procedure

INFOID:0000000010596594

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INFOID:0000000010596593

- ${f 1}$  .CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL
- Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH connector.
- Turn ignition switch ON. 3.
- Check voltage between rear power window motor LH harness connector and ground.

	+) ndow motor LH	(-)	Condition		Voltage (V) (Approx.)		
Connector	Terminal				, , ,		
	1			UP	Battery voltage		
DEO	'	Ground	Cround	Cround	Door nower window awitch LU	DOWN	0
D52	3		Rear power window switch LH	UP	0		
	3			DOWN	Battery voltage		

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

YES >> GO TO 3.

NO >> GO TO 2.

### 2.check rear power window motor LH circuit

- 1. Turn ignition switch OFF.
- Disconnect rear power window switch LH connector.
- 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		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	5	D52	1	Existed
	4	D32	3	LAISIEU

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

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#### < DTC/CIRCUIT DIAGNOSIS >

Rear power	Rear power window switch LH		Continuity
Connector	Terminal	Ground	Continuity
D54	5	Ground	Not existed
D94	4		Not existed

#### Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to <a href="PWC-118">PWC-118</a>, "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</u>, "Removal and Installation".

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

#### >> INSPECTION END

### REAR LH: Component Inspection

INFOID:0000000010596595

## 1. CHECK REAR POWER WINDOW MOTOR LH

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

Rear power window motor LH con-	Terminal		- Motor condition	
nector	(+)	(–)	Wiotor Condition	
D52	3	1	DOWN	
532	1	3	UP	

#### Is the inspection result normal?

YES >> Rear power window motor LH is OK.

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

#### REAR RH

### **REAR RH: Description**

INFOID:0000000010596596

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:0000000010596597

### ${f 1}$ . 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 >> Power window motor RH is OK.

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

### REAR RH: Diagnosis Procedure

INFOID:0000000010596598

## 1. CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

#### < DTC/CIRCUIT DIAGNOSIS >

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

	+) ndow motor RH	(–)	Condition		Voltage (V) (Approx.)	
Connector	Terminal				( ) ,	
	1	Constant	Cround Boor		UP	Battery voltage
D72	1			Ground	Ground Rear power wind	Rear power window switch RH
DIZ	3	Giouna	Tid Real power willdow switch Rh	UP	0	
	3			DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

## 2.check rear power window motor rh circuit

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

Rear power wi	ndow switch RH	Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
	5	D72	1	Existed
D14	4	512	3	LAISTEU

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

Rear power wii	ndow switch RH		Continuity
Connector	Terminal	Ground	Continuity
D74	5	Giodila	Not existed
	4		Not existed

#### Is the inspection result normal?

>> Replace rear power window switch RH. Refer to PWC-118, "Removal and Installation". YES

NO >> Repair or replace harness.

## 3.check rear power window motor RH $\,$

Check rear power window motor RH.

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

#### Is the inspection result normal?

YES >> GO TO 4.

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

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "Intermittent Incident".

>> INSPECTION END

#### REAR RH: Component Inspection

### 1. CHECK REAR POWER WINDOW MOTOR RH

- Turn ignition switch OFF.
- Disconnect rear power window motor RH connector.

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#### < DTC/CIRCUIT DIAGNOSIS >

Check motor operation by connecting the battery voltage directly to rear power window motor RH terminals.

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

#### Is the inspection result normal?

YES >> Rear power window motor RH is OK.

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

#### < DTC/CIRCUIT DIAGNOSIS >

### **ENCODER**

### **DRIVER SIDE**

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### DRIVER SIDE : Description

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

### DRIVER SIDE: Component Function Check

#### INFOID:0000000010596601

### 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?

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YES >> Encoder is OK.

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

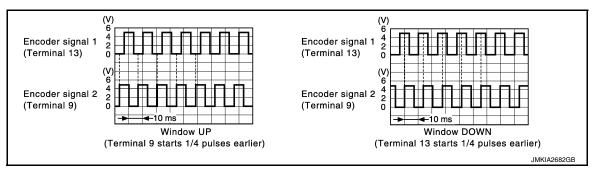
### DRIVER SIDE: Diagnosis Procedure

#### INFOID:0000000010596602

### 1. CHECK ENCODER SIGNAL

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

( Power windo	(+) Power window main switch		Signal (Reference value)
Connector	Terminal		(Reference value)
	9	Ground	Refer to following signal
20	13	Ground	Refer to following signal



#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "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	Power window main switch		Front power window motor (driver side)	
Connector	Terminal	Connector	Terminal	
	9	D10	3	Existed
	13	010	5	Existed

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

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#### < DTC/CIRCUIT DIAGNOSIS >

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

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## ${f 3.}$ CHECK ENCORDER POWER SUPPLY CIRCUIT 1

- 1. Connect power window main switch connector.
- 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		(дрргох.)	
D10	4	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

### 4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

- 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
D8	15	D10	4	Existed

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

Power window main switch			Continuity	
Connector	Connector Terminal		Continuity	
D8	15		Not existed	

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to <a href="PWC-118">PWC-118</a>, "Removal and Installation".

NO >> Repair or replace harness.

## CHECK GROUND 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	
D8	2	D10	6	Existed	

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

#### 6.CHECK GROUND CIRCUIT 2

#### **ENCODER**

#### < DTC/CIRCUIT DIAGNOSIS >

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

Power window main switch			Continuity
Connector	Connector Terminal		Continuity
D8	2		Existed

#### Is the inspection result normal?

>> Replace front power window motor (driver side). Refer to <u>GW-20, "Removal and Installation"</u>.

>> Replace power window main switch. Refer to PWC-118. "Removal and Installation".

#### PASSENGER SIDE

### PASSENGER SIDE: Description

INFOID:0000000010596603

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

### 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.

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

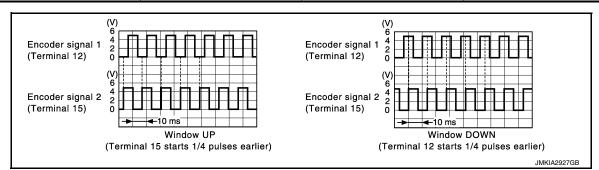
### PASSENGER SIDE : Diagnosis Procedure

### 1. CHECK ENCODER SIGNAL

Turn ignition switch ON.

Check signal between front power window switch (passenger side) harness connector and ground using oscilloscope.

(+) Front power window switch (passenger side)		(-)	Signal (Reference value)
Connector	Terminal		( = = = = = = = = = = = = = = = = = = =
D38	12 15	Ground	Refer to following signal



#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation".

NO >> GO TO 2.

### 2.CHECK ENCORDER SIGNAL CIRCUIT

Turn ignition switch OFF.

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#### **ENCODER**

#### < DTC/CIRCUIT DIAGNOSIS >

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

Front power window s	witch (passenger side)	Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D38	12	D40	5	Existed
D30	15	D40	3	LAISIEU

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

Front power window switch (passenger side)			Continuity
Connector	Terminal	Ground	Continuity
D38	12	Ground	Not existed
	15	-	NOT EXISTED

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

## 3.check encorder power supply circuit

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

(+)			Voltage (V)
Front power window	Front power window motor (passenger side)		Voltage (V) (Approx.)
Connector	Connector Terminal		
D40	4	Ground	Battery voltage

#### Is the inspection result normal?

YES >> GO TO 5. NO >> GO TO 4.

## 4.CHECK ENCODER POWER SUPPLY CIRCUIT 2

- 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 motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D38	4	D40	4	Existed

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

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

#### Is the inspection result normal?

YES >> Replace front power window switch (passenger side). Refer to <a href="PWC-118">PWC-118</a>, "Removal and Installation".

NO >> Repair or replace harness.

### 5. CHECK GROUND CIRCUIT 1

1. Turn ignition switch OFF.

#### **ENCODER**

#### < DTC/CIRCUIT DIAGNOSIS >

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

#### Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

### 6.CHECK GROUND CIRCUIT 2

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

Front power window sw		Continuity	
Connector Terminal		Ground	Continuity
D38	3		Existed

#### Is the inspection result normal?

YES >> Replace front power window motor (passenger side). Refer to <u>GW-20, "Removal and Installation"</u>.

NO >> Replace front power window switch (passenger side). Refer to <a href="PWC-118">PWC-118</a>, "Removal and Installation".

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#### < DTC/CIRCUIT DIAGNOSIS >

# POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

### POWER WINDOW MAIN SWITCH: Description

INFOID:0000000010596606

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:0000000010596607

### 1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

#### (II) With CONSULT

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to DLK-49, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

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

#### Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-32, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

### POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000010596608

## 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)	
D8	14	Ground	(V) 15 10 5 0 10 ms	

#### 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.
- Disconnect power window main switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between power window main switch harness connector and ground.

(+)			Voltage (V)
Power window main switch		(–)	Voltage (V) (Approx.)
Connector	Terminal		
D8	14	Ground	Battery voltage

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "Removal and Installation".

NO >> GO TO 3.

## 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	BCM Power window main switch		Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M123	132	D8	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-97, "Removal and Installation".

NO >> Repair or replace harness.

### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-45, "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

# 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

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <a href="DLK-49">DLK-49</a>, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
CDL LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
ODE UNLOCK 3VV	UNLOCK	: ON	

#### Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <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:0000000010596611

## 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)
D38	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-118">PWC-118</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.
- 3. Turn ignition switch ON.
- Check voltage between front power window switch (passenger side) harness connector and ground.

(+) Front power window switch (passenger side)		(-)	Voltage (V) (Approx.)	
Connector	Terminal		( )	
D38	16	Ground	Battery voltage	

#### Is the inspection result normal?

YES >> Replace power window main switch. Refer to PWC-118, "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 >

ВСМ		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M123	132	D38	16	Existed

4. Check continuity between BCM connector and ground.

BCM			Continuity	
Connector	Connector Terminal		Continuity	
M123	132		Not existed	

### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-97, "Removal and Installation".

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

#### NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

#### CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
TIX WIF LIXTH	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
TIX WASHEN SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT	Off
I IX WIF LIX IIVI	Front wiper switch INT	On
FR WIPER STOP	Front wiper is not in STOP position	Off
TIX WIF LIX STOF	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
RR WIFER ON	Rear wiper switch ON	On
RR WIPER INT	Other than rear wiper switch INT	Off
KK WIPEK INT	Rear wiper switch INT	On
DD WAGUED OW	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
DD 14//DED 070D	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
TORN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWIF SVV	Lighting switch 1ST or 2ND	On
HI BEAM SW	Other than lighting switch HI	Off
HI BEAW 3W	Lighting switch HI	On
HEAD LAMP SW/1	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
PASSING SW	Other than lighting switch PASS	Off
FASSING SW	Lighting switch PASS	On
ALITO LIGHT SW	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On

## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
-R FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOD CW DD	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
DOOD OW AC	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
DOOD OW DI	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
2002 014 214	Back door closed	Off
DOOR SW-BK	Back door opened	On
	Other than power door lock switch LOCK	Off
CDL LOCK SW	Power door lock switch LOCK	On
	Other than power door lock switch UNLOCK	Off
CDL UNLOCK 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 switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	NOTE: The item is indicated, but not monitored.	Off
TD/DD ODEN OW	Back door opener switch OFF	Off
TR/BD OPEN SW	While the back door opener switch is turned ON	On
TRNK/HAT MNTR	NOTE: The item is indicated, but not monitored.	Off
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off
DKE I OCK	LOCK button of the key is not pressed	Off
RKE-LOCK	LOCK button of the key is pressed	On
DIVE LINI OOK	UNLOCK button of the key is not pressed	Off
RKE-UNLOCK	UNLOCK button of the key is pressed	On
RKE-TR/BD	NOTE: The item is indicated, but not monitored.	Off
	PANIC button of the key is not pressed	Off
RKE-PANIC	PANIC button of the key is pressed	On
	UNLOCK button of the key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the key is pressed and held	On

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Monitor Item	Condition	Value/Status
RKE-MODE CHG	LOCK/UNLOCK button of the key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the key is pressed and held simultaneously	On
OPTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
OF HOAL SENSON	Dark outside of the vehicle	Close to 0 V
REQ SW -DR	Driver door request switch is not pressed	Off
INEQ 3W -DIN	Driver door request switch is pressed	On
REQ SW -AS	Passenger door request switch is not pressed	Off
NEQ OW -AO	Passenger door request switch is pressed	On
REQ SW -RR	NOTE: The item is indicated, but not monitored.	Off
REQ SW -RL	NOTE: The item is indicated, but not monitored.	Off
DEO SW. DD/TD	Back door request switch is not pressed	Off
REQ SW -BD/TR	Back door request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
F 0311 3W	Push-button ignition switch (push switch) is pressed	On
IGN RLY2 -F/B	NOTE: The item is indicated, but not monitored.	Off
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
DIVAILE OW Z	The brake pedal is depressed	On
DETE/CANCL SW	Selector lever in P position	Off
DETERO/ WOL OW	Selector lever in any position other than P	On
SFT PN/N SW	Selector lever in any position other than P and N	Off
01 1 1 14/1V 0VV	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
J	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
. 55.1511 II DIN	Push-button ignition switch (push-switch) is pressed	On
IGN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
DETE OVV "II DIVI	Selector lever in P position	On
SFT PN -IPDM	Selector lever in any position other than P and N	Off
OLITINE II DIVI	Selector lever in P or N position	On

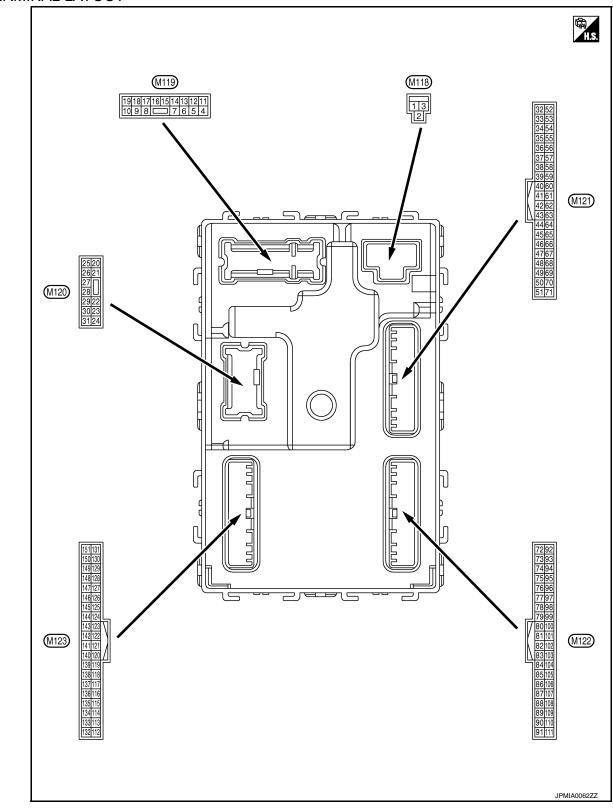
## < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
SFT P -MET	Selector lever in any position other than P	Off
,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	Selector lever in P position	On
SFT N -MET	Selector lever in any position other than N	Off
71 14 WIE1	Selector lever in N position	On
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
INGINE STATE	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
	Driver door is locked	LOCK
DOOR STAT-DR	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	Driver side door is open after ignition switch is turned OFF (Shift position is in the P position)	Reset
	Ignition switch ON	Set
PRMT ENG STRT	The engine start is prohibited	Reset
'RIVIT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The key is not inserted into key slot	Off
VET SW -SLOT	The key is inserted into key slot	On
RKE OPE COUN1	During the operation of the key	Operation frequency of the key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	Yet
JOHN NWID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	Done
	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	Yet
ONEIRM ID4	The key ID that the key slot receives accords with the fourth key ID reg-	Done
CONFIRM ID4	istered to BCM.	Done
CONFIRM ID4		Yet

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Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	Yet
CONFIRMIDZ	The key ID that the key slot receives accords with the second key ID registered to BCM.	Done
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	Yet
CONFIRMIDI	The key ID that the key slot receives accords with the first key ID registered to BCM.	Done
TP 4	The ID of fourth key is not registered to BCM	Yet
IP 4	The ID of fourth key is registered to BCM	Done
TP 3	The ID of third key is not registered to BCM	Yet
IP 3	The ID of third key is registered to BCM	Done
TD 0	The ID of second key is not registered to BCM	Yet
TP 2	The ID of second key is registered to BCM	Done
TD 4	The ID of first key is not registered to BCM	Yet
TP 1	The ID of first key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID 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 REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGOT FRI	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
ID REGGI KKI	ID of rear RH tire transmitter is not registered	Yet
ID REGST RL1	ID of rear LH tire transmitter is registered	Done
ID NEGOT KLI	ID of rear LH tire transmitter is not registered	Yet
WARNING LAMP	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DLIZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

### TERMINAL LAYOUT



PHYSICAL VALUES

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Condition   Cond		inal No.	Description				Value
Ground   Battery power supply   Input   Inpu		e color) –	Signal name			Condition	
Ground   GAT   County   GAT   G		Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
Ground   Ground   Ground   Interior room lamp   Dattery saver is activated. (Cuts the interior room lamp power supply)		Ground		Output	Ignition switch OF	F	Battery voltage
A (LG)   Ground   Interior room lamp power supply   Output   Interior room lamp power supply   Output   Interior room lamp pattery saver is not activate-led. (Outputs the interior room lamp power supply)   Output   Cox   Output   Passenger door   Output   O		Ground		Output	Ignition switch ON		Battery voltage
Ground   G			· · ·				0 V
Second   Passenger door UN-   COCK   Passenger door UN-   COCK   Passenger door   Passenger door   Passenger door   Passenger door   COCK   CActuator is activated)   COCK   CActuator is not activated)   COCK   CActuator is not activated)   COCK   CACtuator is not activated   COCK   CACTUATOR   CACTUATOR		Ground		Output	ed.	-	Battery voltage
Common	5	Cround		Output		UNLOCK	Battery voltage
Cround   C	(L)	Ground	LOCK	Output	Passenger door		0 V
Common	7	Cround	Ston Jama	Output	Ston Jama	ON	0 V
Section of Common of Com	(Y)	Giodila	Step lamp	Output	Step lamp	OFF	Battery voltage
Common   C		Ground		Output	All doors		Battery voltage
Ground Ground   Driver door, fuel lid UNLOCK   Driver door   Driver do	(V)	Glound	LOCK	Output	All doors		0 V
Company   Comp		Ground		Output	Driver door		Battery voltage
Rear RH door and rear LH door UNLOCK   Output   Rear RH door and rear LH door   Output   Rear RH door and rear LH door   Other than UNLOCK (Actuator is not activated)   Other than UNLOCK (Actuator is not activated)   Over than UNLOCK (Actuator is activated)   Over than UNLOCK (Actuator is not activated   Over than UNLOCK (Actuator is not activated   Over than UNLOCK (Actuator is not activated   O	(G)		UNLOCK				0 V
Cock   Sand rear LH door   Other than UNLOCK (Actuator is not activated)   O V		Ground		Outnut			Battery voltage
(R) Ground Battery power supply Input Ignition switch OFF  13 (B) Ground Ground — Ignition switch ON  OFF  OV  NOTE: When the illumination brightening/dimming level is in the neutral position switch illumination ground  ON  ON  Battery voltage  OFF ON  Battery voltage  OFF ON  Battery voltage	(BR)	Ground		Output	and rear LH door		0 V
(B) Ground Ground — Ignition switch ON  OFF  OV  NOTE: When the illumination brightening/dimming level is in the neutral position  Switch illumination ground  ON  OFF ON  Battery voltage		Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
ROTE: When the illumination brightening/dimming level is in the neutral position Switch illumination ground  Output Tail lamp  ON  Fush-button ignition switch illumination ground  ON  ON  Battery voltage		Ground	Ground	_	Ignition switch ON		0 V
Push-button ignition switch illumination ground  Push-button ignition switch illumination ground  Output Tail lamp  ON  When the illumination brightening/dimming level is in the neutral position  (V)  10  2 ms  JSNIA0010GB  Battery voltage	-					OFF	0 V
(W) Ground Switch illumination ground Output lail lamp ON 10 10 2 ms JSNIA0010GB  15 Ground ACC indicator lamp Output Ignition switch OFF or ON Battery voltage		Cround		Outout	Toil lame		When the illumination brighten- ing/dimming level is in the neutral position
Ground   ACC indicator lamp   Output   Ignition switch	(W)	Ground		Output	таш татр	ON	10 0 2 ms
Ground   ACC indicator lamp   Output   Ignition switch	15		100: 1: :			OFF or ON	Battery voltage
		Ground	ACC indicator lamp	Output	ignition switch	ACC	0 V

		Description	Description			Value		
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)		
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	0 V  (V) 15 10 5 0 PKID0926E		
					Turn signal switch OFF	6.5 V 0 V		
18 (BG)	Ground	Turn signal LH (Front)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V		
19 (V)	Ground	Room lamp timer control	Output	Interior room lamp	OFF ON	Battery voltage 0 V		
					Turn signal switch OFF	0 V		
20 (V)	Ground	Turn signal RH (Rear)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V		
23	0						OPEN (Back door opener actuator is activated)	Battery voltage
(G)	Ground	Back door open	Output	Back door	Other than OPEN (Back door opener actuator is not activated)	0 V		
					Turn signal switch OFF	0 V		
25 (G)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V		
26	Ground	Pear winer	Outout	Pear winer	OFF (Stopped)	0.5 V		
(G)	Ground	Rear wiper	Output	Rear wiper	ON (Operated)	Battery voltage		

	inal No.	Description				Value						
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)						
34	Ground	Luggage room anten-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0062GB						
(SB)	Clound	na (–)	Cutput	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB						
35	Ground	Luggage room anten-	Output	anten-Output Ignition switch OFF When	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0062GB					
(V)	Clound	na (+)									OFF	OFF
38	Ground	Back door antenna (–	Qutput	When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB						
(B)	Ground	)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB						

Terminal No. (Wire color)		Description				Value	Λ
+ (VVire	e color) –	Signal name	Input/ Output		Condition	(Approx.)	А
39		Back door antenna		When the back door opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0062GB	B C
(W)	Ground	(+)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	E
47	Craund	Ignition relay (IPDM	Outnut	lamition outlab	OFF or ACC	Battery voltage	G
(Y)	Ground	E/R) control	Output	Ignition switch	ON	0 V	
52	Ground	Starter relay control	Output	Ignition switch	When selector lever is in P or N position	Battery voltage	Н
(SB)	Giodila	Starter relay control	Output	ON	When selector lever is not in P or N position	0 V	
60		Push-button ignition		Push-button igni-	Pressed	0 V	- 1
(BR)	Ground	switch (Push switch)	Input	tion switch (push switch)	Not pressed	Battery voltage	J
					ON (Pressed)	0 V	J
61 (W)	Ground	Back door opener request switch	Input	Back door opener request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms	PW
		Intelligent Key warn-		Intelligent Key	Sounding	1.0 V	M
64 (V)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	Battery voltage	
65 (BG)	Ground	Rear wiper stop position	Input	Rear wiper	In stop position	(V) 15 10 10 ms JPMIA0016GB 1.0 V	О Р
	i l				Not in stop position	0 V	

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
66 (R)	Ground	Back door switch	Input	Back door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
					Pressed	0 V
67 (GR)	Ground	Back door opener switch	Input	Back door opener switch	Not pressed	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB
68 (BR)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 11.8 V
					ON (Door open)	0 V
69 (R)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 10 ms JPMIA0011GB
					ON (Door open)	0 V

	inal No.	Description				Value	Λ			
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α			
74		Passenger door an-		When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	B C D			
(SB)	Ground	tenna (-)	Output	quest switch is operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	E F			
75	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			
(GR)	Glouliu	tenna (+)	Q    O				operated with ig- nition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	J PWC
76	Ground	Driver door antenna	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	M			
(V)	Giouria	(-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	O			

	inal No. e color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
77		Driver door antenna		When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(LG)	Ground	(+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
78	Ground	Room antenna 1 (–)		Ignition switch OFF	ut Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0062GB
(Y)	Ground	(Instrument panel)	Output		When Intelligent Key is not in the passenger compartment	(V) 15 10 5 11 1 s  JMKIA0063GB	
79	Ground	Room antenna 1 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(BR)	Sisting	(Instrument panel)	Carput	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	

## < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
82	Ground	Ignition relay [Fuse	Output	Ignition switch	OFF or ACC	0 V
(R)	Giodila	block (J/B)] control	Juiput	iginuon switch	ON	Battery voltage
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)	Ground	tion	Output	When operating e	ither button on the key	(V) 15 10 5 0 1 ms JMKIA0065GB

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	inal No.	Description				Value
+ (Wire	e 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
87	Ground	Combination switch	Input	Combination	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
(BR)		INPUT 5		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.	Description				Value	Α
+	e color)	Signal name	Input/ Output		Condition	(Approx.)	A
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0036GB 1.3 V	E F
88 (V)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	G H
					Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	PWC
					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 1.3 V	M
90 (P)	Ground	CAN-L	Input/ Output	_	1	_	0
91 (L)	Ground	CAN-H	Input/ Output	_		_	Р

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)
					OFF	Battery voltage
92 (LG)	Ground	Key slot illumination	Output	Key slot illumina- tion	Blinking	(V) 15 10 5 0 JPMIA0015GB 6.5 V
					ON	0 V
93 (V)	Ground	ON indicator lamp	Output	Ignition switch	OFF or ACC	Battery voltage 0 V
-					OFF	Battery voltage
94 (Y)	Ground	Puddle lamp control	Output	Puddle lamp	ON	0 V
95					OFF	0 V
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	Battery voltage
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output	_		Battery voltage
99	Cround	Selector lever P posi-	laaut	Coloator lover	P position	0 V
(R)	Ground	tion switch	Input	Selector lever	Any position other than P	Battery voltage
					ON (Pressed)	0 V
100 (G)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
					ON (Pressed)	0 V
101 (SB)	Ground	Driver door request switch	Input	Driver door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V
(BG)	Ground	lay control	Output	igililori switcii	ON	Battery voltage
103 (LG)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OF	F	Battery voltage

## < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	Δ
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	Α
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C D
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB	E F
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB	G H
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	J PWC
					Front washer switch ON	(V) 15 10 5 0 2 ms	M
						1.3 V	$\circ$

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	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper intermittent dial 4)	(V) 15 10 2 ms JPMIA0041GB 1.4 V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB
108 (R)	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
					Any of the conditions below with all switches OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

	inal No.	Description				Value	Λ
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	А
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V	B C
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	E F
109 (Y)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V	Н
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V	J PW(
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V	M
					ON	0 V	0
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 10 ms JPMIA0012GB 1.1 V	Р

	inal No.	Description				Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
113	Ground	Optical sensor	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V
(P)	Ground	Optical Serisor	Прис	ON	When dark outside of the vehicle	Close to 0 V
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage
		Stop lamp switch 2		Stop lamp switch	OFF (Brake pedal is not depressed)	0 V
118	Ground	(Without ICC)	Input	Otop lamp switch	ON (Brake pedal is depressed)	Battery voltage
(P)	Oround	Stop lamp switch 2	Прис		OFF (Brake pedal is not de- brake hold relay OFF	0 V
		(With ICC)			ON (Brake pedal is de- rake hold relay ON	Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 10 5 0 10 ms JPMIA0012GB
					UNLOCK status (Unlock switch sensor ON)	0 V
121 (BR)	Ground	Key slot switch	Input		ot inserted into key slot	Battery voltage 0 V
123 (W)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V Battery voltage
124 (LG)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)  ON (Door open)	(V) 15 10 10 ms  JPMIA0011GB 11.8 V 0 V
132 (BR)	Ground	Power window switch communication	Input/ Output	Ignition switch ON		(V) 15 10 5 10 ms  JPMIA0013GB 10.2 V  Battery voltage

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
			-		ON (Tail lamps OFF)	9.5 V
133 (W)	Ground	Push-button ignition switch illumination	Output	Push-button ignition switch illumination	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination brightening/dimming level.  (V) 15 10 5
					OFF	JPMIA0159GB
134				LOCK indicator	OFF	Battery voltage
(GR)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch ON		0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(Y)	Ground	power supply	Output	iginuon switch	ACC or ON	5.0 V
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 * * 0.2s
(L)		er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 
140 (GR)	Ground	Selector lever P/N position	Input	Selector lever	P or N position  Except P and N positions	Battery voltage 0 V
					ON P and N positions	0 V
141 (G)	Ground	Security indicator	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s JPMIA0014GB
					055	11.3 V
					OFF	Battery voltage

	inal No.	Description				Value	
+ (VVir	e color) –	Signal name	Input/ Output		Condition	(Approx.)	
·					All switches OFF	0 V	
					Lighting switch 1ST		
					Combination	Lighting switch HI	(V)
142	Ground	Combination switch	Output	switch	Lighting switch 2ND	10	
(BG)	Ground	OUTPUT 5	Output	(Wiper intermittent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	
					All switches OFF (Wiper intermittent dial 4)	0 V	
					Front wiper switch HI (Wiper intermittent dial 4)		
143	Crown	Combination switch	Outro	Combination	Rear wiper switch INT (Wiper intermittent dial 4)	(V) 15 10	
(P)	Ground	OUTPUT 1	Output	switch	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	5 0 2 ms JPMIA0032GB	
					All switches OFF (Wiper intermittent dial 4)	0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
144		Combination switch		Combination	Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15	
(G)	Ground	OUTPUT 2	Output	switch	Rear washer switch ON (Wiper intermittent dial 4)	10 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		
				Combination	Front wiper switch LO	(V) 15	
145 (L)	Ground	Combination switch OUTPUT 3	Output	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms	
						10.7 V	

## < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	0
(Wir	e color)	Signal name	Input/ Output		Condition	(Approx.)	F
					All switches OFF	0 V	
					Front fog lamp switch ON		-
				Combination	Lighting switch 2ND	(V)	
146	Ground	Combination switch	Output	switch	Lighting switch PASS	10	(
(SB)	Gradina	OUTPUT 4	Guipar	(Wiper intermit- tent dial 4)	Turn signal switch LH	0 2 ms JPMIA0035GB 10.7 V	
						(V) 15 10	E
150 (LG)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	0	
						JPMIA0011GB 11.8 V	
					ON (Door open)	0 V	
151	Crours	Rear window defog-	Out not it	Rear window de-	Active	0 V	ŀ
(G)	Ground	ger relay control	Output	fogger	Not activated	Battery voltage	

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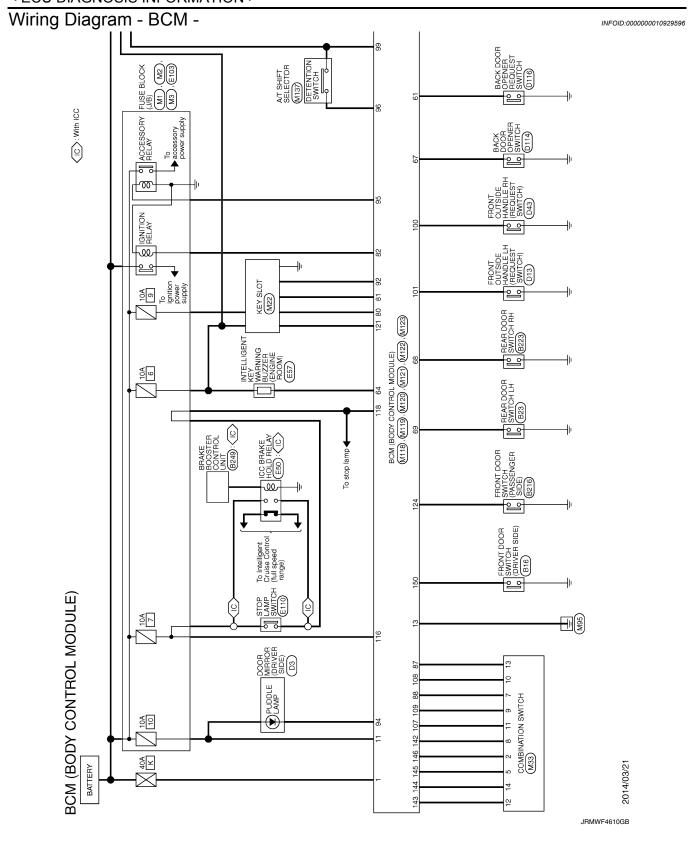
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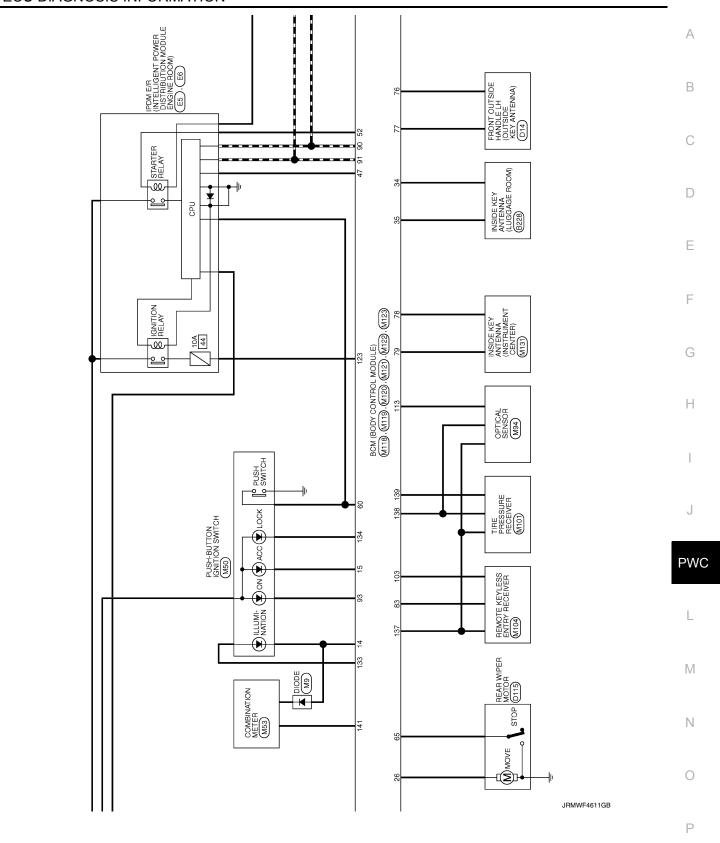
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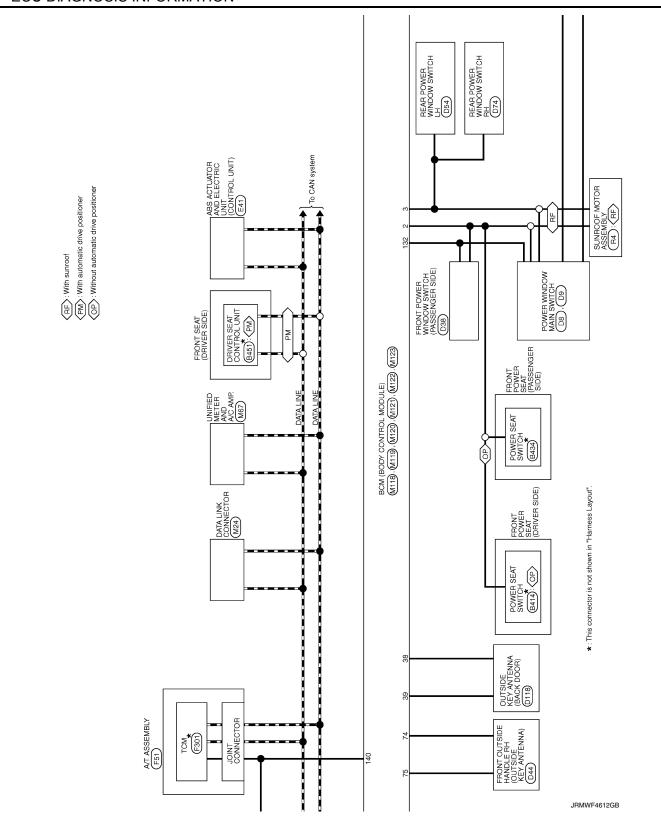
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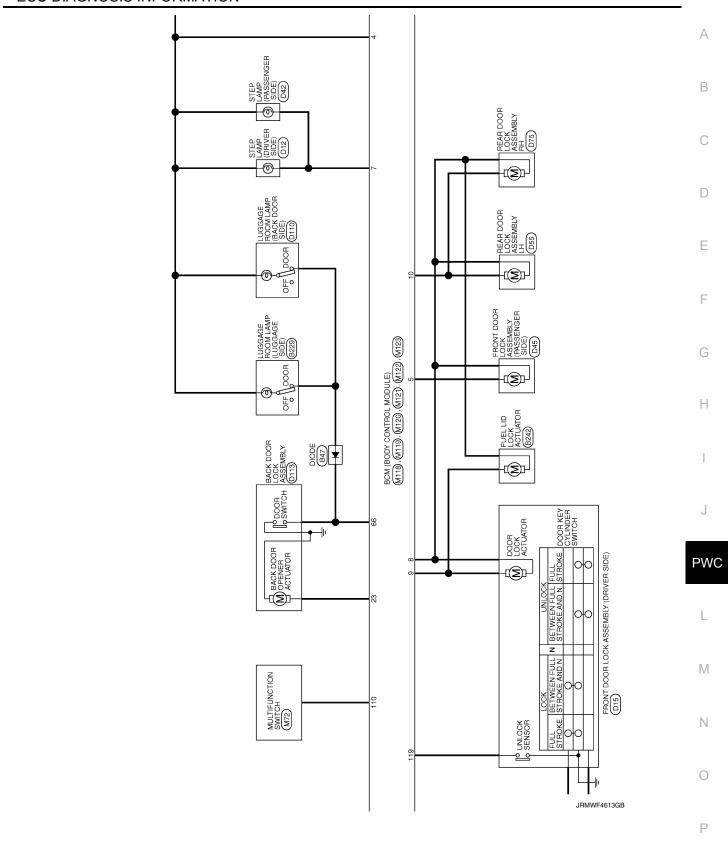
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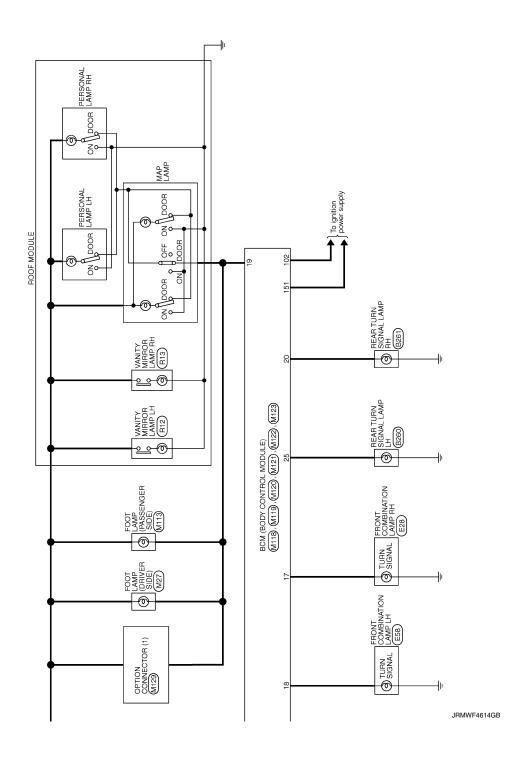
Revision: February 2015 PWC-59 2015 QX50











Connector No. B242  Connector Name PUEL LD LOCK ACTUATOR  Connector Type MASFW-LC  Terminal Color Of Signal Name [Specification]  No. Wire  2	Cornector Nume   BRAKE BOOSTER CONTROL UNIT	
Corrector No.   B228	Corrector No. 8229  Corrector Name Luciacut Robut Luke Luciacut Sibel Corrector Type TRUSHW  Terminal Color Of Name Signal Name (Specification)  1 GR  2 L	
Temminal Color Of   Signal Name [Specification]   Wire   Wire	Terminal Color Of Wire Signal Name [Specification]  Connector Name REAR DOOR SWITCH RH Connector Type AGGFW  Terminal Color Of Signal Name [Specification]  Terminal Color Of Signal Name [Specification]	
BCM (BODY CONTROL MODULE)    Connector Non Bits	Corrector No. BE33 Corrector Name REAR DOOR SWITCH LH Corrector Type A05FW  Terminal Color Of Signal Name [Specification]  Corrector Name B17  Corrector Name DIODE  Corrector Type 24335 C9900	

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BCM (BODY CONTROL MODULE)									
Connector No. B260	Connector No.	B414	Connector No.		B451	Connector No.	or No.	D3	
Connector Name REAR TURN SIGNAL LAMP LH	Connector Name	POWER SEAT SWITCH	Connector Name		DRIVER SEAT CONTROL UNIT	Connect	Connector Name	DOOR MIRROR (DRIVER SIDE)	
Connector Type HS02FG-W	Connector Type	NS10FW-CS	Connector Type	П	TH32FW	Connect	Connector Type	TH24MW-NH	
	E	60	Œ			Œ			
	ć.	4365109	ń.		128 27 28 25 24 23 22 21 20 19 18 17	Ą.	<i>5</i> 1	12 11 10 7 6 5 3 2 2 24 23 22 21 19 18 17 14	
Terminal Golor Of Signal Name [Specification] No. Wire	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal O No.	Color Of Wire	Signal Name [Specification]	Terminal No.	Color Of Wire	Signal Name [Specification]	
	1 2	1	-	-	CAN-H	2	0	П	
2 B -	2 B		2	1	UART (TX/RX)	3	В	SIDE CAMERA LH COMM	
	3 G/Y	-	4	,	PULSE (RECLINER)	2	>	SIDE CAMERA LH IMAGE SIGNAL	
N	4	1	20	1	PULSE(TELESCOPIC)	9 1	œ 3	SIDE CAMERA LH POWER SUPPLY	
┰	A >	1	0 1		ADDRESS 2	ç	<b>×</b> 0	1	
Connector Name REAR TURN SIGNAL LAMP RH	╀		- 00		SLIDE SW (BACKWARD)	=	5 0	1	
Connector Type HS02FG-W	8	-	o		RECLINER SW (BACKWARD)	12	. 0	1	
	9 L/R	1	10	,	FRONT LIFTER SW (DOWNWARD)	14	P7	1	
	10 G/W	1	11	-	REAR LIFTER SW (DOWNWARD)	17	5	SIDE CAMERA LH IMAGE GND	
			12	1	POWER SUPPLY (ENCODER)	18	W	SIDE CAMERA LH GND	
S. S			17	-	CAN-L	19	В	1	
	Connector No.	B434	18	1	PULSE (SLIDE)	21	GR	1	
)	Connector Name	POWER SEAT SWITCH	19	1	PULSE (FRONT LIFTER)	22	BR	I	
	- 1		20	1	PULSE (REAR LIFTER)	23	>	1	
	Connector Type	NS10FW-CS	21		PULSE(TILT)	24	>		
<u>_</u>	þ		22	1	ADDRESS 1				
No. Wire	国		23	,	IND 1				
>	¥	7 8 1	24		SLIDE SW (FORWARD)	Connector No.	or No.	D8	
2 B =	Ź		25	1	RECLINER SW (FORWARD)	Connect	Connector Name	POWER WINDOW MAIN SWITCH	
		6 5 9 10 3 4	97		FRONT LIFTER SW (UPWARD)				
			27	1	REAR LIFTER SW (UPWARD)	Connect	Connector Type	NS16FW-CS	
			28	1	SET SW	Œ			
	Tarminal Color Of					手			
		Signal Name [Specification]				H.S.	rá	1 2 3 4 0 5 6 7	
	1 R	1					ı	8 9 10 11 13 14 15	
	2 B	-						11 01	
	3 €/√	1							
	+	1							
	w :	1				Terminal	Color Of	Signal Name [Specification]	
	╀					<u> </u>	2 3	1	
	8					- 2	BB	1	
	9 L/R	1				e	SR.	,	
	10 G/W	1				4	>	1	

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[DE]	cetion)	В
DD2 STEP LAMP (PASSENGER SIDE) TB02FW  C211 Signal Name (Specification)	Signal Name [Specification]	С
sector No. estor Type estor Type  Sector Type  Sector Type  Wire	Name   Na	D
O O O O O O O O O O O O O O O O O O O		Е
DIS FROMT DOOR LOCK ASSEMBLY (DRIVER SIDE) FROMT DOOR LOCK ASSEMBLY (DRIVER SIDE)  FROMT DOOR LOCK ASSEMBLY (DRIVER SIDE)  Signal Name [Specification]	1	F
		G
Corrector No. Corrector Name Corrector Type H.S. H.S. No. Wire No.	1   1   2   2   2   2   2   3   3   4   4   8   6   4   4   6   5   4   4   6   5   4   5   5   5   5   5   5   5   5	Н
FROM OUTSIDE HANDE LU REQUEST SWITCH) RROZFL  Signal Name [Specification]	Signal Name [Specification]	I
PI3 ROAT OUTSIDE I RKOZFL Signal	Signal	J
Corrector Nome F Connector Type II  H.S.  Terminal Color Of No. Wire No. Wire No. Wire St.	Oolor Of SB	PWC
DDULE)	entional Control of the Control of t	L
BCM (BODY CONTROL MODULE)  5	Nagostw-css Nagostw-css Signal Name (Specification)  12 1  Signal Name (Specification)  Signal Name (Specification)	M
BCM (BOD 6 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Connector Name	Ν
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BCM (BODY CONTROL MODULE)						
Connector No. D44	Connector No. D54	4	Connector No.	No. D74		Connector No. D110
Connector Name FRONT OUTSIDE HANDLE RH (OUTSIDE KEY ANTENNA)	Connector Name RE	REAR POWER WINDOW SWITCH LH	Connector Name		REAR POWER WINDOW SWITCH RH	Connector Name LUGGAGE ROOM LAMP (BACK DOOR SIDE)
Connector Type RK02MGY	Connector Type NS	NS08FW-CS	Connector Type	Type NS08FW-CS	-cs	Connector Type TK03FW
<b>E</b>	修		唇			<b>E</b>
	S.	23451	S.		23451	
Terminal Golor Of Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal C No.	Color Of Wire	Signal Name [Specification]	Terminal Golor Of Signal Name [Specification] No. Wire
1 P	<b>→</b>	-	-	W	-	
2 V =	2 v		2	^	1	2 Р
	g .	1	е.	5	-	
ON-	4 4		4 4	10		District District
00111001101	ł	1		0 00		
Connector Name FROWT DOOR LOCK ASSEMBLY (PASSENGER SIDE)				,		Connector Name BACK DOOR LOCK ASSEMBLY
Connector Type E06FGY-RS						Connector Type NS04FW-CS
4	Connector No. D55	5	Connector No.	No. D75		4
医	Connector Name RE	REAR DOOR LOCK ASSEMBLY LH	Connector Name		REAR DOOR LOCK ASSEMBLY RH	」
	Connector Type E0	E06FGY-RS	Connector Type	rve E06FGY-RS	-RS	
	1		4	1		4 3 2 1
	厚		厚		[	
	H.S.		H.S.			
-					(11211)	la C
No. Wire						No. Wire
2 LG -						2 B -
	Terminal Color Of No. Wire	Signal Name [Specification]	Terminal O No.	Color Of Wire	Signal Name [Specification]	3 V 4 B
	Н		-	g	1	
	2 G	1	2	>	1	

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	Connector No. E28 Connector Name FRONT COMBINATION LAMP RH	Connector Type RS08FB-PR	H.S. (5 6 7 8)	Terminal   Color Of   Signal Name   Specification   Specification   Specification   Specification   Specification   Specif
Γ	Connector Name POWER OFFICE POWER DISTRIBUTION MODILE ENGINE	Connector Type TH20FW-CS12-M4-1V	1	Terminal   Color Of   Signal Name   Specification
	Connector Name BACK DOOR OPENER REQUEST SWITCH	Connector Type TK02MBR-P	H.S.	Terminal Color Of Name (Specification)  1 Were Name Commercian Name (Specification)  Commercian Name Outside KEY ANTENNA (BACK DOOR)  Commercian Name Outside KEY ANTENNA (BACK DOOR)  Commercian Name (Specification)  No. Were Name (Specification)  1 BR
닒	Connector No. D114 Connector Name BACK DOOR OPENER SWITCH	Connector Type TK02MBR-P	H.S.	Terminal Color Of Name   Signal Name [Specification]   1

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Connector No. F301	<u>ء</u>	Connector Time SP10EG	1			(12345)	016181219		Terminal Golor Of Signal Name [Specification] No. Wire	1 - IGNITION POWER SUPPLY	2 – BATTERY POWER SUPPLY	3 - CAN-H	-	5 - GROUND		8 - CAN-L	9 - STARTER RELAY	10 - GROUND		Connector No.	Connector Name FISE BLOCK (J/B)	П	Connector Type NS06FW-M2		T.S. 3A 11A	8A 17A 6A 5A 4A			Terminal Color Of Similar Color Of	No. Wire Signal Name Lopecinication		2A G	+	4A R –	- 24 V	- W	+	
Connector No.   E110	e e	Connector Time MOJEW-I C	٦.		•	· [α	[12]		Terminal Color Of Signal Name [Specification] No. Wire	1 L	2 W -	3 ×			Connector No. F51		Connector Name   A/   ASSEMBLY	Connector Type RK10FG-DGY		A Astron	H.S.	1 1	<u> </u>	Tourninal Calas Of	No. Wire Signal Name [Specification]	1 Y IGNITION POWER SUPPLY	2 BR BATTERY POWER SUPPLY		5 B GROUND	6 Y IGNITION POWER SUPPLY	BACK-L		GR ST/	10 B GROUND				
Connector No. E58	e e	Conventor Trans	٦.			( 2 3	8 1 8		Terminal Golor Of Signal Name [Specification] No. Wire	2 B -	3 B/Y -	B/W	> 0	5 0	- C	-		Connector No. E103	Connector Name FUSE BLOCK (J/B)	Connector Type NS16FW-CS	1		6F 4F 2F 1F	95 85			Terminal Color Of Signal Name [Specification]	╁	H	4F G -	6F BR -		9F R -					
BCM (BODY CONTROL MODULE)	. Tr	2/ GR DS RL		SB	R	35 L CAN-H 45 B BUS-H		Connector No. E50	Connector Name ICC BRAKE HOLD RELAY	Connector Type M06FGY-R-US			1 7	6 7 3		3		lal	No. Wire Official regular Copecing and 1	2 8	Ь		- L		Connector No. E57	Connector Name INTELLIGENT KEY WARNING BIZZER (ENGINE BOOM)	$\overline{}$		\ -			((1 3))			- C	No. Wire Signal Name [Specification]	Ħ	3 ^

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Corrector No. M33  Corrector Name COMBINATION SWITCH  Corrector Type THEFW-NH  [1 2 3   14 5 6 7 8 9 101 112 13 14	Terminal Color Of Signal Name (Specification]  1
Connector No. M24  Connector Name DATA LINK CONNECTOR.  Connector Type BD16FW  11 14 16  13 4 5 6 7 8	Terminal   Color Of   Signal Name [Specification]   Wire   Signal Name [Specification]   Signal Name [Specification]   Signal Name   Specification]   Sig
Corrector No. M9  Corrector Type 24335,03900	Terminal   Color Of   Signal Name   Specification   No.   Wive
BCM (BODY CONTROL MODULE)  Cornector Nume FUSE BLOCK (J.B.)  Cornector Type NS:10FW-CS  ASSET BLOCK (J.B.)  Cornector Type NS:10FW-CS  (ASSET BLOCK (J.B.)  (ASSET BLOCK (J.B.)	Terminal   Color Of   Signal Name   Specification   Color

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BC№	1 (BO	BCM (BODY CONTROL MODULE)						
7	>	1	Connector No.	r No.	M67	Connector No.	M72	Connector No. M101
80	۵	1	Connector Name		UNIFIED METER AND A/C AMP.	Connector Name	MULTIFUNCTION SWITCH	Connector Name TIRE PRESSURE RECEIVER
			Connector Type	r Type	TH32FW-NH	Connector Type	TH16FW-NH	Connector Type TK04FW
Connector No.	tor No.	M53	(					ú
Connect	Connector Name	e COMBINATION METER	厚			厚		<b>F</b>
Connect	tor Type	Connector Type TH40FW-NH	H.S.		M 100 100 100 100 100 100 100 100 100 10	H.S.	8 8 7	SH SH
<u>(</u>					88		0	[1 2]  4
F	r							
Ž	ñ	1 2 3 5 6 7 10 15 16 19 20	ŀ	- 0		- O		- C C
		21 22 24 25 25 27 28 29 30 31 33 38 38 38 39 40	No.	Wire	Signal Name [Specification]	No. Wire	Signal Name [Specification]	Signal Name [Specification]
			41	>	ACC POWER SUPPLY	1 B	GROUND	1 BG GROUND
			42	<b>X</b>	FUEL LEVEL SENSOR SIGNAL	3 V	ACC	2 L SIGNAL
Terminal	0	Of Signal Name [Specification]	43	œ	INTAKE SENSOR SIGNAL	4 A	ורר	4 Y BATTERY
ė	Wire		44	ΓG	IN-VEHICLE SENSOR SIGNAL	5 ×	ILL CONT	
-	GR	BATTER	45	а	AMBIENT SENSOR SIGNAL	e SB	AV COMM (H)	
2	ΓG	COMMUNICATION	46	BG	SUNLOAD SENSOR SIGNAL	8 LG	AV COMM (L)	Connector No. M104
3	GR	COMMUNICATIO	47	g	EXHAUST GAS / OUTSIDE ODOR DETECTING SENSOR SIGNAL	9 B	SW GND	Connector Name   REMOTE KEYLESS ENTRY RECEIVER
2	В		53	ŋ	IGNITION POWER SUPPLY	14 Y	DISK EJECT SIGNAL	
9	Ь	ALTER	54	>	BATTERY POWER SUPPLY	16 G	HAZARD ON	Connector Type JAB04FB
7	BR	AIR	55	В	GROUND			(
10	g	SECURITY SIGNAL	56	١ ٦	CAN-H			
15	В		57	W	BRAKE FLUID LEVEL SWITCH SIGNAL	Connector No.	M94	
16	В	METER CONT	58	BR	FUEL LEVEL SENSOR GROUND	Consolve Money	aosnas Ivoltao	[.  -  -
19	В	ILL GND	59	GR	INTAKE SENSOR GROUND	COLLECCO Name	OF HOSE SENSON	1 2 4
20	ď		9	٦	IN-VEHICLE SENSOR GROUND	Connector Type	TK03FW	
21	BG	IGNITION SIGNAL	61	BR	AMBIENT SENSOR GROUND	1		
22	В		62	SB	SUNLOAD SENSOR GROUND			
24	BR	COMMUNICATI	63	œ	-			lal
25	>	COMMUNICATION SIGNAL (AMP>LCD)	65	BG	ECV SIGNAL	Žį.		No. Wire Signal warie Especification
26	œ		69	٦	A/C LAN SIGNAL		1 2 3	1 BG GROUND
27	>	PARKING BRAKE SWITCH SIGNAL	70	Я	EACH DOOR MOTOR POWER SUPPLY		2 -	2 Y SIGNAL OUTPUT
28	W	BRAKE FLUID LEVEL SWITCH SIGNAL	7.1	В	GROUND			4 LG BATTERY
58	SB	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)	72	Ь	CAN-L			
30	9	SEAT BELT BUCKLE SWITCH SIGNAL (PASSENGER SIDE)				Terminal Color Of	[missed Name of Control of Contro	
31	٦	WASHER LEVEL SWITCH SIGNAL				No. Wire	Signal Ivanie Lopecincauorij	
33	В	ILLUMINATIC				1 Υ	POWER	
36	LG	SELECT				2 P	OUTPUT	
37	SB	ENTER SWITCH SIGNAL				3 B	GROUND	
38	٦	TRIP A/B RESET SWITCH SIGNAL						
39	Д	ILLUMINATION CC						
40	BG	ILLUMINATION CONTROL SWITCH SIGNAL (+)						

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Jonnector No. Milistories (2007) (199	Connector No. MIT9  Connector Name BOM (BODY CONTROL MODULE)  Connector Name BOM (BODY CONTROL MODULE)  Connector Name NSIGFW-CS  Connector Name NSIGFW-CS  Connector Name No. 100 (1999)	Connector No. M121 Connector Name BCM (BODY CONTROL MODULE) Connector Type Connec	JUE)	80 GR 81 W 82 R 83 Y	NATS ANT AMP. NATS ANT AMP. IGN RELAY (F/B) CONT KEYLESS ENTRY PECEIVER COMM
	4 5 7 5 8 9 10	1 —	SS   SS   SS   SS   SS   SS   SS   S	87 BR 88 V 90 P 91 L 92 LG 93 V 94 Y	COMBISW INPUTS COMBISW INPUTS CANH CANH KEY SLOT ILL CONT ON IND PUDDE LAMP CONT
Signal Name [Specification]  — — — — — — — — — — — — — — — — — —	Terminal Color Of Signal Name [Specification]   Name   N	No.   Wire   Signal Name [Specification]   Wire   Wire   ULOGACE FOOM ANT-   25	action]  MIT-  T-  T-  T-  T-  T-  OUDEST SW  WE RS SW  SWW  SWW  SWW  SWW  SWW  SWW  SW	96 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A.T. SHITT SELECTION COURT OF A TRAIN TO SHIT SELECTION POWER SUPPLY PASSENGER DOON REQUEST SW DELOWER FAM WOTTOR RELAY COURT SW MENT SELOWER SW MENT SELOWER SW MENT 1 COMBES SW MENT 1 COMBES SW MENT 1 COMBES SW MENT 2 HAZARD SW MENT 2 HAZARD SW MENT 2 HAZARD SW MENT 3 HAZARD SW MENT 3 HAZARD SW MENT 3 HAZARD SW MENT 4 COMBES W MENT 2 HAZARD SW MENT 3 HAZARD SW
Signal Name [Specification]  BAT (F.L.)  POWER WINDOW POWER SUPPLY(BAT)  POWER WINDOW POWER SUPPLY(RAP)	Cornector No.   M120   Connector No.   M120   Connector Name   BCM (BODY CONTFOL MODULE)   Connector Type   M512FW-CS   Connector Type   M512FW-CS   Connector Type   Connecto	MI22   Connector Nun   MI22   Connector Nun   ECM (BODY CONTROL MODULE)   Connector Type   ELMORB-VH   Connector Type   ELMORB-VH   Connector Type   ELMORB-VH   Connector Type   ELMORB-VH   Connector Type   C	11E) 	Terminal Color Of Mee   No. Wire   No. Wir	Image   Imag

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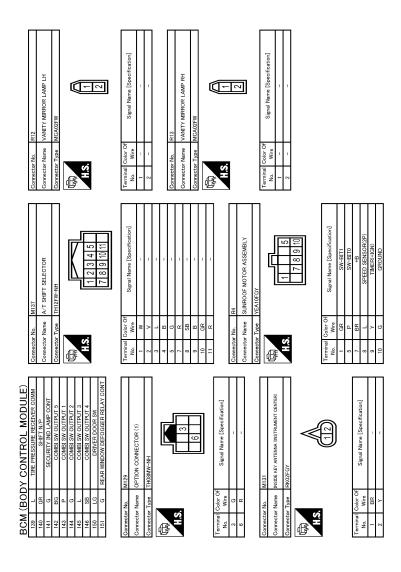
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Fail-safe

FAIL-SAFE CONTROL BY DTC

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 → 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
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

#### 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 stops.
- 2. Turn rear wiper switch OFF.
- 3. Operate the rear wiper switch or rear washer switch.

#### DTC Inspection Priority Chart

INFOID:0000000010929598

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	N
2	U1000: CAN COMM CIRCUIT     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	P

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Revision: February 2015 PWC-75 2015 QX50

#### < ECU DIAGNOSIS INFORMATION >

Priority	DTC
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>B2606: STARTER RELAY</li> <li>B2607: ENG STATE SIG LOST</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>B2618: PUSH-BTN IGN SW</li> <li>B2618: VEHICLE TYPE</li> <li>B26EA: KEY REGISTRATION</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>
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>
6	B2621: INSIDE ANTENNA     B2623: INSIDE ANTENNA

DTC Index

#### 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 <a href="PWC-11">PWC-11</a>. "COM- MON ITEM: CONSULT Function (BCM - COMMON ITEM)".

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
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	_	BCS-42
U1010: CONTROL UNIT (CAN)	_	_	_	_	BCS-43
U0415: VEHICLE SPEED SIG	_	_	_	_	BCS-44
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-40

# < 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	A
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-43	
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-44	
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-45	(
B2195: ANTI SCANNING	×	_	_	_	SEC-46	
B2553: IGNITION RELAY	<del>_</del>	×	_	<del>_</del>	PCS-51	
B2555: STOP LAMP	_	×	_	_	SEC-47	
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-49	
B2557: VEHICLE SPEED	×	×	×		SEC-51	- E
B2560: STARTER CONT RELAY	×	×	×	_	SEC-52	
B2562: LOW VOLTAGE	_	×	_	_	BCS-45	F
B2601: SHIFT POSITION	×	×	×	_	SEC-53	
B2602: SHIFT POSITION	×	×	×	_	SEC-56	
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-59	(
B2604: PNP SW	×	×	×	_	SEC-62	
B2605: PNP SW	×	×	×	_	SEC-64	-  -
B2608: STARTER RELAY	×	×	×	_	SEC-66	•
B260A: IGNITION RELAY	×	×	×	_	PCS-53	•
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-68	
B2614: ACC RELAY CIRC	_	×	×	_	PCS-55	
B2615: BLOWER RELAY CIRC	_	×	×	_	PCS-58	
B2616: IGN RELAY CIRC	_	×	×	_	PCS-61	
B2617: STARTER RELAY CIRC	×	×	×	_	SEC-71	
B2618: BCM	×	×	×	_	PCS-64	P۱
B261A: PUSH-BTN IGN SW	_	×	×	_	SEC-73	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-76	L
B2621: INSIDE ANTENNA	_	×	_	_	DLK-58	
B2623: INSIDE ANTENNA	_	×	_	_	DLK-60	N
B26E1: ENG STATE NO RES	×	×	×	_	SEC-69	
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	SEC-70	
C1704: LOW PRESSURE FL	_	_	_	×		
C1705: LOW PRESSURE FR	_	_	_	×	WT 04	
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-24</u>	C
C1707: LOW PRESSURE RL	_	_	_	×		
C1708: [NO DATA] FL	_	_	_	×		F
C1709: [NO DATA] FR	_	_	_	×	WT oc	1
C1710: [NO DATA] RR	_	_	_	×	<u>WT-26</u>	
C1711: [NO DATA] 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
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-29
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	WT-31
C1734: CONTROL UNIT	_	_	_	×	<u>WT-33</u>

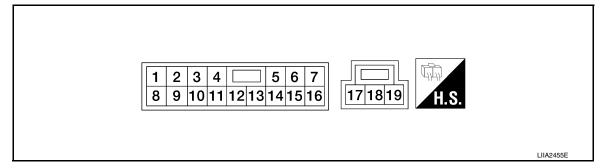
#### **POWER WINDOW MAIN SWITCH**

#### < ECU DIAGNOSIS INFORMATION >

# **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 (W)	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 (BR)	Ground	Encoder ground	_	_	0
3 (GR)	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 (V)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
5 (O)	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 (Y)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
7 (BR)	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 (O)	Ground	Encoder pulse signal 2	Input	When front power window motor (driver side) operates	(V) 6 4 2 0 10 ms  JMKIA0070GB

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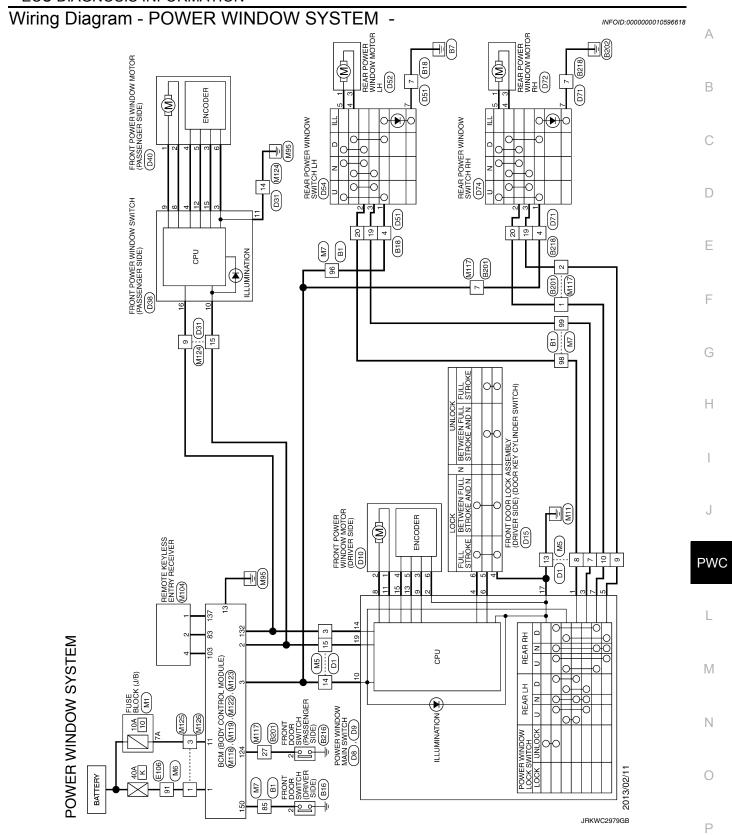
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#### **POWER WINDOW MAIN SWITCH**

# < ECU DIAGNOSIS INFORMATION >

	ninal No. re color)	Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
				Ignition switch ON	Battery voltage
10	Ground	Retained power signal	Input	Within 45 seconds after ignition switch is turned to OFF	Battery voltage
(Y)				When driver side or passenger side door is opened during retained power operation	0
11 (G)	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 (P)	Ground	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	(V) 6 4 2 0 10 ms
14 (V)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating	(V) 15 10 5 0 10 ms
15 (B)	Ground	Encoder power supply	Output	Ignition switch ON	Battery voltage
17 (B)	Ground	Ground	_	_	0
19 (W)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage



POV	ÆR W	POWER WINDOW SYSTEM									
Connector No.	or No.	B1	47	SB	-	Connector No.	B16	Conne	Connector No.	B201	
Connect	Connector Name	WIRE TO WIRE	48	B R		Connector Name	ne FRONT DOOR SWITCH (DRIVER SIDE)	Conne	Connector Name	WIRE TO WIRE	
Connector Type	or Type	TH80FW-CS16-TM4	20	╚	-	Connector Type	e A03FW	Conne	Connector Type	TH80FW-CS16-TM4	
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22	Υ	-	92	BR	-	No.	Wire Signal Name Lopedification	33	H	-	
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27	В		94	SB	-	2	Y - [With BOSE audio]	22	5	-	
28	œ	-	92	ŋ	-	4	A	26	œ	-	
29	Μ	-	96	>	-	2	BR -	24	Н	-	
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35	۵	-				20		63	Ь	-	
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	46   C   - (With autonomic drive positioned)     47   R   - (Without autonomic drive positioned)     48   C   - (Without autonomic drive positioned)     48   C   - (Without autonomic drive positioned)     49   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     41   C   - (Without autonomic drive positioned)     42   C   - (Without autonomic drive positioned)     43   C   - (Without autonomic drive positioned)     43   C   - (Without autonomic drive positioned)     43   C   - (Without autonomic drive positioned)     44   C   - (Without autonomic drive positioned)     45   C   - (Without autonomic drive positioned)     45   C   - (Without autonomic drive positioned)     46   C   - (Without autonomic drive positioned)     47   C   - (Without autonomic drive positioned)     48   C   - (Without autonomic drive positioned)     49   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     41   C   - (Without autonomic drive positioned)     42   C   - (Without autonomic drive positioned)     43   C   - (Without autonomic drive positioned)     44   C   - (Without autonomic drive positioned)     45   C   - (Without autonomic drive positioned)     45   C   - (Without autonomic drive positioned)     46   C   - (Without autonomic drive positioned)     47   C   - (Without autonomic drive positioned)     48   C   - (Without autonomic drive positioned)     48   C   - (Without autonomic drive positioned)     49   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     40   C   - (Without autonomic drive positioned)     41   C   - (Without autonomic drive positioned)     42   C   - (Without autonomic drive positioned)     42   C   - (Without autonomic drive positioned)     43   C   - (Without autonomic drive positioned)     44   C   - (Without
Signal Name   Signal Name   Sourcestor Name   National Name   Signal Name   Sourcestor Name   Name   Signal Name   Sourcestor Name   Name   Sourcestor Name   Name   Sourcestor Name   Name   Sourcestor Name   Name   Name   Sourcestor Name   Name   Name   Sourcestor Name   N	Terminal Geodro Of Terminal Constraints of Terminal Co
22 W   17   17   17   17   17   17   17	Wire L
	JRKWD4943GB

Revision: February 2015 PWC-83 2015 QX50

Connector No.	POWER WINDOW SYSTEM Connector No. D10 Connector Name FRONT POWER WINDOW MOTOR (DRIVER SIDE)	Connector No.	2	D31 WIRE TO WIRE	54 O	1 1	Connector No.	D51 WRE TO WRE
Connector Type	NS06FW-CS	Connector Type	П	TH40FW-CS15			Connector Type	NH10MW-CS10
是 H.S.	1 1 2 3 4 5 6	是 H.S.		ार्ड मा था	Connector None Connector Type	DOSS RICH FOURTH WALCOW SWITCH (PASSENGER SIDC) NIST 6FW-CS    3 4	H.S.	1         2         3         4         5         6           7         8         910111213 13         19         20
Ferminal Color Of No. Wire	of Signal Name [Specification]	Terminal No.	ვ >	Signal Name [Specification]		8 9 10 11 12 15 16	Terminal Color Of No. Wire	o
2 L	-	- 8	H H				2 Y	- [Without BOSE audio] - [With BOSE audio]
3	1 1	9	> 0	1 1	Terminal Color Of	f Signal Name [Specification]	<b>4</b> a	1 1
Н	_	13	ΓG	1	H	1	+	1
6 BR	-	14	g 3	-	4 0	-	7 B	
		16	a a		+		5 >- 0 @	- [With BOSE audio]
Connector No.	D15	17	В	1	Н	-	19 G	1
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)	8 6	α >		= 2		20 \	1
Connector Type	E06FGY-RS	20	- 8	- [With BOSE audio]	+	1		
		20	۳	- [Without BOSE audio]	16 V	-	Connector No.	D52
厚		21	ag e	- [With BOSE audio]			Connector Name	REAR POWER WINDOW MOTOR LH
H.S.	Ø,	22	>	-	Connector No.	D40	Connector Type	RS06FG
ı	(12 3 4 5 6)	23	σ. ≫		Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)	Œ	[
		25	SB	1	Connector Type	NS06FW-CS	· ·	
		26	œ	1	ą		2	
No. Wire	Signal Name [Specification]	30	N W	1 1	手			
PT	-	31	97	-	H.S.	1		)
۵.	-	32	H .			3 4 5 6		
- -		3 2	9 8				No Wire	Signal Name [Specification]
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>	-	36	æ	1	Terminal Color Of			1
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#### **POWER WINDOW MAIN SWITCH**

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Connector No. E106 Connector Name WIRE TO WIRE	Connector Type TH80FW-CS16-TM4							1	Terminal Color Of Signal Name [Specification]	Wire		2 W -	3 B -		5 GR -	H	9 BR	10 BG -	SB	12 BG -	7	ж	А	+	SB	$^{+}$	20 BG -	- 7 7	+	50 00	+	+	20 W	<b>=</b> 0	507	+	t	1	5	SHIELD	>	+	BG	3 3	
Connector No. D72 Connector Name REAR POWER WINDOW MOTOR RH	Connector Type RS06FG	d)		H.S.	Ę			1	Terminal Color Of Signal Name [Specification]	Wire		3 P			Connector No. D74	TO THE PROPERTY OF THE PARTY OF		Connector Type NS08FW-CS				]	2 3 4 5 1	$\blacksquare$			Signal Name [Specification]	wire	× :		5 0	t (	0												
POWER WINDOW SYSTEM Connector No. D54 Connector Name REAR POWER WINDOW SWITCH LH	Connector Type NS08FW-CS			H.S.	_				Terminal Color Of Signal Name [Specification]	Wire	-	2 V -	3 G -	+	- M 9	8			Connector No. D71	Omerandow Name TO MIDE		Connector Type NH10MW-CS10	4		1 2 3 4 5 6		9 10 11 12 13	-	=		Mo Wine Signal Name [Specification]					5 ac		- Method Bo	-	١>	1				

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100 P		0	_	-	Connector Type	TH80MW-CS16-TM4	20	+	_	
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Connector Name 103	DE DECOCA (U/B)	15	>	1		80 80 80 80 80 80 80 80 80 80 80 80 80 8	9	_	-	Γ
Connector Type NS0	NS06FW-M2	16	~	-			19	g		
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李	Щ	19	>	1	Terminal Color Of		99	┞	1	
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		24	>	1	4 SHIELD	- a	69	S.	1	
Terminal Color Of	3	52	GR.		5		70	H		
No. Wire	Signal Name [Specification]	56	œ	1	8	1	17	H	1	
- \		27	*	1	9 BR	1	72	>	-	Γ
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A7	1	33	SB	1	15 P	1	9/	Ͱ		
8A L	-	34	>	-	16 ∨	-	77	۵		
		32	۵	1	17 SB	1	11	œ	- [Wrth ICC]	Γ
		36	57	1	18		78	_	- [With ICC]	
Connector No. M5		37	BR	-	20 BG	,	78	~		
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Connector Type TH4	TH40MW-CS15	40	SB	-	23 P	_	80	SB	-	
		41	_	-	24 BR	-	8	Н	-	
		42	œ	-	25 Y	-	82	SB	_	
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	18117181824212242424282 DSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	45	g		28 G	-	85	٦	-	
_		46	SB	- [With automatic drive positioner]	31 L	-	98	Д	-	
J		46	>	- [Without automatic drive positioner]	32 G	1	87	>	-	Γ
		47	œ	1	33 B	1	88	SR	-	Γ
<u>s</u>	Simol Mosso [Secontinosico]	48	9	-	34 W	-	90	SHIELD	- 0	
No. Wire	olgiai italiie [openiioatioi]	49	Ь		35 R	-	91	W	-	
1 R	-	20	SHIELD	-	36 SHIELD	- O	92	Υ	-	
2 B	-	52	В	-	37 V	-	93	BR	-	
3 BR	-	23	>	-	Н	-	94	Н		
4 P	-	24	ΓC	-	39 BR	-	92	GR	-	
2 - L		22	SB		Н		96	W	1	П
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#### **POWER WINDOW MAIN SWITCH**

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Connector No.   M104	
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Sample   S	
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Revision: February 2015 PWC-87 2015 QX50

POWER WINDOW SYSTEM							
Connector No. M118	Connector No.	M122	Connector No.	. M123	Connector No.	M124	
Connector Name BCM (BODY CONTROL MODULE)	Connector Name	e BCM (BODY CONTROL MODULE)	Connector Name	me BCM (BODY CONTROL MODULE)	Connector Name	WIRE TO WIRE	
Connector Type M03FB-LC	Connector Type	TH40FB-NH	Connector Type	pe TH40FG-NH	Connector Type	TH40MW-CS15	
113 113	H.S.	SS (SS (SS (SS (SS (SS (SS (SS (SS (SS	E.S.	日本   日本   日本   日本   日本   日本   日本   日本	H.S.	1 2 3 4 5 6 7 6 9 10 11 2 10 14 15 1	
Terminal Color Of Signal Name [Specification]	Terminal Color Of No. Wire	r Of Signal Name [Specification]	Terminal Co	Color Of Signal Name [Specification]	Terminal Color Of No. Wire	Signal Name [Specification]	
1 W BAT (F/L)	74 S	SB PASSENGER DOOR ANT-	113	P OPLICAL SENSOR	7	-	
┝	75 G		116	SB STOP LAMP SW 1	97 8	-	
3 Y POWER WINDOW POWER SUPPLY(RAP)	76	/ DRIVER DOOR ANT-	118	P STOP LAMP SW 2	6	1	
	77 L	LG DRIVER DOOR ANT+	119	SB DOOR UNLOCK SENSOR	12 L	-	
	78	ROOM ANT1-	Н	BR KEY SLOT SW	13	-	
Connector No. M119	Н		123		14 B	-	
Connector Name RCM (RODY CONTROL MODILIE)	80	GR NATS ANT AMP.	$\dashv$		15 W	-	
	+		$\dashv$	┥	7	-	
Connector Type NS16FW-CS	+	R IGN RELAY (F/B) CONT	+	PUSH-BUTTON	+	-	
4		KEYLES	_		_		
	$\dashv$	BR COMBI SW INPUT 5	4	BG RECEIVER/SENSOR GND	$\dashv$		
	88	COMBI SW INPUT 3	138	Y RECEIVER/SENSOR POWER SUPPLY	20 W	- [Without BOSE audio]	
0 4 D C 4	90 F	P CAN-L	139	L TIRE PRESSURE RECEIVER COMM	20 Y	- [With BOSE audio]	
11 13 14 15 17 18 19	91 1	. CAN-H	140	GR SHIFT N/P	21 G	- [With BOSE audio]	
11 01 11	92 T	LG KEY SLOT ILL CONT	141	G SECURITY IND LAMP CONT	21 L	- [Without BOSE audio]	
	93	ON IND A	142	BG COMBI SW OUTPUT 5	22 SB	-	
	94	Y PUDDLE LAMP CONT	143	P COMBI SW OUTPUT 1	23 GR	-	
Terminal Color Of Simulation Co. 18	95 B	BG ACC RELAY CONT	144	G COMBI SW OUTPUT 2	24 G	-	
No. Wire Signal reame Lopecincation	96	GR A/T SHIFT SELECTOR POWER SUPPLY	145	L COMBI SW OUTPUT 3	25 Y	,	
4 LG INTERIOR ROOM LAMP POWER SUPPLY	66	R SHIFT P	146	SB COMBI SW OUTPUT 4	26 R	-	
5 L PASSENGER DOOR UNLOCK OUTPUT	100	G PASSENGER DOOR REQUEST SW	120	LG DRIVER DOOR SW	29 SHIELD	-	
7 Y STEP LAMP CONT	101	SB DRIVER DOOR REQUEST SW	151	G REAR WINDOW DEFOGGER RELAY CONT	30 W	-	
8 V ALL DOOR, FUEL LID LOCK OUTPUT	_	BG BLOWER FAN MOTOR RELAY CONT			31 LG	_	
DRIVE	-	LG KEYLESS ENTRY RECEIVER POWER SUPPLY			-	_	
10 BR REAR DOOR UNLOCK OUTPUT	107 L	LG COMBI SW INPUT 1			33 BR	-	
11 R BAT (FUSE)	108	R COMBI SW INPUT 4			34 ^	-	
13 B GROUND	601	Y COMBI SW INPUT 2			35 G	-	
14 W PUSH-BUTTON IGNITION SW ILL GND	110	G HAZARD SW			36 Y	-	
15 Y AGC IND					37 BR	-	
17 W TURN SIGNAL RH (FRONT)					43 L	-	
18 BG TURN SIGNAL LH (FRONT)					44 Y	-	
19 V INT ROOM LAMP CONT					45 R	-	
					46 W	-	
					47 SHIELD	-	
					52 R	-	
					53		

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#### **POWER WINDOW MAIN SWITCH**

#### < ECU DIAGNOSIS INFORMATION >

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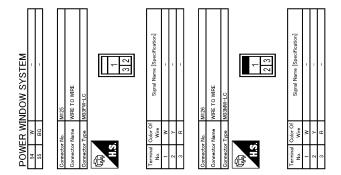
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#### **FAIL-SAFE CONTROL**

Fail-safe

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

#### **POWER WINDOW MAIN SWITCH**

#### < ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window motor is detected for the specified value or more, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 1	When the actual door glass position that is out of specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP or DOWN.
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Door key cylinder switch power window function

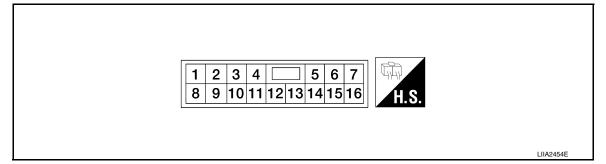
When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

< 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 (L)	Ground	Encoder ground	_	_	0
4 (G)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	Battery voltage
8 (W)	Ground	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
9 (G)	Ground	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage
10 (W)	Ground	Battery power supply	Input	_	Battery voltage
11 (B)	Ground	Ground	_	_	0
12 (R)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

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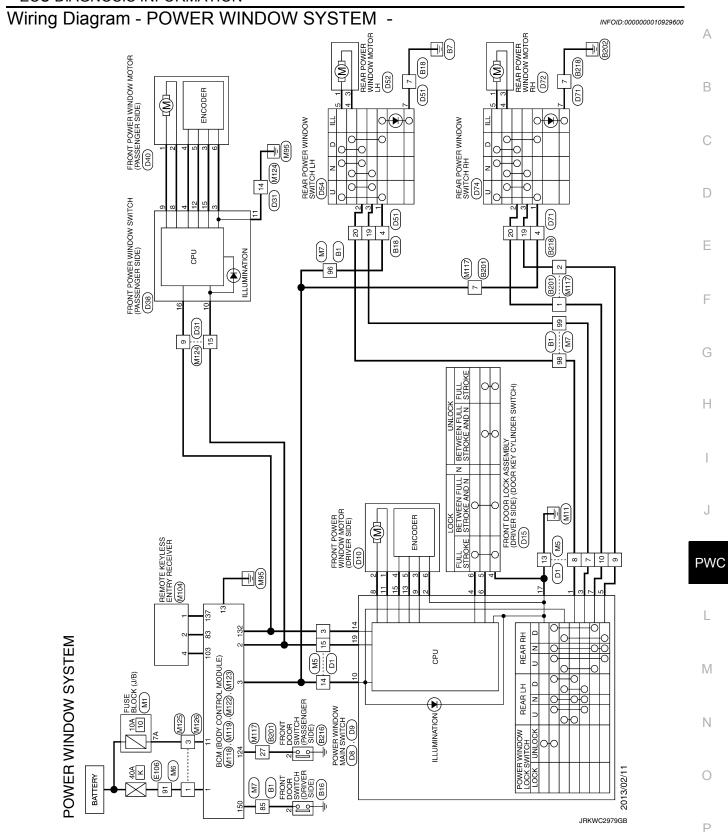
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#### < ECU DIAGNOSIS INFORMATION >

Term	inal No.	Description			Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
15 (O)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
16 (V)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

< ECU DIAGNOSIS INFORMATION >



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Connector No.	or No.	B1	47	SB	-	Connector No.	B16	Conne	Connector No.	B201
Connector Name	or Name	e WIRE TO WIRE	48	B a		Connector Name	FRONT DOOR SWITCH (DRIVER SIDE)	Conne	Connector Name	WIRE TO WIRE
Connector Type	or Type	TH80FW-CS16-TM4	20	H	-	Connector Type	A03FW	Conne	Connector Type	TH80FW-CS16-TM4
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			99	N N						N 10 10 10 10 10 10 10 10 10 10 10 10 10
			29	>	-		]			
Terminal	Terminal Color Of	r Of Signal Name [Specification]	89	SB	-	lal	Of Simal Name [Specification]	Terminal	0	f Signal Name [Specification]
Š	Wire		69	SHIELD	-	No. Wire		N	_	Doggood Classes
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12	SB		78	Ь	-	Connector Type	NH10FW-CS10	15	SB	_
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16	ď	1	98	PI	1	\ \ \	]	27	H	1
17	>	-	87	>	,		13 12 11 10 9	28	<b>&gt;</b>	,
92	SB	-	88	~	,		1 1 1	58	<b>&gt;</b>	1
19	P	1	68	a	,		0 0 1	99	GR.	,
20	HH	-	90	BG	,			31	H	,
21	SHIEL	- 071	16	ŋ		Terminal Color Of	Jo.	32	BR	
22	٨	1	92	BR	-	No. Wire		33	H	
24	۵		93	ŋ	-	2 1.6	- [Without BOSE audio]	51	L	
27	В		94	SB	-	2 Y	- [With BOSE audio]	22	5	-
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30	SHIELD	- qu	98	Μ	_	9	-	28	Н	-
31	SHIELD	- 071	99	GR	_	7 B		59	SHIELD	
32	^	_				8		9	-	-
33	SB					$\dashv$	- [Without BOSE audio]	19	┨	1
34	_					19 GR		62	BR	-
32	۵					20 W	-	63	۵	-
36	_	-						64		-
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39	٨							67	٦	_
40	SB							68	SHIELD	
44	<b>\</b>	-						69	^	-
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46	FP							71	SB	-

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#### < ECU DIAGNOSIS INFORMATION >

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13   B	
Connector No.   B218   Connector No.   B218   Connector No.   B218   Connector No.   B218   Connector No.   Connector No.	
POWER WINDOW SYSTEM  73	
	JRKWD4943GB

Revision: February 2015 PWC-95 2015 QX50

Connector No.	POWER WINDOW SYSTEM Connector No. D10 Connector Name FRONT POWER WINDOW MOTOR (DRIVER SIDE)	Connector No.	2	D31 WIRE TO WIRE	54 O	1 1	Connector No.	D51 WRE TO WRE
Connector Type	NS06FW-CS	Connector Type	П	TH40FW-CS15			Connector Type	NH10MW-CS10
是 H.S.	1 1 2 3 4 5 6	是 H.S.		ार्ड मा था	Connector None Connector Type	DOSS FROM FROMEN WACHON SWITCH (PASSENGER SIDG) NIST BFW-CS  NIST BFW-CS	H.S.	1         2         3         4         5         6           7         8         910111213 13         19         20
Ferminal Color Of No. Wire	of Signal Name [Specification]	Terminal No.	ვ >	Signal Name [Specification]		8 9 10 11 12 15 16	Terminal Color Of No. Wire	o
2 L	-	- 8	H H				2 Y	- [Without BOSE audio] - [With BOSE audio]
3	1 1	9	> 0	1 1	Terminal Color Of	f Signal Name [Specification]	<b>4</b> a	1 1
Н	_	13	ΓG	1	H	1	+	1
6 BR	-	14	g 3	-	4 0	-	7 B	
		16	a a		+		5 >- 0 @	- [With BOSE audio]
Connector No.	D15	17	В	1	Н	-	19 G	1
Connector Name	FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE)	8 6	α >		= 2		20 \	1
Connector Type	E06FGY-RS	20	- 8	- [With BOSE audio]	+	1		
		20	۳	- [Without BOSE audio]	16 V	-	Connector No.	D52
厚		21	ag e	- [With BOSE audio]			Connector Name	REAR POWER WINDOW MOTOR LH
H.S.	Ø,	22	>	-	Connector No.	D40	Connector Type	RS06FG
ı	(12 3 4 5 6)	23	σ. ≫		Connector Name	FRONT POWER WINDOW MOTOR (PASSENGER SIDE)	Œ	[
		25	SB	1	Connector Type	NS06FW-CS	· ·	
		26	œ	1	ą		2	
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PT	-	31	97	-	H.S.	1		)
۵.	-	32	H .			3 4 5 6		
- -		3 2	9 8				No Wire	Signal Name [Specification]
>		32	5 0				╁	
>	-	36	æ	1	Terminal Color Of			1
		37	ŋ	-	No. Wire	Signal Name [Specification]		
		43	>		-	1		
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Signal Name (Specification)	F
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Signal Name [Specification]	I
Signal N Signal N Signal N	J
Connector Name Connector Name Connector Type HS  Terminal Objoy Of No. Wive I	PW
Switch LH	L
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Connector Num   Dist	N
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Revision: February 2015 PWC-97 2015 QX50

POWER WINE	POWER WINDOW SYSTEM	[					Ľ	ŀ		
A 100		,	<u> </u>		Connector No.	Mb	3	+	1	T
SHIELD 38			*	-	Connector Name	WIRE TO WIRE	£ :	+		Ī
4		6	g.			Т	49	+	-	T
100 P		0	_	-	Connector Type	TH80MW-CS16-TM4	20	+	_	
		11	5	-	(		51	BR	-	
		12	^		E	3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	54	Y	-	
Connector No. M1		13	В	-	ŧ	36 X C C C C C C C C C C C C C C C C C C	22	ŋ	-	
г	071/300 10 1011	4.	>	-	Š	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	29	>	-	Γ
Connector Name 103	DE DECOCA (U/B)	15	>	1		80 80 80 80 80 80 80 80 80 80 80 80 80 8	9	_	-	Γ
Connector Type NS0	NS06FW-M2	16	~	-			19	g		
		17	В	1			62	H	1	
Œ		18	5	1			63	H	1	
李	Щ	19	>	1	Terminal Color Of		99	┞	1	
S. F	3A 2A 1A	20	_	-	No. Wire	Signal Name [Specification]	65	┞	1	
	0A 7A 6A 5A AA	21	2	-			99	┞		
	AT AND AND HO	22	_	-	2 R	-	67	SHELD	-	
		23	g	-	en en	,	99	>		
		24	>	1	4 SHIELD	- a	69	S.	1	
Terminal Color Of	3	52	GR.		5		70	H		
No. Wire	Signal Name [Specification]	56	œ	1	8	1	17	H	1	
- \		27	*	1	9 BR	1	72	>	-	Γ
ZA G	1	28	SHELD	1	0t R	1	73	SB	-	Γ
3A L	1	58	>	1	11 BR	1	74	H	- [With ICC]	Γ
4A R		30	>		12 BG		74	7	- [Without ICC]	
2A v		31	ď		13 L		75	g		
. ∀ A9	1	32	BR	1	14 R	1	76	H	- [Without ICC]	
A7	1	33	SB	1	15 P	1	9/	Ͱ		
8A L	-	34	>	-	16 ∨	-	77	۵		
		32	۵	1	17 SB	1	11	œ	- [Wrth ICC]	Γ
		36	PT	1	18		78	_	- [With ICC]	
Connector No. M5		37	BR	-	20 BG	,	78	~		
Г	CH LOW	38	۵		21 L		79	۸	- [Without ICC]	
CONTRECTOR INSTITUTE	E IO WINE	39	BG		22 W		79	Y	- [With ICC]	
Connector Type TH4	TH40MW-CS15	40	SB	-	23 P	_	80	SB	-	
		41	_	-	24 BR	-	8	Н	-	
		42	œ	-	25 Y	-	82	SB	_	
	2 3 4 5 6 7 8 9 10 11 12 13 14 15	43	BR	-	26 V	_	83	>	_	
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	18117181824212242424282 DSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS	45	g		28 G	-	85	٦	-	
_		46	SB	- [With automatic drive positioner]	31 L	-	98	Д	-	
J		46	>	- [Without automatic drive positioner]	32 G	1	87	>	-	Γ
		47	œ	1	33 B	1	88	SR	-	Γ
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1 R	-	20	SHIELD	-	36 SHIELD	- O	92	Υ	-	
2 B	-	52	В	-	37 V	-	93	BR	-	
3 BR	-	23	>	-	Н	-	94	Н		
4 P	-	24	ΓC	-	39 BR	-	92	GR	-	
2 - L		22	SB		Н		96	W	1	П
9 R	1				42 BG	. 1	97	_		٦

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#### < ECU DIAGNOSIS INFORMATION >

Marking   Mark	В
- [Without BOSE audio] - [With BOSE audio] - [With BOSE audio] - [With BOSE audio]	С
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Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)  Signal Name (Specification)	F
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Connector Name   Connector Name   Connector Name   No.   Wee   No.   N	Н
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N   N   N   N   N   N   N   N   N   N	PWC
Section (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	L
POWER WINDOW SYSTEM	M
Object   Color of the color o	N
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**Revision: February 2015 PWC-99** 2015 QX50

POWER WINDOW SYSTEM										
Connector No. M118	Connector No	Ш	M122	Connector No.	or No.	M123	Connector No.	П	M124	
Connector Name BCM (BODY CONTROL MODULE)	Connector Name	Vame	BCM (BODY CONTROL MODULE)	Connec	Connector Name	BCM (BODY CONTROL MODULE)	Connect	Sonnector Name	WIRE TO WIRE	
Connector Type M03FB-LC	Connector Type	П	TH40FB-NH	Connec	Connector Type	TH40FG-NH	Connector Type	or Type	TH40MW-CS15	
H.S.	E.S.		日本   日本   日本   日本   日本   日本   日本   日本	<b>康</b>	છ		香 H.S.	<b>1</b>	1   2   3   4   5   6   7   8   9   10   11   12   33   14   15   10   11   12   133   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   13   14   15   15   15   15   15   15   15	
		Ī								
Terminal Color Of Signal Name [Specification] No. Wire	Terminal C No.	Color Of Wire	Signal Name [Specification]	Terminal No.	al Color Of Wire	Signal Name [Specification]	Terminal No.	Color Of Wire	Signal Name [Specification]	
ш,	74	SB	PASSENGER DOOR ANT-	113	۵	OPLICAL SENSOR	7	٠	1	
2 W POWER WINDOW POWER SUPPLY(BAT)	75	GR	PASSENGER DOOR ANT+	116	SB	STOP LAMP SW 1	00	LG		
3 Y POWER WINDOW POWER SUPPLY(RAP)		>	DRIVER DOOR ANT-	118	۵	STOP LAMP SW 2	6	>	1	
	77	5	DRIVER DOOR ANT+	611	SB	DR DOOR UNLOCK SENSOR	12	7	1	
200	92 29	> 6	ROOM ANTI-	121	BR	KEY SLOT SW	€ 3	> 0	1	
MIN	2 8	ž 8	NATS AND	3 5	= =	DASSENDED DOOR SW	± ¥	3		
Connector Name BCM (BODY CONTROL MODULE)	8 8	5 >	NATS ANT AMP.	132	3 8	POWER WINDOW SW COMM	9 9	BB		
Connector Type NS16FW-CS	82	œ	IGN RELAY (F/B) CONT	133	*	PUSH-BUTTON IGNITION SW ILL POWER	17	В	1	
	88	>	KEYLESS ENTRY RECEIVER COMM	134	GR	LOCK IND	18	ď		
	87	BR	COMBI SW INPUT 5	137	9B	RECEIVER/SENSOR GND	19	8	-	
	88	>	COMBI SW INPUT 3	138	۶	RECEIVER/SENSOR POWER SUPPLY	50	W	- [Without BOSE audio]	
4 5 7 8 9 70	06	Ь	CAN-L	139	_	TIRE PRESSURE RECEIVER COMM	20	γ	- [With BOSE audio]	
11 13 14 15 17 18 19	91	٦	CAN-H	140	GR	SHIFT N/P	21	G	- [With BOSE audio]	
	92	LG	KEY SLOT ILL CONT	141	G	SECURITY IND LAMP CONT	21	L	- [Without BOSE audio]	
	93	^	ON IND	142	BG	COMBI SW OUTPUT 5	22	SB	_	
	94	>	PUDDLE LAMP CONT	143	Ь	COMBI SW OUTPUT 1	23	GR	-	
la E	96	BG	ACC RELAY CONT	144	g	COMBI SW OUTPUT 2	24	g	-	
┨	Ц Т	g.	A/T SHIFT SELECTOR POWER SUPPLY	145	_	COMBI SW OUTPUT 3	52	۶	1	
4 LG INTERIOR ROOM LAMP POWER SUPPLY	L T	~	SHIFT P	146	SB	COMBI SW OUTPUT 4	56	~	1	
5 L PASSENGER DOOR UNLOCK OUTPUT	001	g	PASSENGER DOOR REQUEST SW	120	PP	DRIVER DOOR SW	53	SHELD	1	
7 Y STEP LAMP CONT	101	SB	DRIVER DOOR REQUEST SW	151	ō	REAR WINDOW DEFOGGER RELAY CONT	30	٨	-	
V ALL DOOR, FL	_  	BG	BLOWER FAN MOTOR RELAY CONT				31	ΓC	1	
G DRIVER DOOR, FI		ΓC	KEYLESS ENTRY RECEIVER POWER SUPPLY				32	g		
10 BR REAR DOOR UNLOCK OUTPUT	107	LG	COMBI SW INPUT 1				33	BR		
11 R BAT (FUSE)	108	œ	COMBI SW INPUT 4				34	>	-	
13 B GROUND	109	٨	COMBI SW INPUT 2				35	G	-	
14 W PUSH-BUTTON IGNITION SW ILL GND	110	G	HAZARD SW				36	Υ	-	
15 Y ACC IND							37	BR	-	
17 W TURN SIGNAL RH (FRONT)							43	L	-	
BG	_						44	≻		
19 V INT ROOM LAMP CONT	_						45	ч	1	
							46	^	1	
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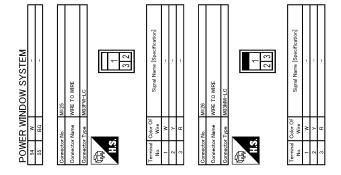
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#### **FAIL-SAFE CONTROL**

Fail-safe

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

#### < ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition	
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.	
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.	
Pulse direction malfunction	When a pulse signal indicating that window is moving in the opposite direction against the power window motor is detected for the specified value or more, while door glass is being operated UP or DOWN.	
Glass recognition position malfunction 1	When the actual door glass position that is out of specified value is detected compared to the door glass fully closed position memorized in module, while door glass is being operated UP or DOWN.	
Glass recognition position malfunction 2	When pulse count that is out of the door glass full stroke value or more is detected, while door glass is being operated UP or DOWN.	

If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

- Auto-up operation
- Anti-pinch function
- Door key cylinder switch power window function

When fail-safe control is activated, perform initialization procedure to recover. If a malfunction is detected in power window switch or more, fail-safe control is activated again.

#### POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH-ES

< SYMPTOM DIAGNOSIS >

# SYMPTOM DIAGNOSIS POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

# Diagnosis Procedure

# 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.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

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Revision: February 2015 PWC-103 2015 QX50

#### DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

#### < SYMPTOM DIAGNOSIS >

#### DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

#### Diagnosis Procedure

INFOID:0000000010596624

# $1.\mathsf{check}$ power window main switch power supply and ground circuit

Check power window switch 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 DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor.

Refer to PWC-20, "DRIVER SIDE: Component Function Check".

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

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-45, "Intermittent Incident".

NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS > FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE	
	Α
WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure	В
1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT	
Check front power window switch (passenger side) serial link circuit.  Refer to <a href="https://example.com/PWC-33">PWC-33</a> , "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check".	С
Is the inspection result normal? YES >> GO TO 2.	D
NO >> Repair or replace the malfunctioning parts.	
	Е
Confirm the operation again.  Is the result normal?	
YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".	F
NO >> GO TO 1. WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED	
WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED:	G
Diagnosis Procedure	
1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	Н
Replace front power window switch (passenger side). Refer to PWC-118, "Removal and Installation"	
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED	J
WHEN BOTTH OWER WINDOW WATER TOWN TO OWER WINDOW	PWC
SWITCH ARE OPERATED : Diagnosis Procedure	
1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT	L
Check front power window switch (passenger side) power supply and ground circuit.  Refer to PWC-15, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure".	M
Is the inspection result normal?	
YES >> GO TO 2.  NO >> Repair or replace the malfunctioning parts.	Ν
2. CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT	
Check passenger side power window motor circuit.	0
Refer to <a href="PWC-21">PWC-21</a> , "PASSENGER SIDE: Component Function Check".  Is the inspection result normal?	
YES >> GO TO 3.  NO >> Repair or replace the malfunctioning parts.	Р
110 - 77 Nopali of Topiaco tile manufottorning parts.	

YES

NO

3. CONFIRM THE OPERATION

Confirm the operation again.

>> GO TO 1.

Is the result normal?

**PWC-105** 2015 QX50 **Revision: February 2015** 

>> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

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

< 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

INFOID:0000000010596628

# 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-45, "Intermittent Incident".

NO >> GO TO 1.

#### WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

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

INFOID:0000000010596629

# 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-118, "Removal and Installation".

#### >> 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-45, "Intermittent Incident".

NO >> GO TO 1.

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#### 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:0000000010596631

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# ${f 1}$ .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-45, "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:0000000010596632

# ${f 1}$ .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-118, "Removal and Installation".

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#### >> 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 INFOID:0000000010596633

# 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-45, "Intermittent Incident".

NO >> GO TO 1.

**PWC-107 Revision: February 2015** 2015 QX50 **PWC** 

#### ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY

#### < SYMPTOM DIAGNOSIS >

# ANTI-PINCH FUNCTION DOES NOT OPERATE NORMALLY DRIVER SIDE

## DRIVER SIDE : Diagnosis Procedure

INFOID:0000000010596634

#### 1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-109, "DRIVER SIDE : Diagnosis Procedure".

# 2. CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

#### PASSENGER SIDE

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000010596635

## 1. CHECK POWER WINDOW AUTO OPERATION

Check power window auto operation.

#### Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-109, "PASSENGER SIDE : Diagnosis Procedure".

# 2.CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

#### AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-< SYMPTOM DIAGNOSIS > AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES Α NORMALLY DRIVER SIDE В DRIVER SIDE: Diagnosis Procedure INFOID:0000000010596636 1. PERFORM INITIALIZATION PROCEDURE Initialization procedure is executed and operation is confirmed. Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description". D Is the inspection result normal? >> INSPECTION END YES NO >> GO TO 2. Е 2.CHECK ENCODER (DRIVER SIDE) CIRCUIT Check encoder (driver side) circuit. Refer to PWC-27, "DRIVER 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. Н Is the result normal? YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident". NO >> GO TO 1. PASSENGER SIDE PASSENGER SIDE : Diagnosis Procedure INFOID:0000000010596637

 ${f 1}$  .PERFORM INITIALIZAITON PROCEDURE Initialization procedure is executed and operation is confirmed. **PWC** Refer to PWC-5, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description". Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2. 2.CHECK ENCODER (PASSENGER SIDE) CIRCUIT M Check encoder (passenger side) circuit. Refer to PWC-29, "PASSENGER SIDE: Component Function Check". N Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.  ${f 3.}$ CONFIRM THE OPERATION Confirm the operation again. Is the result normal? Р YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident". NO >> GO TO 1.

# POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NOR-MALLY

#### < SYMPTOM DIAGNOSIS >

# POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NORMALLY

## Diagnosis Procedure

INFOID:0000000010596638

# 1. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-63, "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-45, "Intermittent Incident".

NO >> GO TO 1.

Revision: February 2015 PWC-110 2015 QX50

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

< SYMPTOM DIAGNOSIS >	_
KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS	A
Diagnosis Procedure	639
1.PERFORM INITIALIZATION PROCEDURE	E
Initialization procedure is executed and operation is confirmed.  Refer to <a href="PWC-5">PWC-5</a> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".	<u>p-</u>
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 <a href="https://docs.pythology.com/DLK-76">DLK-76</a> , "Component Function Check".	 E
Is the inspection result normal?	
YES >> GO TO 3.  NO >> Repair or replace the malfunctioning parts.	F
3.CONFIRM THE OPERATION	
Confirm the operation again.  Is the result normal?	(
YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".  NO >> GO TO 1.	H
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**PWC-111 Revision: February 2015** 2015 QX50

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

#### < SYMPTOM DIAGNOSIS >

### KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description INFOID:000000010596640

Power window down does not operate when pressing unlock button on Intelligent Key.

#### Diagnosis Procedure

INFOID:0000000010596641

# 1. CHECK REMOTE KEYLESS ENTRY FUNCTION

Check remote keyless entry function.

Does door lock/unlock with Intelligent Key button?

YES >> GO TO 2.

NO >> Refer to DLK-185, "Description".

# 2.check power window operation

Check power window operation.

Does power window operate up/down using power window main switch?

YES >> GO TO 3.

NO >> Refer to PWC-103, "Diagnosis Procedure".

3.check "pw down set" setting in "work support"

Check "PW DOWN SET" setting in "WORK SUPPORT".

Refer to DLK-51, "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Set "PW DOWN SET" setting in "WORK SUPPORT".

#### 4. CONFIRM THE OPERATION

Confirm the operation again.

#### Is the result normal?

YES >> Check intermittent incident. Refer to GI-45, "Intermittent Incident".

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION < SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION Α Diagnosis Procedure INFOID:0000000010596642 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. С >> Refer to PWC-118, "Removal and Installation".  $\mathsf{D}$ Е F G Н J L

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#### POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

# POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE DRIVER SIDE

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000010596643

#### 1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to PWC-118, "Removal and Installation".

>> INSPECTION END

PASSENGER SIDE

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000010596644

# 1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

Refer to PWC-118, "Removal and Installation".

>> INSPECTION END

**REAR LH** 

REAR LH: Diagnosis Procedure

INFOID:0000000010596645

# 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 harness.

#### 2.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.

Refer to PWC-118, "Removal and Installation".

>> INSPECTION END

REAR RH

REAR RH: Diagnosis Procedure

INFOID:0000000010596646

# 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 harness.

# 2.REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.

Refer to PWC-118, "Removal and Installation".

>> INSPECTRION END

Revision: February 2015 PWC-114 2015 QX50

# **PRECAUTION**

#### **PRECAUTIONS**

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS 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.

## Precautions for Removing Battery Terminal

 When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.

#### NOTE:

**WARNING:** 

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

• For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

detected.
 After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.
 NOTE:

The removal of 12V battery may cause a DTC detection error.

Precautions For Xenon Headlamp Service

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Comply with the following warnings to prevent any serious accident.

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#### **PRECAUTIONS**

#### < PRECAUTION >

- Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.
- Never work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector. (Turning it ON outside the lamp case may cause fire or visual impairments.)
- Never touch the bulb glass immediately after turning it OFF. It is extremely hot.

#### **CAUTION:**

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

- Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)
- Never perform HID circuit inspection with a tester.
- Never touch the xenon bulb glass with hands. Never put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

#### **PREPARATION**

#### < PREPARATION >

# **PREPARATION**

# **PREPARATION**

# Commercial Service Tools

Tool name		Description
Remover tool	JMKIA3050ZZ	Remove the clip, pawl and metal clip

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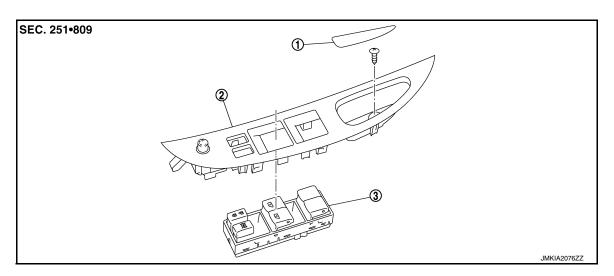
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# REMOVAL AND INSTALLATION

#### POWER WINDOW MAIN SWITCH

Exploded View



- 1. Pull handle cover
- 2. Power window main switch finisher
- 3. Power window main switch

#### 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-118. "Removal and Installation".

#### Removal and Installation

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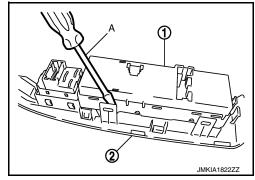
#### **REMOVAL**

- Remove the power window main switch finisher (2).
   Refer to <u>GW-20</u>, "<u>Exploded View</u>" and <u>GW-20</u>, "<u>Removal and Installation</u>".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using remover tool (A).

#### **CAUTION:**

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

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



#### INSTALLATION

Note the following items, and then 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-5">PWC-5</a>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description".