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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

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 "DTC/CIRCUIT DIAGNOSIS"

Perform the diagnosis with "DTC/CIRCUIT DIAGNOSIS" of the applicable system.

>> GO TO 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 >

[FRONT & REAR WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Description INFOID:0000000007467369

When battery negative terminal is disconnected, initialization is necessary.

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

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

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement INFOID:0000000007467370

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initialization. Otherwise, the next operation cannot be done.
- AUTO-UP operation
- 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.

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

 Power supply to the power window control unit is cut off by the removal of battery terminal or the battery fuse is blown.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT & REAR WINDOW ANTI-PINCH]

- 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

- 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.

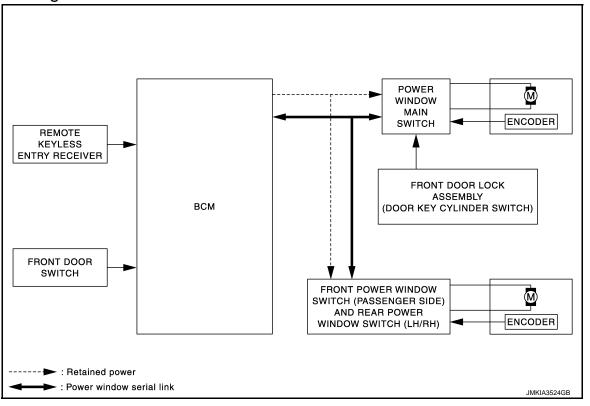
CAUTION:

- 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.
- 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

 Power window system is activated by power window switch when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.

Power window main switch opens/closes all door glass.

- Front and rear power window switch opens/closes the corresponding door glass.
- AUTO UP/DOWN operation can be performed when power window switch turns to AUTO.
- Power window serial link transmits the signals from power window main switch to each module.
- Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is the specified value or more while power window of each seat is in AUTO-UP operation, power window of each 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 all power windows when ignition switch OFF.
- All power windows open when pressing Intelligent Key unlock button for 3 seconds.

POWER WINDOW AUTO-OPERATION

- AUTO UP/DOWN operation can be performed when each power window switch 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.

Retained Power Cancel Conditions

- Front door CLOSE (door switch OFF) → OPEN (door switch ON).

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When ignition switch turns ON again.

Revision: 2013 February

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT & REAR WINDOW ANTI-PINCH]

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 each power window switch operation except the power window main switch.

POWER WINDOW SERIAL LINK

- All 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, and rear power window switches.

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

NOTE:

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

DOOR KEY CYLINDER SWITCH POWER WINDOW FUNCTION

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

OPERATION CONDITION

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

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

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

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

Keyless power window down operation mode can be changed by "PW DOWN SET" mode in "WORK SUP-PORT". Refer to DLK-53, "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".

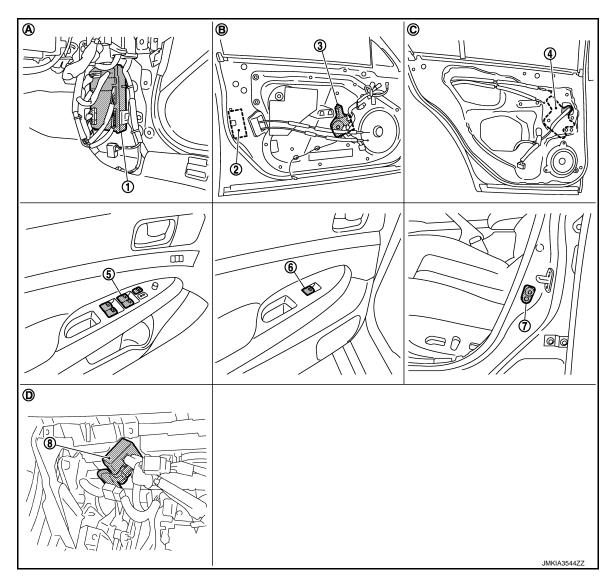
NOTE:

Use CONSULT to change settings.

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

Component Parts Location

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- 1. BCM
- 4. Rear power window motor LH
- 7. Front door switch (driver side)
- A. View with dash side lower (passenger side)
- D. View with instrument lower panel (passenger side) removed
- Front door lock assembly (driver side) (door key cylinder switch)
- 5. Power window main switch
- B. Remote keyless entry receiver
- $\mbox{B.} \quad \mbox{View with front door finisher removed} \quad \mbox{C.}$
- Front power window motor (driver side)
- Rear power window switch LH
 - . View with rear door finisher removed

Component Description

Component	Function
BCM	Supplies power supply to power window switch.Controls retained power function.
Power window main switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window.
Front power window switch (passenger side)	 Controls anti-pinch operation of power window. Controls power window motor of passenger door.

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POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT & REAR WINDOW ANTI-PINCH]

Component	Function
Rear power window switch	 Controls anti-pinch operation of power window. Controls power window motor of rear right and left doors.
Power window motor	 Integrates the ENCODER and WINDOW MOTOR. Starts operating with signals from each power window switch. Transmits power window motor rotation as a pulse signal to power window switch.
Front door lock assembly (door 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 >

[FRONT & REAR WINDOW ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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x: Applicable 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. Refer to CONSULT operation manual.		
Data Monitor	The BCM input/output signals are displayed.		
Active Test	The signals used to activate each device are forcibly supplied from BCM.		
Ecu Identification	The BCM part number is displayed.		
Configuration	This function is not used even though it is displayed.		

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

RETAINED PWR

SIGNAL BUFFER

TPMS (AIR PRESSURE MONITOR)

Diagnosis mode System Sub system selection item Work Support **Data Monitor Active Test** Door lock DOOR LOCK X × × REAR DEFOGGER Rear window defogger X × Warning chime **BUZZER** X × Interior room lamp timer INT LAMP X X × Exterior lamp **HEAD LAMP** × × × Wiper and washer **WIPER** × × **FLASHER** Turn signal and hazard warning lamps × × AIR CONDITONER* · Intelligent Key system INTELLIGENT KEY × X × · Engine start system Combination switch COMB SW × Body control system **BCM** X **IVIS - NATS IMMU** × X Interior room lamp battery saver **BATTERY SAVER** X × X Trunk lid open TRUNK × X THEFT ALM Vehicle security system X × X

NOTE

TPMS

RAP system

Signal buffer system

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[FRONT & REAR WINDOW ANTI-PINCH]

CONSULT screen item	Indication/Unit	Description		
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected		
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected		
	SLEEP>LOCK		While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK" to "ACC"	
	ACC>ON		While turning power supply position from "ACC" to "IGN"	
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emergency stop operation)	
	ACC>OFF	While turning power supply position from "ACC" to "OFF		
	OFF>LOCK	Power position status of the moment a particular DTC is detected	31 1171	
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"	
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"	
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode	
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)	
	OFF		Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
	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	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 		

RETAIND PWR

RETAIND PWR: CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000007467378

Data monitor

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.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007467379

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1. CHECK POWER SUPPLY CIRCUIT 1

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

(+) Power window main switch		(-)	Voltage (V) (Approx.)
Connector	Terminal		(· • • • • • • • • • • • • • • • • • • •
D8	10	Ground	12
D9	19	Ground	12

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.
- 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	LAISIGU

Check continuity between BCM harness connector and ground.

BC	CM		Continuity	
Connector	Terminal	Ground	Continuity	
M118	2	Ground	Not existed	
WITTO	3		Not existed	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

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 windo	w main switch		Continuity	
Connector	Connector Terminal		Continuity	
D9	17		Existed	

Is the inspection result normal?

YES >> INSPECTION END

>> Repair or replace harness.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

FOID:0000000007467380

1. CHECK POWER SUPPLY CIRCUIT 1

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

(+) Front power window switch (passenger side)		(–)	Voltage (V) (Approx.)	
Connector	Connector Terminal			
D38	10	Ground	12	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT 2

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

В	ВСМ		Front power window switch (passenger side)	
Connector	Terminal	Connector Terminal		Continuity
M118	2	D38	10	Existed

3. Check continuity between BCM harness connector and ground.

В	CM		
Connector	Connector Terminal		Continuity
M118	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

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 s	witch (passenger side)		Continuity	
Connector Terminal		Ground	Continuity	
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:0000000007467381

1. CHECK POWER SUPPLY CIRCUIT 1

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

(+) Rear power window switch			(-)	Voltage (V) (Approx.)
-	Connector Tel		(-)	(Approx.)
LH	D57	- 10	Ground	12
RH	D77	- 10	Giodila	12

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

$2.\,{\hbox{\footnotesize check power supply circuit 2}}$

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

ВС	СМ	Rear power window switch		Rear power window switch		Continuity
Connector	Terminal	Connector		Terminal	Continuity	
M118	2	LH	D57	10	Existed	
IVITO	M118 2		D77	10	LAISIEU	

4. Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector Terminal		Ground	Continuity	
M118	2		Not existed	

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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

Rear power window switch				Continuity	
Connector		Terminal	Ground	Continuity	
LH	D57	11	Giouria	Existed	
RH	D77	11		Existed	

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace harness.

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000007467382

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

DRIVER SIDE: Component Function Check

INFOID:0000000007467383

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-18, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007467384

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

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

(+) Front power window motor (driver side)		(–) Condition			Voltage (V) (Approx.)	
Connector	Terminal				(, (pprox.)	
	1	Ground	Power window main switch	NEUTRAL	0	
D10				DOWN	12	
2	2			NEUTRAL	0	
	2			UP	12	

Is the measurement value within the specification?

YES >> Replace front power window motor (driver side).

NO >> GO TO 2.

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

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

Power wind	Power window main switch		Front power window motor (driver side)	
Connector	Terminal	Connector	Terminal	Continuity
DΩ	8	D10	2	Existed
D8	11	510	1	LXISIEU

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

Power windo	w main switch	Ground	Continuity	
Connector	Terminal			
D8	8	Ground	Not existed	
	11		. to: oxiotod	

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000007467385

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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

INFOID:0000000007467386

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

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

Is the inspection result normal?

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

NO >> Refer to PWC-19, "PASSENGER SIDE: Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007467387

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

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

(+) Front power window motor (passenger side)		(-)	Condition		Voltage (V) (Approx.)
Connector	Terminal				(лиргох.)
	1	- Ground	Front power window switch (passenger side)	NEUTRAL	0
D40	'			UP	12
D40	2			NEUTRAL	0
	2			DOWN	12

Is the measurement value within the specification?

YES >> Replace front power window motor (passenger side).

NO >> GO TO 2.

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

- 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	8	D40	2	Existed
D30	9	D40	1	LAISIEU

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

Front power windov	v switch (passenger side)		Continuity
Connector	Terminal	Cround	Continuity
D38	8	Ground	Not existed
D30	9		NOI EXISIEU

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

INFOID:0000000007467388

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

REAR LH: Component Function Check

INFOID:0000000007467389

${f 1}$.CHECK REAR POWER WINDOW MOTOR LH OPERATION

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

Is the inspection result normal?

YES >> Power window motor LH is OK.

NO >> Refer to PWC-20, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

INFOID:0000000007467390

1. CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+) Rear power window motor LH		(–) Condition			Voltage (V) (Approx.)
Connector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	4			NEUTRAL	0
D52	DE2	Cround	Rear power window switch LH	UP	12
-	2	- Ground	Real power willdow switch Ln	NEUTRAL	0
	3			DOWN	12

Is the measurement value within the specification?

YES >> Replace rear power window motor LH.

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

- Turn ignition switch OFF.
- 2. 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 window switch LH		Rear power window motor LH		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
D57	8	D52	1	Existed	
D31	9	532	3	LAISIGU	

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

Rear power w	indow switch LH		Continuity	
Connector	Terminal	- - Ground	Continuity	
D57	8	Ground	Not existed	
D57	9		Not existed	

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> Replace rear power window switch LH.

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

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

REAR RH: Component Function Check

1. CHECK 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.

>> Refer to PWC-21, "REAR RH: Diagnosis Procedure". NO

REAR RH: Diagnosis Procedure

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

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

`	(+) Rear power window motor RH		Condition		Voltage (V) (Approx.)
Connector	Terminal				(44)
	4	Ground	Rear power window switch RH	NEUTRAL	0
D72	I			UP	12
072	2			NEUTRAL	0
	3			DOWN	12

Is the measurement value within the specification?

YES >> Replace rear power window motor RH.

NO >> GO TO 2.

2.check rear power window motor rh circuit

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

Rear power wil	ndow switch RH	Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D77	8	D72	1	Existed
ווט	9	012	3	LAISIEU

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

Rear power wi	ndow switch RH		Continuity	
Connector	Connector Terminal		Continuity	
D77	8	Ground	Not existed	
	9		INOL GXISIGU	

Is the inspection result normal?

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

YES >> Replace rear power window switch RH.

NO >> Repair or replace harness.

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DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE : Component Function Check

INFOID:0000000007467395

1. CHECK ENCODER OPERATION

Check driver side door glass perform AUTO open/close operation normally by power window main switch. Is the inspection result normal?

YES >> Encoder operation is OK.

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

DRIVER SIDE: Diagnosis Procedure

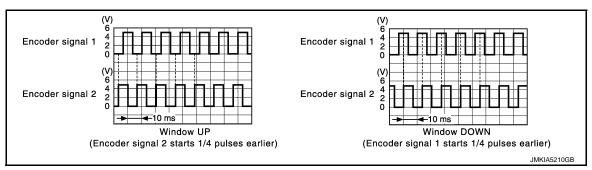
INFOID:0000000007467396

1. CHECK ENCODER SIGNAL

1. Turn ignition switch ON.

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

(+)		O : !	
Power window main switch		(–)	Signal (Reference value)	
Connector	Terminal		(**************************************	
	9	Ground	Refer to following signal	
50	13	Ground	Trefer to following signal	



Is the inspection result normal?

YES >> Replace power window main switch.

NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

Turn ignition switch OFF.

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

Power windo	w main switch	Front power window motor (driver side)		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
D8	9	D10	3	Existed	
	13	D10	5	LAISIEU	

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

Power wind	ow main switch		Continuity
Connector	Terminal		Continuity
	9	Ground	Not existed
Do	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 windo	+) w motor (driver side)	(-)	Voltage (V) (Approx.)	
Connector	Terminal		(/ (ppiox.)	
D10	4	Ground	12	

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

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

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

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

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

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

Power windo	Power window main switch Front power window motor (driver side)		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

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

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

Is the inspection result normal?

YES >> Replace front power window motor (driver side).

NO >> Replace power window main switch.

PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000007467397

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

PASSENGER SIDE: Component Function Check

INFOID:0000000007467398

1. CHECK ENCODER OPERATION

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

Is the inspection result normal?

YES >> Encoder operation is OK.

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

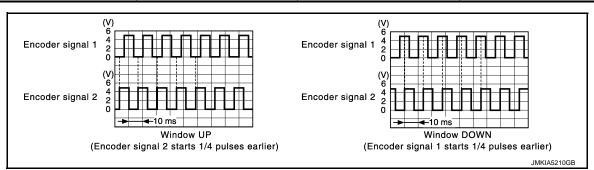
PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007467399

1. CHECK ENCODER SIGNAL

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

(+)		Cianal
Front power window s	switch (passenger side)	(-) (Re	Signal (Reference value)
Connector	Terminal		,
D38	12	Ground	Refer to following signal
D36	15	Giouna	Refer to following signal



Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

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

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senger side) connector.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

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

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

Front power window s	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

- 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.

(+) Front power window motor (passenger side)		(-)	Voltage (V) (Approx.)
Connector	Terminal		(*
D40	4	Ground	12

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

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

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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

Front power window s	power window switch (passenger side) Front power window motor (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

- Connect front power window switch (passenger side) connector.
- 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	3		Existed

Is the inspection result normal?

>> Replace front power window motor (passenger side).

NO >> Replace front power window switch (passenger side).

REAR LH

REAR LH: Description

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

REAR LH: Component Function Check

1. CHECK ENCODER OPERATION

Check rear door LH glass perform AUTO open/close operation normally by power window main switch or rear power window switch LH.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-27, "REAR LH: Diagnosis Procedure".

REAR LH: Diagnosis Procedure

1. CHECK ENCODER SIGNAL

Turn ignition switch ON.

Check signal between rear power window switch LH harness connector and ground using oscilloscope.

(+) Rear power window switch LH		(-)	Signal (Reference value)
Connector	Terminal		(
D57	12	Ground	Poter to following signal
D31	15	Ground	Refer to following signal

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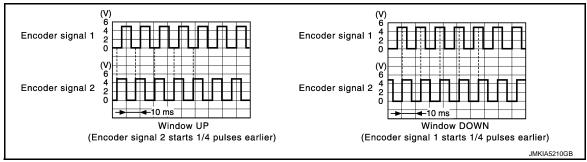
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Is the inspection result normal?

YES >> Replace rear power window switch LH.

NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect rear power window switch LH connector and rear power window motor LH connector.
- Check continuity between rear power window switch LH harness connector and rear power window motor LH harness connector.

Rear power w	indow switch LH	Rear power wi	ndow motor LH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D57	12	_ D52 _	5	Existed
<i>D31</i>	15		6	LXISIEU

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

Rear power window switch LH			Continuity
Connector	Terminal	Ground	Continuity
D57	12	Ground	Not existed
D57	15	_	Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

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

(+) Rear power window motor LH		(-)	Voltage (V) (Approx.)
Connector	Connector Terminal		(, 45, 21, 1)
D52	2	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

Rear power wi	ndow switch LH	Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D57	4	D52	2	Existed

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

Rear power window switch LH			Continuity
Connector	Terminal	Ground	Continuity
D57	4		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch LH.

NO >> Repair or replace harness.

CHECK GROUND CIRCUIT 1

Turn ignition switch OFF.

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

Rear power wi	Rear power window switch LH		Rear power window motor LH	
Connector	Terminal	Connector	Terminal	Continuity
D57	3	D52	4	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT 2

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

Rear power window switch LH			Continuity
Connector	Terminal	Ground	Continuity
D57	3		Existed

Is the inspection result normal?

YES >> Replace rear power window motor LH.

NO >> Replace rear power window switch LH.

REAR RH

REAR RH : Description

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

REAR RH: Component Function Check

1. CHECK ENCODER OPERATION

Check rear door RH glass perform AUTO open/close operation normally by power window main switch or rear power window switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-30, "REAR RH: Diagnosis Procedure". **PWC**

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INFOID:0000000007467404

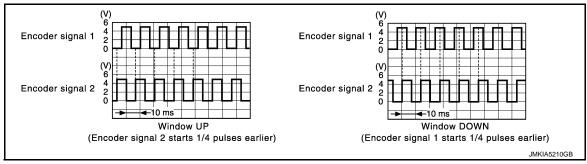
REAR RH: Diagnosis Procedure

INFOID:0000000007467405

1. CHECK ENCODER SIGNAL

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

(+) Rear power window switch RH		(-)	Signal (Reference value)
Connector	Terminal		(Notoronoe value)
	12	Ground	Poter to following signal
DIT	15	- Ground	Refer to following signal



Is the inspection result normal?

YES >> Replace rear power window switch RH.

NO >> GO TO 2.

2. CHECK ENCODER SIGNAL CIRCUIT

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

Rear power w	rindow switch RH	Rear power window motor RH		Continuity
Connector	Terminal	Connector Terminal		Continuity
D77	12	D72	5	Existed
DIT	15	DIZ	6	LXISIEU

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

Rear power window switch RH			Continuity
Connector	Terminal	Ground	Continuity
D77	12	Giodila	Not existed
	15		TVOL EXISTED

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCODER POWER SUPPLY CIRCUIT 1

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

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	(+)		V-16 0.0
Rear power w	Rear power window motor RH		Voltage (V) (Approx.)
Connector	Connector Terminal		,
D72	2	Ground	12

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

Rear power wi	Rear power window switch RH Rear power window motor RH		Rear power window motor RH	
Connector	Terminal	Connector Terminal		Continuity
D77	4	D72	2	Existed

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

Rear power window switch RH			Continuity
Connector	Terminal	Ground	Continuity
D77	4		Not existed

Is the inspection result normal?

YES >> Replace rear power window switch RH.

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH harness connector.
- 3. 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
D77	3	D72	4	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

6. CHECK GROUND CIRCUIT 2

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

Rear power window switch RH			Continuity
Connector	Terminal	Ground	Continuity
D77	3		Existed

Is the inspection result normal?

YES >> Replace rear power window motor RH.

NO >> Replace rear power window switch RH.

DOOR KEY CYLINDER SWITCH

Description INFOID:000000007467406

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

Component Function Check

INFOID:0000000007467407

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to DLK-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

Monitor item		Condition	
KEY CYL LK-SW	Lock	: ON	
RET GTE ER-GW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
KET CTL OIN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

YES >> Door key cylinder switch is OK.

NO >> Refer to PWC-32, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007467408

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) (key cylinder switch) connect.
- 3. Turn ignition switch ON.
- Check voltage between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

(+) Front door lock assembly (driver side) (key cylinder switch)		(-)	Voltage (V) (Approx.)	
Connector	Terminal			
D15	5	Ground	5	
	6	3.3dnd	J	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

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

Power window main	Power window main switch		Front door lock assembly (driver side) (key cylinder switch)	
Connector	Terminal	Connector	Terminal	
D8	4	D15	6	Evistod
Do	6	D15	5	Existed

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

E POPORTOGIT BITTORIO	, -	-	
Power window	v main switch		
Connector	Terminal	One word	Continuity
D8	4	Ground	Not existed
	6		Not existed
s the inspection result normal	_		
YES >> Replace power will NO >> Repair or replace			
3.CHECK DOOR KEY CYLIN		CIRCUIT	
Check continuity between from			vitch) harness connector a
ground.	it door lock assembly (dir	ver side, (key cyllider sw	nton) namess connector a
Forest de corte de cor			
Front door lock ass (key cylind			Continuity
Connector	Terminal	Ground	
D15	4		Existed
s the inspection result normal	<u>?</u>		
YES >> GO TO 4.			
NO >> Repair or replace			
4.CHECK DOOR KEY CYLIN			
Check front door lock assembl Refer to <u>PWC-33, "Componen</u>		er switch).	
s the inspection result normal	<u> </u>		
YES >> GO TO 5.	_		
<u> </u>	r lock assembly (driver si	de) (key cylinder switch).	
CHECK INTERMITTENT IN	ICIDENT		
Refer to GI-43, "Intermittent In	<u>cident"</u> .		
INODEOTION EN	_		
>> INSPECTION ENI	J		
Component Inspection			INFOID:000000000746
COMPONENT INSPECTION	N		
1. CHECK DOOR KEY CYLIN			
	IDEN OWN ON		
 Turn ignition switch OFF. Disconnect front door lock 	assembly (driver side) (k	kev cylinder switch) conne	ctor.
Check front door lock asset			
Front door lock asset	mbly (driver side)		
(key cylinde		Key position	Continuity
Termir	nal		·
5		Unlock	Existed
o e		Neutral / Lock	Not existed

Is the	inen	ection	requilt	normal?
15 111	5 1113P	CCHOH	169aii	HUHHai:

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>> INSPECTION END YES

>> Replace front door lock assembly (driver side) (key cylinder switch). NO

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Neutral / Lock

Neutral / Unlock

Lock

Not existed

Existed

Not existed

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000007467410

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

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

Keyless power window down signal

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

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

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000007467411

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-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

Monitor item		Condition
CDL LOCK SW	LOCK	: ON
ODE 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-34, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007467412

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 JPMIA0013GB	

Is the inspection result normal?

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

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

(+)			Voltage (V) (Approx.)
Power window main switch		(–)	
Connector Terminal			
D8	14	Ground	12

Is the measurement value within the specification?

YES >> Replace power window main switch.

NO >> GO TO 3.

3.check power window serial link circuit

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

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

Check continuity between BCM connector and ground.

В	CM		Continuity
Connector	Terminal	Ground	Continuity
M123	132		Not existed

Is the inspection result normal?

>> Replace BCM. Refer to BCS-80, "Removal and Installation". YES

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "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), rear power window switch and BCM transmit and receive the signal by power window serial link.

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

Keyless power window down signal

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

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

FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check INFOID:0000000007467414

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 DLK-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-36</u>, "<u>FRONT POWER WINDOW SWITCH (PASSENGER SIDE)</u>: <u>Diagnosis Procedure</u>".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

INFOID:0000000007467415

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)		(–)	Signal (Reference value)	
Connector	Terminal	1	(Neterence Value)	
D38	16	Ground	(V) 15 10 5 0 JPMIA0013GB	

Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

Power windo	Power window main switch Front power window switch (passenger side)		Front power window switch (passenger side)	
Connector	Terminal	Connector	Terminal	Continuity
D8	14	D38	16	Existed

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

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D8	14		Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

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

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

Keyless power window down signal

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

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

REAR LH: Component Function Check

INFOID:0000000007467417

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-51, "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
	UNLOCK	: ON

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-37, "REAR LH: <a href="Diagnosis Procedure".

REAR LH: Diagnosis Procedure

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1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

	+) ndow switch LH Terminal	(–)	Signal (Reference value)
D57	16	Ground	(V) 15 10 5 0 10 ms JPMIA0013GB

Is the inspection result normal?

YES >> Replace rear power window switch LH.

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

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

Power windo	ower window main switch Rear power window switch LH Continuity		Rear power window switch LH	
Connector	Terminal	Connector Terminal		Continuity
D8	14	D57	16	Existed

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

Power windo	ndow main switch Continuity		Continuity
Connector	Terminal	Ground	Continuity
D8	14		Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

INFOID:0000000007467419

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

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

Keyless power window down signal

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

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

REAR RH: Component Function Check

INFOID:0000000007467420

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>DLK-51</u>, "DOOR LOCK: <u>CONSULT Function</u> (BCM - DOOR LOCK)".

Monitor item		Condition
CDL LOCK SW	LOCK	: ON
GDE LOCK SW	UNLOCK	: OFF
CDL UNLOCK SW	LOCK	: OFF
ODE GINEOGR SW	UNLOCK	: ON

Is the inspection result normal?

YES >> Power window serial link is OK.

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

REAR RH: Diagnosis Procedure

INFOID:0000000007467421

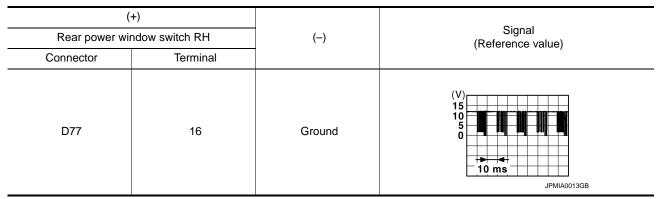
1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]



Is the inspection result normal?

YES >> Replace rear power window switch RH.

NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

Power windo	er window main switch Rear power window switch RH Continuity		Rear power window switch RH	
Connector	Terminal	Connector	Terminal	Continuity
D8	14	D77	16	Existed

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

_	Power windo	w main switch	switch	
	Connector	Terminal	Ground	Continuity
	D8	14		Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

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[FRONT & REAR WINDOW ANTI-PINCH]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
TIX WIII EIXTII	Front wiper switch HI	On
ED WIDED LOW	Other than front wiper switch LO	Off
FR WIPER LOW	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED MUDED INT	Other than front wiper switch INT/AUTO	Off
FR WIPER INT	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIFER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial pos tion
TURN SIGNAL R	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
TURN SIGNAL L	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off
TAIL LAWIP SW	Lighting switch 1ST or 2ND	On
LI DEAM CW	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
HEAD LAMP SW 1	Other than lighting switch 2ND	Off
HEAD LAIMP SW 1	Lighting switch 2ND	On
HEAD LAMP SW 2	Other than lighting switch 2ND	Off
HEAD LAIMF 3W 2	Lighting switch 2ND	On
PASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
AUTO LIGHT SW	Other than lighting switch AUTO	Off
AUTO LIGITI SW	Lighting switch AUTO	On
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off
DOOR SW-DR	Driver door closed	Off
DOOK 3W-DK	Driver door opened	On
DOOD SW AS	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
DOOD CW DD	Rear RH door closed	Off
DOOR SW-RR	Rear LH door opened	On

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Monitor Item	Condition	Value/Status	-
OOR SW-RL	Rear LH door closed	Off	_
JOOR SW-RL	Rear LH door opened	On	_
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off	_
SDL LOOK OW	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	_
(=) (0) (1) (0) (Other than driver door key cylinder LOCK	Off	_
(EY CYL LK-SW	Driver door key cylinder LOCK	On	_
(E) (O) (I III O) (I	Other than driver door key cylinder UNLOCK	Off	_
REY CYL UN-SW	Driver door key cylinder LOCK	On	_
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off	_
1474DD 614/	Hazard switch is OFF	Off	_
INCAUD OW	Hazard switch is ON	On	_
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off	_
TO CANCEL SW	Trunk lid opener cancel switch OFF	Off	_
R CANCEL SW	Trunk lid opener cancel switch ON	On	_
D/RD ODEN SW	Trunk lid opener switch OFF	Off	_
N/BD OF LIN SW	Trunk lid opener switch OFF While the trunk lid opener switch is turned ON Trunk lid closed	On	_
DNIZ/LIAT MAITD	Trunk lid closed	Off	_
KINK/HAT WINTK	Trunk lid opened	On	_
REVERSE SW	NOTE: The item is indicated, but not monitored.	Off	_
DKE LOCK	Driver door key cylinder LOCK Y CYL SW-TR NOTE: The item is indicated, but not monitored. Hazard switch is OFF Hazard switch is ON NOTE: The item is indicated, but not monitored. AR DEF SW CANCEL SW Trunk lid opener cancel switch OFF Trunk lid opener switch ON Trunk lid opener switch OFF While the trunk lid opener switch is turned ON Trunk lid opened Trunk lid opened NOTE: The item is indicated, but not monitored. LOCK button of the Intelligent Key is not pressed LOCK button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is pressed PANIC button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed PANIC button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is not pressed and held LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off	_
KKE-LOCK	LOCK button of the Intelligent Key is pressed	On	
OKE TIMI OCK	UNLOCK button of the Intelligent Key is not pressed	Off	
AINE-UINEUUN	UNLOCK button of the Intelligent Key is pressed	On	_
OKE_TD/PD	TRUNK OPEN button of the Intelligent Key is not pressed	Off	_
The item is indicated, but not monitored. Trunk lid opener cancel switch OFF Trunk lid opener switch OFF Trunk lid opener switch OFF While the trunk lid opener switch is turned ON Trunk lid closed Trunk lid opened EVERSE SW NOTE: The item is indicated, but not monitored. LOCK button of the Intelligent Key is not pressed LOCK button of the Intelligent Key is not pressed UNLOCK button of the Intelligent Key is pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is not pressed TRUNK OPEN button of the Intelligent Key is pressed PANIC button of the Intelligent Key is pressed		On	_
OKE-DVIIC	PANIC button of the Intelligent Key is not pressed	Off	_
ME-FAINIC	PANIC button of the Intelligent Key is pressed	On	_
DKE-D/M ODEN	UNLOCK button of the Intelligent Key is not pressed	Off	_
NE-F/VV OPEN	UNLOCK button of the Intelligent Key is pressed and held	On	_
RKE-MODE CHG		Off	=
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On	_
ODTICAL CENCOR	Bright outside of the vehicle	Close to 5 V	_
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V	_
250 000 05	Driver door request switch is not pressed	Off	_
REQ SW -DR	Driver door request switch is pressed	On	_
250 004 10	Passenger door request switch is not pressed	Off	_
REQ SW -AS	Passenger door request switch is pressed	On	_

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
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	Trunk lid opener request switch is not pressed	Off
REQ SW -BD/TR	Trunk lid opener request switch is pressed	On
DUCH CW	Push-button ignition switch (push switch) is not pressed	Off
PUSH SW	Push-button ignition switch (push switch) is pressed	On
GN 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
STITICH SW	The clutch pedal is not depressed	Off
CLUCH SW	The clutch pedal is depressed	On
	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
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
DETE/CANCL CW	 Selector lever in P position (Except M/T models) The clutch pedal is depressed (M/T models) 	Off
DETE/CANCL SW	 Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) 	On
25T DN/N 01M	Selector lever in any position other than P and N	Off
SFT PN/N SW	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
INI K CEN DD	Driver door is unlocked	Off
UNLK SEN -DR	Driver door is locked	On
	Push-button ignition switch (push-switch) is not pressed	Off
PUSH SW -IPDM	Push-button ignition switch (push-switch) is pressed	On
CN DLV4 E/D	Ignition switch in OFF or ACC position	Off
GN RLY1 -F/B	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
DE LE 300 -IPDIVI	Selector lever in P position	On
SFT PN -IPDM	 Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models) 	Off
I FIN -IFUIVI	Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models)	On
SET D MET	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
DET NI MET	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
LINGINE 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 (60 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (60 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
DDMT FNO OTDT	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY OM CLOT	The Intelligent Key is not inserted into key slot	Off
KEY SW -SLOT	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
OOM NW ID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONFIRM ID3	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONTINIVI IDZ	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIDM ID4	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFIRM ID1	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
1F 4	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
IF 3	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
IF Z	The ID of second Intelligent Key is registered to BCM The ID of first Intelligent Key is not registered to BCM	
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
IPI	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECOT ELA	ID of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID DECCT ED4	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
ID DECOT DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCT DI 4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MADNING LAND	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
DUZZED	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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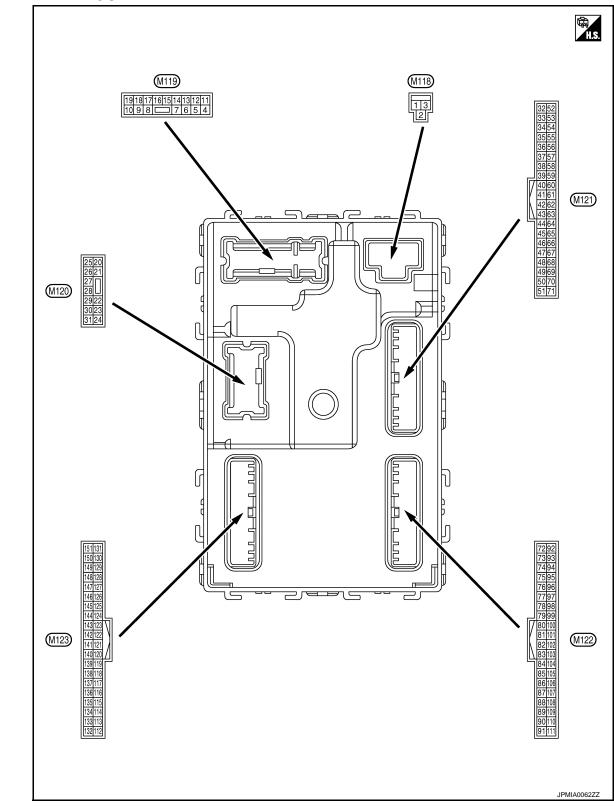
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TERMINAL LAYOUT



PHYSICAL VALUES

Revision: 2013 February PWC-45 2012 G Sedan

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch (OFF	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch (OFF	12 V
3 (BG)	Ground	P/W power supply (RAP)	Output	Ignition switch (NO	12 V
					np battery saver is activated. r room lamp power supply)	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	vated.	mp battery saver is not acti- erior room lamp power sup-	12 V
5	Ground	Passenger door UN-	Output	Passenger	UNLOCK (Actuator is activated)	12 V
(P)	Ground	LOCK	door	Other than UNLOCK) Actuator is not activated	0 V	
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(SB)	Cround	Grop lamp	Output	Otop ramp	OFF	12 V
8	Ground	Ground All doors, fuel lid	Output	All doors, fuel	LOCK (Actuator is activated)	12 V
(V)	Cround	LOCK	Output		Other than LOCK (Actuator is not activated)	0 V
9	Ground	Driver door, fuel lid	Output	utput Driver door, fuel lid	UNLOCK (Actuator is activated)	12 V
(G)	0.000	UNLOCK	o a.p a.		Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door	UNLOCK (Actuator is activated)	12 V
(P)		LOCK		door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch (DFF	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch (NO	0 V
14* ¹ (W)	Ground	_	_		_	_
15 (BG)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(50)					ACC	0 V
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s
						6.5 V

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

	nal No.	Description				Value
+	color)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	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
19	Ground	Interior room lamp	Output	Interior room	OFF	12 V
(V)	0.00	control	o a.pa.	lamp	ON	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
23	Ground	Trunk lid open	Output	t Trunk lid	OPEN (Trunk lid opener actuator is activated)	12 V
(LG)	Ground	Trunk na open	Output		Other than OPEN (Trunk lid opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
30	Carrie	Two leaves leaves	Outers	Trunk room	ON	0 V
(P)	Ground	Trunk room lamp	Output	lamp	OFF	12 V

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< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			Condition	Value	
+	_	Signal name	Input/ Output		Condition	(Approx.)	
39		Rear bumper anten-		When the trunk lid opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(W)	Ground	na (+)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V 0 V	
50 (BG)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk lid is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (Trunk lid is opened)	0 V	
				Ignition switch ON (A/T mod-	When selector lever is in P or N position When selector lever is not	12 V	
52 (R)	Ground	Starter relay control	Output	els)	in P or N position	0 V	
(K)		-		Ignition switch ON (M/T mod-	When the clutch pedal is depressed	Battery voltage	
				els)	When the clutch pedal is not depressed	0 V	
60	Ground	Push-button ignition	Input	Push-button ig- nition switch	Pressed	0 V	
(BR)	Ground	switch (Push switch)	Input	(push switch)	Not pressed	Battery voltage	
					ON (Pressed)	0 V	
61 (SB)	Ground	Trunk lid opener request switch	Input	Trunk lid open- er request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB	
		Intelligent Key warn-		Intelligent Key	Sounding	1.0 V 0 V	
64 (G)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	12 V	

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
73	Crowd	Room antenna 2 (+)	Outout	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)	Ground	(Center console)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
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
(SB)	Ground	tenna (-)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
75	Ground	Passenger door an-	Output	When the passenger door request switch is	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)	Giodid	tenna (+)	Output	operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
76	the arrarea When the driver door antenna Output switch is oper-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB			
(V)	Global to	(-)	Сири	ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
77	Ground	Driver door antenna	Output	When the driver door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB
(LG)		(+)	Сара	switch is oper- ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
78	Ground	Room antenna 1 (–)	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(Y)	Giodila	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description				Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
79		Room antenna 1 (+)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(BR)	Ground	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
82 (SB)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V 12 V	
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms	
(Y) Ground receiver communica-		Output	When operating gent Key	g either button on the Intelli-	(V) 15 10 5 1 ms JMKIA0065GB		

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
87 (Y)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
					Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 6 Wiper volume dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			0 177	Value	
+		Signal name	Input/ Output		Condition	(Approx.)	i.
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms	
					Lighting switch HI (Wiper volume dial 4)	1.4 V	
88 (BG)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper volume dial 4)	1.3 V	
					Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 3	JPMIA0037GB 1.3 V (V) 15 10 5 0 JPMIA0040GB 1.3 V	
90 (P)	Ground	CAN-L	Input/ Output		_	_	•
91 (L)	Ground	CAN-H	Input/ Output		— OFF	— 12 V	
92 (LG)	Ground	Key slot illumination	Output	Key slot illumi- nation	Blinking	(V) 15 10 5 0 1 s JPMIA0015GB 6.5 V 0 V	
93	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage	
(GR)	Ciound	ON INGICATOR IAINP	Juipui	ignition switch	ON	0 V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(BG)	Orodria	-	Output	ignition switch	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output		_	12 V
		Selector lever P position switch (A/T mod-		Selector lever	P position	0 V
		els)		Selector level	Any position other than P	12 V
99		ASCD clutch switch (M/T models without ICC) ICC clutch switch (M/T models with ICC)		ASCD clutch	OFF (Clutch pedal is depressed)	0 V
(R)* ² (BR)* ³	Ground		Input	switch	ON (Clutch pedal is not depressed)	12 V
				ICC clutch switch	OFF (Clutch pedal is depressed)	0 V
					ON (Clutch pedal is not depressed)	12 V
					ON (Pressed)	0 V
100 (Y)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
-					ON (Pressed)	0 V
101 (P)	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	igililoir switch	ON	12 V
103 (P)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch (DFF	12 V

< ECU DIAGNOSIS INFORMATION >

		Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V	
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper volume dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB	
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB	
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V	

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description	Description			Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (W)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper volume dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)	
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch (DN	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1	
113	Ground	Ontinal concer	Input	Ignition switch	When bright outside of the vehicle	Close to 5 V	
(BG)	Ground	Optical sensor	Input	ON	When dark outside of the vehicle	Close to 0 V	
114	Ground	Clutch interlock	Input	Clutchinterlock	OFF (Clutch pedal is not depressed)	0 V	
(R)	Ground	switch	Прис	on (Clutch pedal is depressed)		Battery voltage	
116 (SB)	Ground	Stop lamp switch 1	Input	_		Battery voltage	
		Stop lamp switch 2 (Without ICC) Stop lamp switch 2	- Input	Stop lamp switch	OFF (Brake pedal is not depressed)	0 V	
118	Ground				ON (Brake pedal is depressed)	Battery voltage	
(BR)	Ground			Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V	
		(With ICC)		Stop lamp switch ON (Brake pedal is depressed) or ICC brake 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 1.1 V	
					UNLOCK status (Unlock switch sensor ON)	0 V	
121	Ground	Key slot switch	Input	When the Intellig	gent Key is inserted into key	12 V	
(SB)	Sibana	Toy old Switch	Прис	When the Intelli- key slot	gent Key is not inserted into	0 V	
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V	
(V)	2.300			Ignition switch ON		Battery voltage	

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
129 (BG)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch C	DN	(V) 15 10 5 0 10 ms JPMIA0013GB 10.2 V
				Ignition switch C	OFF or ACC	12 V
133	Crour -	Push-button ignition	Outnut	Push-button ig-	ON (Tail lamps OFF)	9.5 V
(L)	Ground	switch illumination	Output	nition switch il- lumination	OFF	0 V
134	Ground	LOCK indicator lamp	Output	LOCKindicator	OFF	Battery voltage
(LG)	Cidana	-	Carpat	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch C	ON	0 V
138	Ground	Receiver and sensor	Output	Ignition switch	OFF	0 V
(V)	3,00,10	power supply	Jaipat	.9.11.011	ACC or ON	5.0 V

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	nal No.	Description		0 111		Value
+ (VVire	color)	Signal name	Input/ Output	Condition		(Approx.)
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 4 2 0 + 0.2s
(L)	Glound	er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 2 0 • 0.2s
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	12 V
(B)	Ground	position	mput	Ociector level	Except P and N positions	0 V
					ON	0 V
141 (W)	Ground	Security indicator lamp	Output	Security indicator lamp	Blinking	(V) 15 10 5 0 JPMIA0014GB 11.3 V
					OFF	12 V
142 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper volume	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND	0 V
				dial 4)	Turn signal switch RH	2 ms JPMIA0031GB
	Ground				All switches OFF (Wiper volume dial 4) Front wiper switch HI	0 V
143 (P)		Combination switch OUTPUT 1	Output	Combination switch	(Wiper volume dial 4) Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 3 Wiper volume dial 6 Wiper volume dial 7	(V) 15 10 2 ms JPMIA0032GB

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

	nal No. color)	Description			Condition	Value
+	-	Signal name	Input/ Output	Condition		(Approx.)
					All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	(V)
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6	15 0 5 0 2 ms JPMIA0033GB
					All switches OFF	0 V
					Front wiper switch INT/ AUTO	(V) 15
145		Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	Front wiper switch LO	10
(L) G	Ground				Lighting switch AUTO	5 0 2 ms 10.7 V
					All switches OFF	0 V
					Front fog lamp switch ON	
				Combination	Lighting switch 2ND	(V) 15
146	Ground	Combination switch	Output	switch	Lighting switch PASS	10 5 0
(SB)	Glodina	OUTPUT 4	Guipat	(Wiper volume dial 4)	Turn signal switch LH	0
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms 10 ms 11.8 V
					ON (Door open)	0 V
151	Ground	Rear window defog-	Output	Rear window	Active	0 V
(G)	Cround	ger relay control	Caiput	defogger	Not activated	Battery voltage

^{• *1:} This harness is not used.

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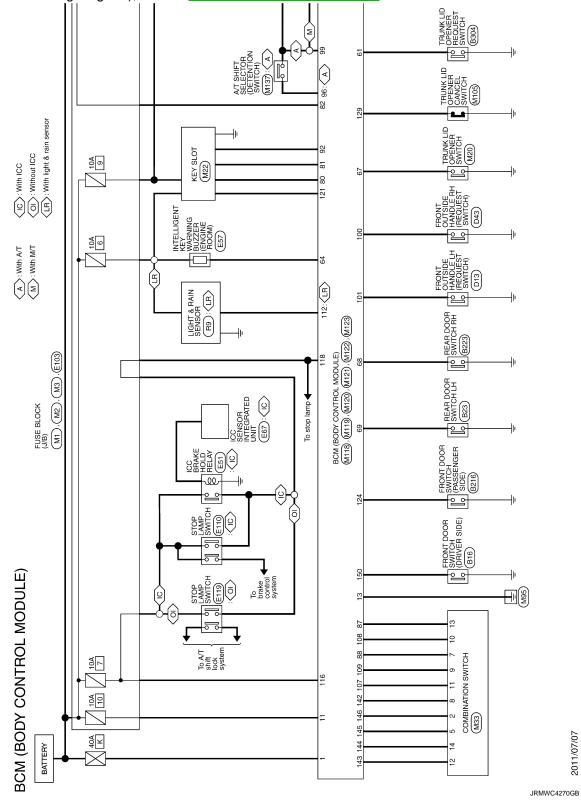
^{• *2:} A/T models

^{• *3:} M/T models

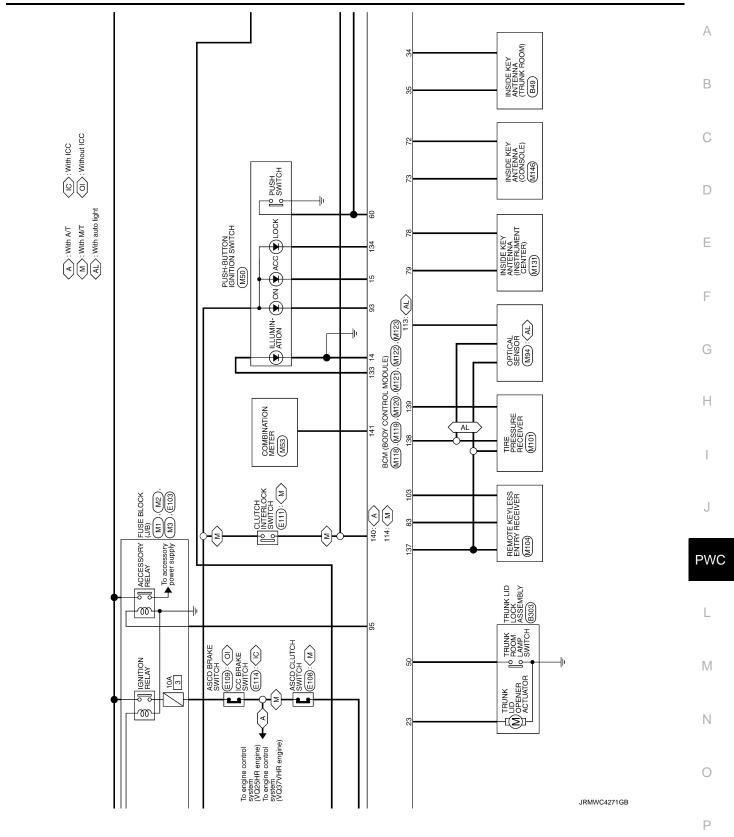
Wiring Diagram - BCM -

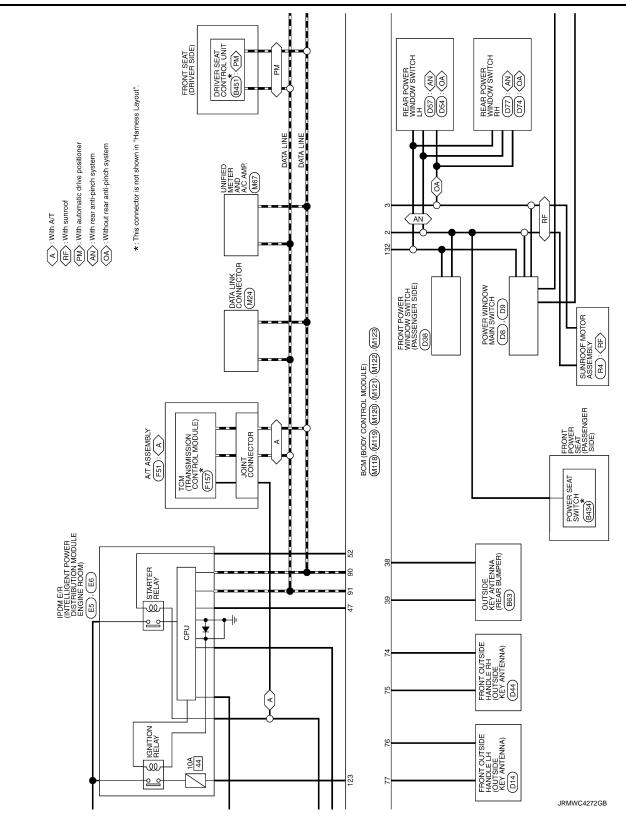
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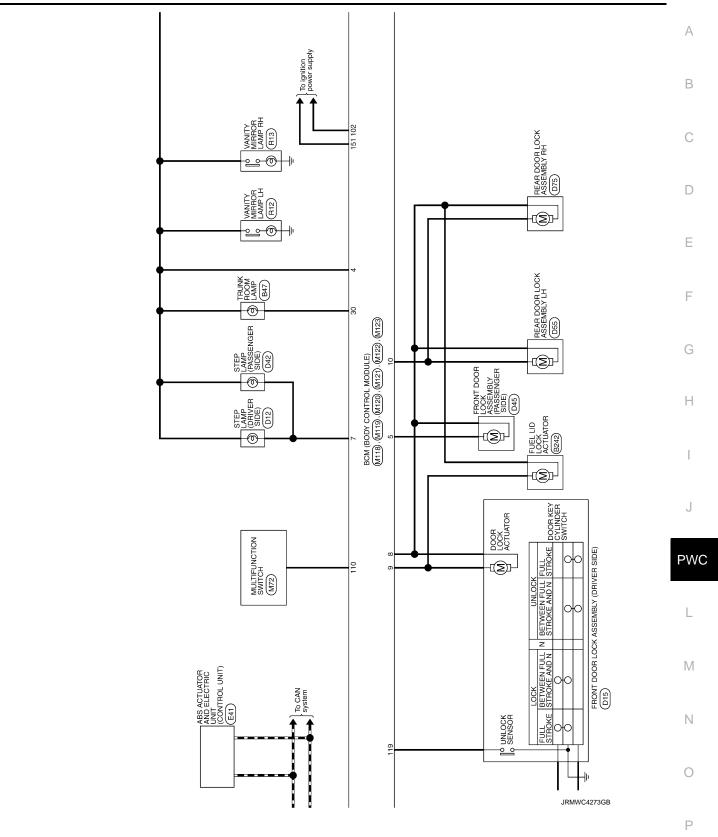
For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".

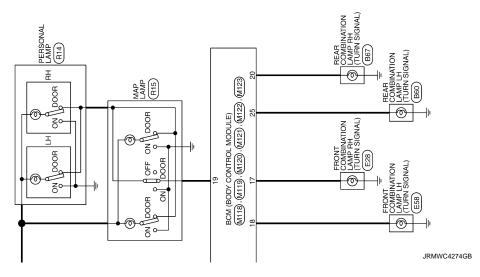


< ECU DIAGNOSIS INFORMATION >









Fail-safe

FAIL-SAFE CONTROL BY DTC

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

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON \rightarrow OFF
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status becomes consistent • Starter control relay signal • Starter relay status signal
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	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (12 V) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions are fulfilled • Power position changes to ACC • Receives engine status signal (CAN)
B2617: BCM	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
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled Status 1 Clutch switch signal (CAN from ECM): ON Clutch interlock switch signal: OFF (0 V) Status 2 Clutch switch signal (CAN from ECM): OFF Clutch interlock switch signal: ON (Battery voltage)

DTC Inspection Priority Chart

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

Priority	DTC	
1	B2562: LOW VOLTAGE	
2	U1000: CAN COMM U1010: CONTROL UNIT(CAN)	
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING 	

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[FRONT & REAR WINDOW ANTI-PINCH]

Priority	DTC
4	 B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: STARTER RELAY B2606: STARTER RELAY B2607: ENG STATE SIG LOST B2614: BCM B2615: BCM B2616: BCM B2617: BCM B2618: BCM B2618: VEHICLE TYPE B2626: CLUTCH SW B2626: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2622: 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 <u>BCS-16, "COM-MON ITEM"</u>.

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	Refer- ence page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM	_	_	_	_	BCS-35
U1010: CONTROL UNIT(CAN)	_	_	_	_	BCS-36
U0415: VEHICLE SPEED	_	_	_	_	BCS-37
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-44

< 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	Refer- ence page	•
B2191: DIFFERENCE OF KEY	×	_	_	_	<u>SEC-47</u>	-
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-48	-
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-50	-
B2195: ANTI-SCANNING	×	_	_	_	SEC-51	-
B2553: IGNITION RELAY	_	×	_	_	PCS-48	-
B2555: STOP LAMP	_	×	_	_	SEC-52	-
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-54	-
B2557: VEHICLE SPEED	×	×	×	_	SEC-56	-
B2560: STARTER CONT RELAY	×	×	×	_	SEC-57	-
B2562: LOW VOLTAGE	_	×	_	_	BCS-38	-
B2601: SHIFT POSITION	×	×	×	_	SEC-58	-
B2602: SHIFT POSITION	×	×	×	_	SEC-61	-
B2603: SHIFT POSI STATUS	×	×	×	_	SEC-64	-
B2604: PNP/CLUTCH SW	×	×	×	_	SEC-67	-
B2605: PNP/CLUTCH SW	×	×	×	_	SEC-69	-
B2608: STARTER RELAY	×	×	×	_	<u>SEC-71</u>	-
B260A: IGNITION RELAY	×	×	×	_	PCS-50	-
B260F: ENG STATE SIG LOST	×	×	×	_	<u>SEC-73</u>	-
B2614: BCM	_	×	×	_	PCS-52	-
B2615: BCM	_	×	×	_	PCS-54	-
B2616: BCM	_	×	×	_	PCS-56	-
B2617: BCM	×	×	×	_	SEC-78	-
B2618: BCM	×	×	×	_	PCS-58	
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-59	-
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	<u>SEC-80</u>	-
B2621: INSIDE ANTENNA	_	×	_	_	DLK-59	-
B2622: INSIDE ANTENNA	_	×	_	_	DLK-61	-
B2623: INSIDE ANTENNA	_	×	_	_	DLK-63	•
B26E8: CLUTCH SW	×	×	×	_	SEC-75	-
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-77</u>	-
C1704: LOW PRESSURE FL	_	_	_	×		-
C1705: LOW PRESSURE FR	_	_	_	×	WT-20	
C1706: LOW PRESSURE RR	_	_	_	×	<u>vv 1-2U</u>	
C1707: LOW PRESSURE RL	_	_	_	×		
C1708: [NO DATA] FL	_	_	_	×		-
C1709: [NO DATA] FR	_	_	_	×	WT 00	
C1710: [NO DATA] RR	_	_		×	<u>WT-22</u>	
C1711: [NO DATA] RL	_	_	_	×	1	

< 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	Refer- ence page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-25
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-26</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-27</u>

POWER WINDOW MAIN SWITCH

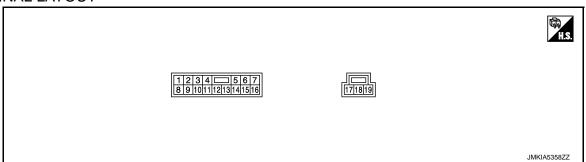
< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

	nal No. color)	Description		Condition	Voltage (V)
+	_	Signal name	Input/ Output	Condition	(Approx.)
2 (LG)	Ground	Encoder ground	_	_	0
4 (V)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0
6 (Y)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral → Unlocked)	5 → 0
8 (L)	Ground	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is UP at operated.	12
9 (BG)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
				Ignition switch ON	12
10	Ground	Ground Rap signal	Input	Within 45 second after ig- nition switch is turned to OFF	12
(SB)		. 5		When driver side or pas- senger side door is opened during retained power operation	0
11 (G)	Ground	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	12

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

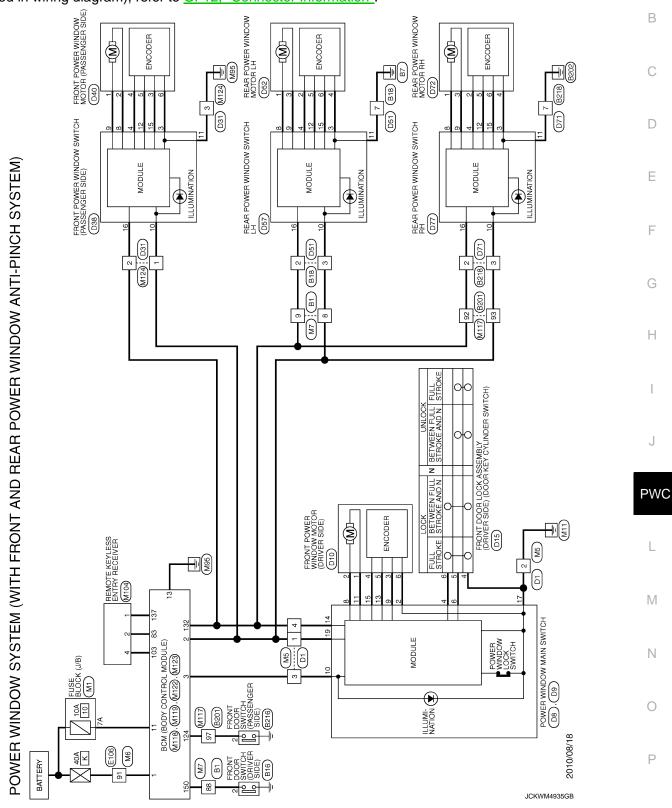
	inal No. e color)	Description		Condition	Voltage (V)	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
13 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
14 (V)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB	
15 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	12	
17 (B)	Ground	Ground	_	_	0	
19 (Y)	Ground	Battery power supply	Input	_	12	

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Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



Fail-safe

FAIL-SAFE CONTROL

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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.

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.

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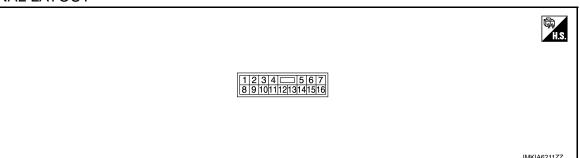
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FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

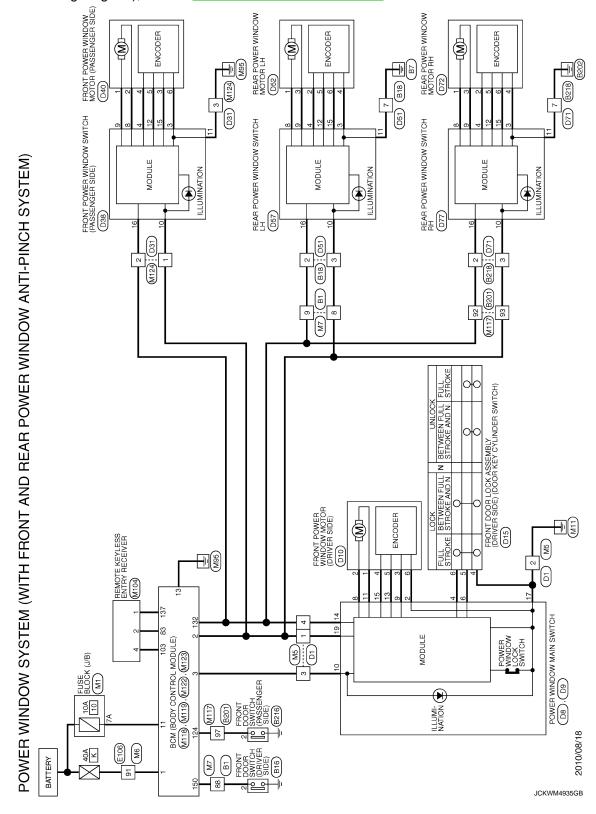
Terminal No. (wire color)		Description		Condition	Voltage (V)	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
3 (LG)	Ground	Encoder ground	_	_	0	
4 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	12	
8 (L)	Ground	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	12	
9 (G)	Ground	Power window motor UP signal	Output	When power window motor is UP at operated.	12	
10 (Y)	Ground	Battery power supply	Input	_	12	
11 (B)	Ground	Ground	_	_	0	
12 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 64 2 0 10 ms	
15 (BG)	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	

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Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

INFOID:0000000007803053

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Fail-safe INFOID:0000000007467432

FAIL-SAFE CONTROL

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

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.

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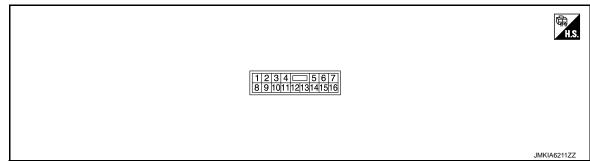
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REAR POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT

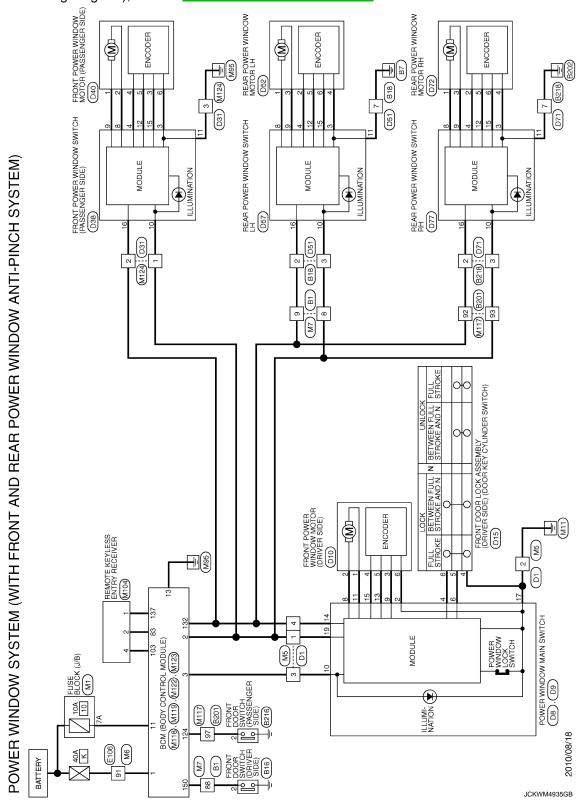


PHYSICAL VALUES

Terminal No. (wire color)		Description		Condition	Voltage (V)
+	_	Signal name	Input/ Output	Condition	(Approx.)
3 (BR)	Ground	Encoder ground	_	_	0
4 (SB)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	12
8 (W)	Ground	Power window motor UP signal	Output	When power window motor is UP at operated.	12
9 (L)	Ground	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	12
10 (W)	Ground	Battery power supply	Input	_	12
11 (B)	Ground	Ground	_	_	0
12 (GR)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
15 (BG)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
16 (Y)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



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REAR POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Fail-safe

FAIL-SAFE CONTROL

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

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 SWITCHES

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

SYMPTOM DIAGNOSIS Α POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW **SWITCHES** В **Diagnosis Procedure** INFOID:0000000007467436 ${f 1}$.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT C Check BCM power supply and ground circuit. BCS-39, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2.CHECK POWER WINDOW MAIN SWITCH SERIAL LINK CIRCUIT Check power window serial link circuit. Refer to PWC-34, "POWER WINDOW MAIN SWITCH: Component Function Check". F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CONFIRM THE OPERATION Confirm the operation again. Н Is the result normal? YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". NO >> GO TO 1. J

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DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007467437

${f 1}$.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window switch power supply and ground circuit.

Refer to PWC-15, "POWER WINDOW MAIN SWITCH: 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-18, "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-43, "Intermittent Incident".

NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE [FRONT & REAR WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE Α WHEN POWER WINDOW MAIN SWITCH IS OPERATED WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure INFOID:0000000007467438 ${f 1}$.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) SERIAL LINK CIRCUIT Check front power window switch (passenger side) serial link circuit. Refer to PWC-35, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check". Is the inspection result normal? D 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-43, "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: Diagnosis Procedure INFOID:0000000007467439 Н 1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE) Replace front power window switch (passenger side). Refer to PWC-97, "Removal and Installation" >> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED **PWC** WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED: Diagnosis Procedure INFOID:0000000007467440 1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIR-CUIT Check front power window switch (passenger side) power supply and ground circuit. M Refer to PWC-16, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 2. N NO >> Repair or replace the malfunctioning parts. 2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT Check passenger side power window motor circuit. Refer to PWC-19, "PASSENGER SIDE: Component Function Check". Is the inspection result normal? Р 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-43, "Intermittent Incident". >> GO TO 1. NO

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REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW DOES NOT OPERATE WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000007467441

1. CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT

Check rear power window switch LH serial link circuit.

Refer to PWC-37, "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-43, "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:0000000007467442

1. REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.

Refer to PWC-97, "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 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. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-20, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS > [I KOKT & KLAK WINDOW AKTI-I INCIT]	
REAR LH SIDE POWER WINDOW DOES NOT OPERATE	
WHEN POWER WINDOW MAIN SWITCH IS OPERATED	Δ
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	Е
1. CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT	
Check rear power window switch RH serial link circuit. Refer to PWC-38, "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	
	Е
Confirm the operation again. Is the result normal?	
YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".	F
NO >> GO TO 1. WHEN REAR POWER WINDOW SWITCH RH IS OPERATED	
	C
WHEN REAR POWER WINDOW SWITCH RH IS OPERATED: Diagnosis Procedure	
1.REPLACE REAR POWER WINDOW SWITCH RH	-
Replace rear power window switch RH. Refer to PWC-97, "Removal and Installation"	
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW	PV
SWITCH RH ARE OPERATED : Diagnosis Procedure	
1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT	L
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?	\mathbb{N}
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.CHECK REAR POWER WINDOW MOTOR RH	N
Check rear power window motor RH.	
Refer to PWC-21, "REAR RH: Component Function Check".	C
Is the inspection result normal? YES >> GO TO 3.	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	P
3. CONFIRM THE OPERATION	Г
Confirm the operation again.	
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007467447

1. CHECK POWER WINDOW AUTO OPERATION

Check AUTO operation when anti-pinch function does not operate.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-89, "Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY

Diagnosis Procedure

INFOID:0000000007467448

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1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to the following.

- Driver side: Refer to PWC-23, "DRIVER SIDE: Component Function Check".
- Passenger side: Refer to <u>PWC-25</u>, "PASSENGER SIDE: Component Function Check".
- Rear LH side: Refer to <u>PWC-27</u>, "<u>REAR LH</u>: <u>Component Function Check</u>".
 Rear RH side: Refer to <u>PWC-29</u>, "<u>REAR RH</u>: <u>Component Function Check</u>".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

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POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NOR-MALLY

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NORMALLY

Diagnosis Procedure

INFOID:0000000007467449

1. CHECK DOOR SWITCH

Check door switch.

Refer to <u>DLK-66</u>, "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-43. "Intermittent Incident".

NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS [FRONT & REAR WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-**DOWS**

INFOID:0000000007467450

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Diagnosis Procedure

1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

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

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

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

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

Refer to PWC-32, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description INFOID:000000007467451

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

Diagnosis Procedure

INFOID:0000000007467452

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-160, "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-84, "Diagnosis Procedure".

 ${f 3.}$ CHECK "PW DOWN SET" SETTING IN "WORK SUPPORT"

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

Refer to DLK-53, "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-43, "Intermittent Incident".

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

[FRONT & REAR WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION Α Diagnosis Procedure INFOID:0000000007467453 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. C >> Refer to PWC-97, "Removal and Installation". D Е F Н J PWC L M Ν 0

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POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:0000000007467454

1. REPLACE POWER WINDOW SWITCH

Replace power window switch.

Refer to PWC-97, "Removal and Installation".

>> INSPECTION END

PRECAUTIONS

< PRECAUTION >

[FRONT & REAR WINDOW ANTI-PINCH]

PRECAUTION

PRECAUTIONS

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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

WARNING:

Always observe the following items for preventing accidental activation.

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

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PREPARATION

[FRONT & REAR WINDOW ANTI-PINCH]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000007698220

	Tool name	Description
Remover tool	JMKIA3050ZZ	Removes the clips, pawls and metal clips

POWER WINDOW MAIN SWITCH

< REMOVAL AND INSTALLATION >

[FRONT & REAR WINDOW ANTI-PINCH]

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

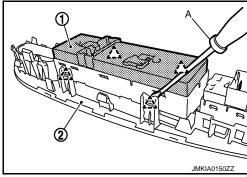
- Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- Power window main switch (1) is removed from power window main switch finisher (2) using remover tool (A).



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

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 PWC-8, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[FRONT WINDOW ANTI-PINCH]

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2. REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.

Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

4. IDENTIFY MALFUNCTIONING PARTS WITH "DTC/CIRCUIT DIAGNOSIS"

Perform the diagnosis with "DTC/CIRCUIT 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 >

[FRONT WINDOW ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

When the battery negative terminal is disconnected, the initialization is necessary.

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

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

The following specified operations can not be performed under the non-initialized condition.

- Auto-up operation
- · Anti-pinch function

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

When the control unit replaced, the initialization in necessary.

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

- Power supply to the power window main switch or power window motor is cut off by the removal
 of battery terminal or if the battery fuse is blown.
- Disconnection and connection of power window main switch harness connector.
- Removal and installation of motor from regulator assembly.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[FRONT WINDOW ANTI-PINCH]

- Disconnection and connection of battery negative terminal.
- · Removal and installation of glass.
- · Removal and installation of door glass run.

The following specified operations can not be performed under the non-initialized condition.

- Auto-up operation
- · Anti-pinch function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

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

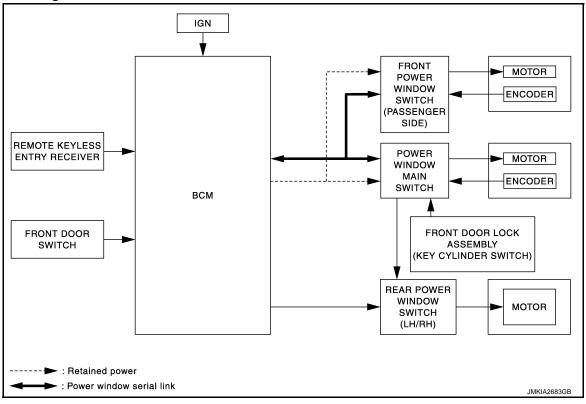
CAUTION:

- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function

SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram



System Description

INFOID:0000000007467463

- Power window system is activated by power window switch when ignition switch turns ON, or during the retained power operation after ignition switch turns OFF.
- Power window main switch opens/closes all door glass.
- Front and rear power window switch opens/closes the corresponding door glass.
- AUTO UP/DOWN operation can be performed when power window main switch or front power window switch (passenger side) turns to AUTO.
- Power window serial link transmits the signals from power window main switch to front power window switch (passenger side).
- Power window lock switch can lock all power windows other than driver seat.
- 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 (FRONT DRIVER SIDE & PASSENGER SIDE)

- AUTO UP/DOWN operation can be performed when power window main switch or front power window switch (passenger side) turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits the encoder pulse signal to power window switch while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at the fully opened/closed position.
- Power window motor is operable if encoder is malfunctioning.

RETAINED POWER OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

Retained power operation is an additional power supply function that enables power window system to operate during the 45 seconds even when ignition switch is turned OFF

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INFOID:0000000007467462

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT WINDOW ANTI-PINCH]

Retained Power Cancel Conditions

- Front door CLOSE (door switch OFF)→OPEN (door switch ON).
- When ignition switch is ON.
- When timer time passes (45 seconds).

POWER WINDOW LOCK FUNCTION

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

POWER WINDOW SERIAL LINK (FRONT DRIVER SIDE & PASSENGER SIDE)

- Power window main switch, front power window switch (passenger side), 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 and front power window switch (passenger side) module.

ANTI-PINCH OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

- Pinch foreign matter in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.9 in) or for 2 seconds when detected.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Resistance is applied to the power window motor rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Power window switch controls to lower the 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).

NOTĚ:

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 OPERATION (FRONT DRIVER SIDE & PASSENGER SIDE)

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-53, "INTELLIGENT KEY: CONSULT Function (BCM - INTELLIGENT KEY)".

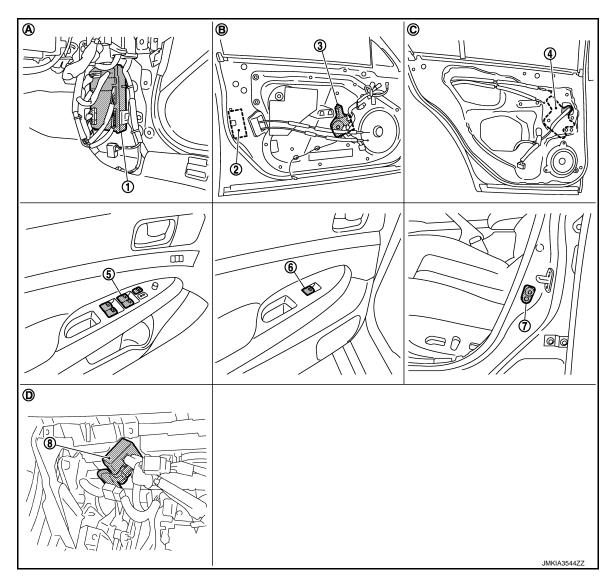
NOTE:

Use CONSULT to change settings.

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

Component Parts Location

INFOID:0000000007467464



- 1. BCM
- 4. Rear power window motor LH
- 7. Front door switch (driver side)
- A. View with dash side lower (passenger side)
- D. View with instrument lower panel (passenger side) removed
- 2. Front door lock assembly (driver side) (door key cylinder switch)
- 5. Power window main switch
- B. Remote keyless entry receiver
- $\mbox{B.} \quad \mbox{View with front door finisher removed} \quad \mbox{C.}$
- Front power window motor (driver side)
- 6. Rear power window switch LH
 - . View with rear door finisher removed

Component Description

Component	Function
BCM	Supplies power supply to power window switch.Controls retained power.
Power window main switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of power window.
Front power window switch (passenger side)	 Controls power window motor of passenger door. Controls anti-pinch operation of power window.

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POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

[FRONT WINDOW ANTI-PINCH]

Component	Function
Rear power window switch	Controls power window motor of rear right and left doors.
Front power window motor	 Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from power window main switch and front power window switch (passenger side). Transmits power window motor rotation as a pulse signal to power window switch.
Rear power window motor	Starts operating with signals from power window main switch and rear power window switch.
Front door lock assembly (key cylinder switch)	Transmits operation condition of key cylinder switch to power window main switch.
Front door switch (driver side/passenger side)	Front 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 >

[FRONT WINDOW ANTI-PINCH]

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. Refer to CONSULT operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	This function is not used even though it is displayed.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

NOTE:

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

x: Applicable item Diagnosis mode System Sub system selection item Work Support **Data Monitor** Active Test Door lock DOOR LOCK × X X REAR DEFOGGER Rear window defogger X X Warning chime **BUZZER** × × Interior room lamp timer INT LAMP × × × Exterior lamp **HEAD LAMP** × × × Wiper and washer **WIPER** × **FLASHER** Turn signal and hazard warning lamps × X AIR CONDITONER* INTELLIGENT KEY Intelligent Key system × × \times Combination switch COMB SW × Body control system **BCM** × **IVIS - NATS IMMU** \times \times Interior room lamp battery saver **BATTERY SAVER** X \times \times Trunk open **TRUNK** × Vehicle security system THEFT ALM X \times \times RAP system **RETAINED PWR** × Signal buffer system SIGNAL BUFFER X X **TPMS** TPMS (AIR PRESSURE MONITOR) × X X

FREEZE FRAME DATA (FFD) AND IGN COUNTER

Freeze Frame Data

The BCM records the following condition at the moment a particular DTC is detected.

- Vehicle Speed
- Odo/Trip Meter

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

[FRONT WINDOW ANTI-PINCH]

• Vehicle Condition (BCM detected condition)

CONSULT screen terms	Description	
SLEEP>LOCK	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK")	
SLEEP>OFF	While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
LOCK>ACC	While turning power supply position from "LOCK" to "ACC"	
ACC>ON	While turning power supply position from "ACC" to "IGN"	
RUN>ACC	While turning power supply position from "RUN" to "ACC" (Vehicle is stopping and selector lever is except P position.)	
CRANK>RUN	While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)	
RUN>URGENT	While turning power supply position from "RUN" to "ACC" (Emergency stop operation)	
ACC>OFF	While turning power supply position from "ACC" to "OFF"	
OFF>LOCK	While turning power supply position from "OFF" to "LOCK"	
OFF>ACC	While turning power supply position from "OFF" to "ACC"	
ON>CRANK	While turning power supply position from "IGN" to "CRANKING"	
OFF>SLEEP	While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode	
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is "LOCK".) to low power consumption mode	
LOCK	Power supply position is "LOCK" (Ignition switch OFF with steering is locked.)	
OFF	Power supply position is "OFF" (Ignition switch OFF with steering is unlocked.)	
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

IGN counter indicates the number of times that ignition switch is turned ON after DTC is detected.

- The number is 0 when a malfunction is detected now.
- The number increases like 1 \rightarrow 2 \rightarrow 3...38 \rightarrow 39 after returning to the normal condition whenever ignition switch OFF \rightarrow ON.
- The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.

RETAIND PWR

RETAIND PWR : CONSULT Function (BCM - RETAINED PWR)

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Data monitor

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.	

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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1. CHECK POWER SUPPLY CIRCUIT 1

- 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.

(+) Power window main switch		(-)	Voltage (V) (Approx.)	
Connector	Terminal		(Approx.)	
D8	10	Ground	12	
D9	19	Ground		

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.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 >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT 2

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- 3. 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
IVITO	3	D8	10	Existed

4. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Cround	Continuity
M118	2	Ground	Not existed
	3		Not existed

Is the inspection result normal?

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YES >> Replace BCM. Refer to BCS-80, "Exploded View".

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Refer to GI-43, "Intermittent Incident"

>> INSPECTION END

FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

INFOID:0000000007467469

1. CHECK POWER SUPPLY CIRCUIT 1

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

(+) Front power window switch (passenger side)		(-)	Voltage (V) (Approx.)
Connector Terminal			
D38	10	Ground	12

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. 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 >> GO TO 4.

NO >> Repair or replace harness.

3.CHECK POWER SUPPLY CIRCUIT $_2$

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

ВСМ		Front power window switch (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	
M118	2	D38	10	Existed

3. Check continuity between BCM harness connector and ground.

BCM			
Connector	Terminal	Ground	Continuity
M118	2		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

>> INSPECTION END

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000007467470

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1. CHECK POWER SUPPLY CIRCUIT 1

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

(+) Rear power window switch			(–)	Voltage (V) (Approx.)
Con	Connector Terminal			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
LH	D54	1	Ground	12
RH	D74	· · · · · · · · · · · · · · · · · · ·	Ground	12

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK GROUND CIRCUIT

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

Rear power window switch				Continuity	
Conr	Connector		Ground	Continuity	
LH	D54	7	Giouria	Existed	
RH	D74			Existed	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

3. CHECK POWER SUPPLY CIRCUIT 2

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

ВСМ		Re	Continuity		
Connector	Terminal	Connector		Terminal	Continuity
M118	2	LH	D54	1	Existed
IVITIO	W116 3	RH	D74	'	LXISIEU

4. Check continuity between BCM harness connector and ground.

B		Continuity	
Connector	Terminal	Ground	Continuity
M118	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

>> INSPECTION END

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

REAR POWER WINDOW SWITCH

Description INFOID:0000000007467471

BCM supplies power.

 When power window switch is operated, corresponding power window motor is activated and rear door glass moves UP/DOWN.

Component Function Check

1. CHECK REAR POWER WINDOW FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch is OK.

>> Refer to PWC-111, "Diagnosis Procedure". NO

Diagnosis Procedure

INFOID:0000000007467473

INFOID:0000000007467472

1. CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

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

Rear	(+) Rear power window switch Connector Terminal		(-) Condition			Voltage (V) (Approx.)
Conn						() 1 - /
		0			NEUTRAL	0
111	DE4	2		Power window main switch (rear LH)	UP	12
LH	LH D54	3	Ground		NEUTRAL	0
					DOWN	12
		2		Power window main switch	NEUTRAL	0
DU	RH D74				UP	12
КΠ		2		(rear RH)	NEUTRAL	0
		3			DOWN	12

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.check rear power window switch

Check rear power window switch.

Refer to PWC-112, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window switch.

3. CHECK HARNESS CONTINUITY

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

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PWC-111

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Power window main switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	Continuity
	1	LH	D54	2	Existed
De	3			3	
D8	5	DU	D74	3	
	7	RH		2	

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

Power windo	Power window main switch		Continuity	
Connector	Terminal		Continuity	
	1	Ground		
D8	3	Ground	Not existed	
	5		NOT EXISTED	
	7			

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

>> INSPECTION END

Component Inspection

INFOID:0000000007467474

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

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

Rear power window switch Terminal		- Condition	Continuity
1	5		
3	4	- UP	Existed
3	4	NEUTRAL	
5	2	NEOTIVAL	LXISIGU
1	4	DOWN	
5	2	DOWN	

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch.

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000007467475

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

DRIVER SIDE: Component Function Check

INFOID:0000000007467476

1. CHECK FRONT POWER WINDOW MOTOR (DRIVER SIEDE) CIRCUIT

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

Is the inspection result normal?

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

NO >> Refer to PWC-113, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:0000000007467477

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

Turn ignition switch OFF.

- 2. Disconnect front power window motor (driver side) connector.
- 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. 3/11)
D10 -	2	- Ground	Power window main switch	NEUTRAL	0
				DOWN	12
				NEUTRAL	0
				UP	12

Is the inspection result normal?

YES >> Replace front power window motor (driver side).

NO >> GO TO 2.

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

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 window main switch		Front power window	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
D8	8	D10	2	Existed
D 0	11	D10	1	Existed

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		INOL EXISTED	

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness. **PWC**

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PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000007467478

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

INFOID:0000000007467479

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

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

NO >> Refer to PWC-114, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007467480

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

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

(+) Front power window motor (passenger side)		(-)	Condition		Voltage (V)	
Connector Terminal					(Approx.)	
	2	Ground	Front power window switch (passenger side)	NEUTRAL	0	
D40				UP	12	
D40				NEUTRAL	0	
				DOWN	12	

Is the inspection result normal?

YES >> Replace front power window motor (passenger side).

NO >> GO TO 2.

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

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

Front power window s	switch (passenger side)	Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector Terminal		Continuity
D38	8	D40	2	Existed
D36	9	540	1	LAISIEU

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).

NO >> Repair or replace harness.

REAR LH

REAR LH: Description

INFOID:0000000007467481

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

REAR LH: Component Function Check

INFOID:0000000007467482

1. CHECK REAR POWER WINDOW MOTOR LH CURCUIT

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

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-115, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

INFOID:0000000007467483

1. CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+) Rear power window motor LH		(–)	Condition		Voltage (V) (Approx.)
Connector	Terminal				(44)
	1			NEUTRAL	0
D52	I	0	Poor nower window awitch I H	UP	12
D52	Ground	Rear power window switch LH	NEUTRAL	0	
	3			DOWN	12

Is the inspection result normal?

YES >> Replace rear power window motor LH.

NO >> GO TO 2.

2.CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

- 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
D54	5	D52	1	Existed
504	4	D32	3	Existed

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

Rear power window switch LH			Continuity
Connector	Terminal	Ground	Continuity
D54	5	Giodila	Not existed
D34	4		Not existed

Is the inspection result normal?

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

YES >> Replace rear power window switch LH.

NO >> Repair or replace harness.

REAR RH

REAR RH: Description

INFOID:0000000007467484

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:0000000007467485

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

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

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Refer to <u>PWC-116</u>, "<u>REAR RH</u>: <u>Diagnosis Procedure</u>".

REAR RH: Diagnosis Procedure

INFOID:0000000007467486

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

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

(+) Rear power window motor RH		(–)	(–) Condition		Voltage (V) (Approx.)
Connector	Terminal			(* (* (* (* (* (* (* (* (* (* (* (* (* (
	1		Door on weight of the DIL	NEUTRAL	0
D72		Crawad		UP	12
	Ground	Rear power window switch RH	NEUTRAL	0	
	3			DOWN	12

Is the inspection result normal?

YES >> Replace rear power window motor RH.

NO >> GO TO 2.

2.check rear power window motor rh circuit

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

Rear power wi	ndow switch RH	Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D74	5	D72	1	Existed
574	4	DIZ	3	LXISIGU

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

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

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

YES >> Replace rear power window switch RH.

NO >> Repair or replace harness.

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ENCODER

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000007467487

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:0000000007467488

1. CHECK ENCODER

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

Is the inspection result normal?

YES >> Encoder is OK.

NO >> Refer to <u>PWC-118</u>, "<u>DRIVER SIDE</u>: <u>Diagnosis Procedure</u>".

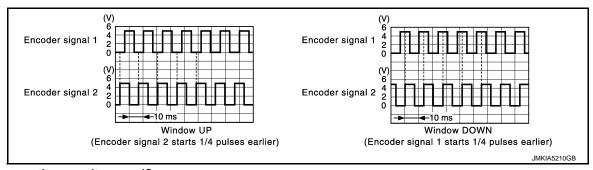
DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007467489

1. CHECK ENCODER SIGNAL

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

(+) Power window main switch		(-)	Signal (Reference value)	
Connector	Terminal		()	
	9	Ground	Poter to following signal	
Do	13	- Ground	Refer to following signal	



Is the inspection result normal?

YES >> Replace power window main switch.

NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

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

Power windo	w main switch	Front power window motor (driver side)		Continuity
Connector	Terminal	Connector	Terminal	
D8	9	D10	3	Existed
	13	510	5	LAISIEU

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

[FRONT WINDOW ANTI-PINCH]

Power window main switch			Continuity
Connector	Terminal	— Continuity Ground	Continuity
	9	Ground	Not existed
Do	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.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor (driver side) harness connector and ground.

(+) Front power window motor (driver side)		(–)	Voltage (V) (Approx.)
Connector	Terminal	. ,	(Approx.)
D10	4	Ground	12

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

Power windo	wer window main switch Front power window motor (driver side)		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 windo	Power window main switch		Continuity
Connector	Terminal	Ground	Continuity
D8	15		Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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

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

Is the inspection result normal?

YES >> GO TO 6.

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NO >> Repair or replace harness.

6.CHECK GROUND CIRCUIT 2

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< DTC/CIRCUIT DIAGNOSIS >

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

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

Is the inspection result normal?

YES >> Replace front power window motor (driver side).

NO >> Replace power window main switch.

PASSENGER SIDE

PASSENGER SIDE: Description

INFOID:0000000007467490

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

PASSENGER SIDE: Component Function Check

INFOID:0000000007467491

1.CHECK ENCODER

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

Is the inspection result normal?

YES >> Encoder is OK.

NO >> Refer to PWC-120, "PASSENGER SIDE : Diagnosis Procedure".

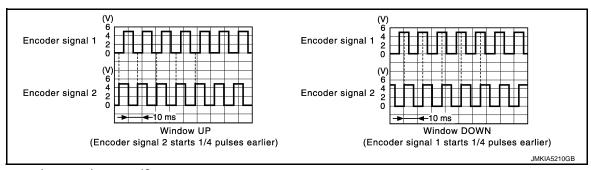
PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007467492

1.CHECK ENCODER SIGNAL

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

(+) Front power window switch (passenger side)		(-)	Signal (Reference value)
Connector	Terminal		(1.0.0.0.00
D38	12	Ground	Refer to following signal
D30	15	Giodila	Refer to following Signal



Is the inspection result normal?

YES >> Replace front power window switch (passenger side).

NO >> GO TO 2.

2.CHECK ENCORDER SIGNAL CIRCUIT

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

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[FRONT WINDOW ANTI-PINCH]

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
	15	540	3	LAISIGU

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

Front power windows	Front power window switch (passenger side)		Continuity
Connector	Terminal	Ground	Continuity
D38	12	Giouna	Not existed
D30	15		Not existed

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK ENCORDER POWER SUPPLY CIRCUIT 1

- 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.

(+) Front power window motor (passenger side)		(-)	Voltage (V) (Approx.)	
Connector	Terminal		(, , , , , , , , , , , , , , , , , , , 	
D40	4	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

Front power window s	switch (passenger side)	Front power window motor (passenger side)		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 s	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).

NO >> Repair or replace harness.

5. CHECK GROUND CIRCUIT 1

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

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[FRONT WINDOW ANTI-PINCH]

Front power window s	ower window switch (passenger side) Front power window motor (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. Turn ignition switch OFF.

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

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

Is the inspection result normal?

YES >> Replace front power window motor (passenger side).

NO >> Replace front power window switch (passenger side).

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

DOOR KEY CYLINDER SWITCH

Description INFOID:000000007467493

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

Component Function Check

INFOID:0000000007467494

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1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

Check ("KEY CYL LK-SW", "KEY CYL UN-SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to DLK-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Door key cylinder switch is OK.

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

Diagnosis Procedure

INFOID:0000000007467495

1. CHECK DOOR KEY CYLINDER SWITCH SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) (key cylinder switch) connect.
- 3. Turn ignition switch ON.
- Check voltage between front door lock assembly (driver side) (key cylinder switch) harness connector and ground.

(+)			
Front door lock assembly (driver side) (key cylinder switch)		(–)	Voltage (V) (Approx.)
Connector	Terminal		
D15	5 6	Ground	5

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH CIRCUIT

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

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

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

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DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

INFOID:0000000007467496

Power window main switch			Continuity
Connector	Terminal	Ground	Continuity
D8	4	Giouria	Not existed
D6	6		Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

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

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

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

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

4. CHECK DOOR KEY CYLINDER SWITCH

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

Refer to PWC-124, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace front door lock assembly (driver side) (key cylinder switch).

5. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident".

>> INSPECTION END

Component Inspection COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect front door lock assembly (driver side) (key cylinder switch) connector.
- 3. Check front door lock assembly (driver side) (key cylinder switch) terminals under the following conditions.

(key cyline	sembly (driver side) der switch) minal	Key position	Continuity
		Unlock	Existed
5	5	Neutral / Lock	Not existed
6	4	Lock	Existed
		Neutral / Unlock	Not existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace front door lock assembly (driver side) (key cylinder switch).

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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

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

Keyless power window down signal

The signals mentioned below are 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:0000000007467498

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(III) With CONSULT

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to DLK-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
CDE LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
CDE UNLOCK 3W	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-125, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007467499

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

Power window Connector	main switch Terminal	(-)	Signal (Reference value)
D8	14	Ground	(V) 15 10 5 0 10 ms JPMIA0013GB

Is the inspection result normal?

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

2. CHECK POWER WINDOW SERIAL LINK SIGNAL

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POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

(+) Power window main switch		(-)	Voltage (V) (Approx.)
Connector	Terminal		(11 -)
D8	14	Ground	12

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> GO TO 3.

3. CHECK POWER WINDOW SERIAL LINK CIRCUIT

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

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

3. Check continuity between BCM harness connector and ground.

BCM			Continuity
Connector	Terminal	Ground	Continuity
M123	132		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Exploded View".

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-43, "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 and front power window switch (passenger side).

Keyless power window down signal

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

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

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

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(P) With CONSULT

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to DLK-51, "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
CDE UNEOCK SW	UNLOCK	: ON

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-127</u>, "FRONT <u>POWER WINDOW SWITCH (PASSENGER SIDE)</u>: <u>Diagnosis Procedure"</u>.

FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure

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1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

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

(+) Front power window sw Connector	Front power window switch (passenger side)		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).

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

1. Disconnect power window main switch connector.

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

Power windo	Power window main switch Front power window switch (passenger side)		Front power window switch (passenger side)	
Connector	Terminal	Connector	Terminal	Continuity
D8	14	D38	16	Existed

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

Power windo	w main switch		Continuity
Connector	Connector Terminal		Continuity
D8 14			Not existed

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

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ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status		
FR WIPER HI	Other than front wiper switch HI	Off		
FR WIPER III	Front wiper switch HI	On		
ED WIDER LOW	Other than front wiper switch LO	Off		
FR WIPER LOW	Front wiper switch LO	On		
FR WASHER SW	Front washer switch OFF	Off		
FR WASHER SW	Front washer switch ON	On		
ED WIDED INT	Other than front wiper switch INT/AUTO	Off		
FR WIPER INT	Front wiper switch INT/AUTO	On		
ED WIDED STOD	Front wiper is not in STOP position	Off		
FR WIFER STOP	Front wiper is in STOP position	On		
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial pos tion		
TURN SIGNAL R TURN SIGNAL L TAIL LAMP SW	Other than turn signal switch RH	Off		
TURN SIGNAL R	Turn signal switch RH	On		
TUDNI CIONIAL I	Other than turn signal switch LH	Off		
TURN SIGNAL L	Turn signal switch LH	On		
TAIL LAMP SW	Other than lighting switch 1ST and 2ND	Off		
TAIL LAMP SW	Lighting switch 1ST or 2ND	On		
HI BEAM SW	Other than lighting switch HI	Off		
	Lighting switch HI	On		
HEAD LAMP SW/1	Other than lighting switch 2ND	Off		
HEAD LAIMP SW 1	Lighting switch 2ND	On		
HEAD LAMP SW 1	Other than lighting switch 2ND	Off		
HEAD LAIVIF SW 2	Lighting switch 2ND	On		
DASSING SW	Other than lighting switch PASS	Off		
PASSING SW	Lighting switch PASS	On		
TURN SIGNAL R TURN SIGNAL L TAIL LAMP SW HI BEAM SW HEAD LAMP SW 1 HEAD LAMP SW 2 PASSING SW AUTO LIGHT SW FR FOG SW	Other than lighting switch AUTO	Off		
AUTO LIGITI SW	Lighting switch AUTO	On		
ED EOG SW	Front fog lamp switch OFF	Off		
FR FOG SW	Front fog lamp switch ON	On		
RR FOG SW	FOG SW NOTE: The item is indicated, but not monitored.			
DOOD OW DD	Driver door closed	Off		
DOOK 3W-DK	Driver door opened	On		
DOOD SW AS	Passenger door closed	Off		
DOOK 2M-92	Passenger door opened	On		
DOOD CW DD	Rear RH door closed	Off		
DOOK 2M-KK	Rear LH door opened	On		

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	Off
OOK 3W-KL	Rear LH door opened	On
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off
DL LOCK SW	Other than power door lock switch LOCK	Off
DL LOCK SW	Power door lock switch LOCK	On
DL UNLOCK SW	Other than power door lock switch UNLOCK	Off
DE UNLOCK 3W	Power door lock switch UNLOCK	On
EY CYL LK-SW	Other than driver door key cylinder LOCK	Off
ET CTL LK-SW	Driver door key cylinder LOCK	On
TEV CVI LINI CW	Other than driver door key cylinder UNLOCK	Off
EY CYL UN-SW	Driver door key cylinder LOCK	On
EY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
AZARD SW	Hazard switch is OFF	Off
MEMIND OW	On	
EAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
TR CANCEL SW	Trunk lid opener cancel switch OFF	Off
R CANCEL SVV	Trunk lid opener cancel switch ON	On
R/BD OPEN SW	Trunk lid opener switch OFF	Off
R/BD OPEN SW	While the trunk lid opener switch is turned ON	On
DNIZ/LIAT MAITD	Trunk lid closed	Off
RNK/HAT MNTR	Trunk lid opened	On
EVERSE SW	NOTE: The item is indicated, but not monitored.	Off
WE LOOK	LOCK button of the Intelligent Key is not pressed	Off
KE-LOCK	LOCK button of the Intelligent Key is pressed	On
RKE-LOCK	UNLOCK button of the Intelligent Key is not pressed	Off
KE-UNLOCK	UNLOCK button of the Intelligent Key is pressed	On
KE TD/DD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
KE-TR/BD	TRUNK OPEN button of the Intelligent Key is pressed	On
VE DANIC	PANIC button of the Intelligent Key is not pressed	Off
KE-PANIC	PANIC button of the Intelligent Key is pressed	On
KE DAW ODEN	UNLOCK button of the Intelligent Key is not pressed	Off
KE-P/W OPEN	UNLOCK button of the Intelligent Key is pressed and held	On
KE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simultaneously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
ADTICAL SENSOR	Bright outside of the vehicle	Close to 5 V
PTICAL SENSOR	Dark outside of the vehicle	Close to 0 V
FO CW DD	Driver door request switch is not pressed	Off
EQ SW -DR	Driver door request switch is pressed	On
NEO OM AO	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On

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Monitor Item	Condition	Value/Status
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 -BD/TD	Trunk lid opener request switch is not pressed	Off
REQ 3W -BD/TR	Trunk lid opener request switch is pressed	On
DUCH CW	RR NOTE: The item is indicated, but not monitored. RL NOTE: The item is indicated, but not monitored. BD/TR Trunk lid opener request switch is not pressed Trunk lid opener request switch is pressed Push-button ignition switch (push switch) is not pressed Push-button ignition switch (push switch) is pressed Push-button ignition switch (push switch) is pressed Push-button ignition switch (push switch) is pressed NOTE: The item is indicated, but not monitored. NOTE: The item is indicated, but not monitored. W The clutch pedal is not depressed The clutch pedal is not depressed The brake pedal is depressed when No. 7 fuse is blown The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is not mal W The brake pedal is not depressed (M/T models) The brake pedal is not depressed (M/T models) Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) Selector lever in any position other than P and N Selector lever in any position NOTE: The item is indicated, but not monitored. Push-button ignition switch (push-switch) is not pressed Push-button ignition switch (push-switch) is pressed Ignition switch in OFF or ACC position Ignition switch in OF position Selector lever in any position other than P and N (Except M/T models) Selector lever in any position other than P	
703H 3W	Push-button ignition switch (push switch) is pressed	On
GN RLY2 -F/B		Off
ACC RLY -F/B		Off
STITICH SW	The clutch pedal is not depressed	Off
OLUUM SVV	The clutch pedal is depressed	On
	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
SKAKE SW 2	The brake pedal is depressed	On
DETE (OANOL OW		Off
DETE/CANCL SW		On
25T DN//N 01M	Selector lever in any position other than P and N	Off
SET PN/N SW	Selector lever in P or N position	On
S/L -LOCK		Off
S/L -UNLOCK		Off
S/L RELAY-F/B		Off
INII Z CENL DD	Driver door is unlocked	Off
JNLK SEN -DR	Driver door is locked	On
EQ SW -BD/TR USH SW GN RLY2 -F/B CC RLY -F/B ELUCH SW RAKE SW 1 RAKE SW 2 ETE/CANCL SW FT PN/N SW /L -LOCK /L -UNLOCK	Push-button ignition switch (push-switch) is not pressed	Off
-USH SVV -IPUIVI	Push-button ignition switch (push-switch) is pressed	On
CN DLV4 E/D	Ignition switch in OFF or ACC position	Off
GIN KLT I -F/B	Ignition switch in ON position	On
DETE OW IDDM	Selector lever in any position other than P	Off
DE LE 200 -ILDIM	Selector lever in P position	On
SET DN IDDM	 Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models) 	Off
OF I FIN -IMUIVI	 Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) 	On
OFT D. MET	Selector lever in any position other than P	Off
DELP-MEI	Selector lever in P position	On
	Selector lever in any position other than N	Off
SELN-MET	Selector lever in N position	On

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Monitor Item	Condition	Value/Status
	Engine stopped	Stop
ENGINE STATE	While the engine stalls	Stall
ENGINE 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 (60 seconds)	READY
	Driver door is unlocked	UNLOCK
	Passenger door is locked	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (60 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
DOME THE STOR	The engine start is prohibited	Reset
PRMT ENG STRT	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY OM OLOT	The Intelligent Key is not inserted into key slot	Off
KEY SW -SLOT	The Intelligent Key is inserted into key slot	On
RKE OPE COUN1	During the operation of the Intelligent Key	Operation frequency of the Intelligent Key
RKE OPE COUN2	NOTE: The item is indicated, but not monitored.	_
CONFRM ID ALL	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
CONFRINTID ALL	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONEIDM IDA	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
CONFIRM ID4	The key ID that the key slot receives is recognized by the fourth key ID registered to BCM.	Done
CONEIDM ID2	The key ID that the key slot receives is not recognized by the third key ID registered to BCM.	Yet
CONFIRM ID3	The key ID that the key slot receives is recognized by the third key ID registered to BCM.	Done
CONEIDM ID2	The key ID that the key slot receives is not recognized by the second key ID registered to BCM.	Yet
CONFIRM ID2	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID1	The key ID that the key slot receives is not recognized by the first key ID registered to BCM.	Yet
CONFINITION	The key ID that the key slot receives is recognized by the first key ID registered to BCM.	Done
TP 4	The ID of fourth Intelligent Key is not registered to BCM	Yet
17 4	The ID of fourth Intelligent Key is registered to BCM	Done
TP 3	The ID of third Intelligent Key is not registered to BCM	Yet
IF 3	The ID of third Intelligent Key is registered to BCM	Done
TP 2	The ID of second Intelligent Key is not registered to BCM	Yet
IF Z	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
IFI	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID DECCT ELA	ID of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
ID DECCT ED4	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
ID DECCE DD4	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
ID DECCT DL4	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
MARNING LAMP	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
BUZZER	Tire pressure warning alarm is not sounding	Off
DUZZEN	Tire pressure warning alarm is sounding	On

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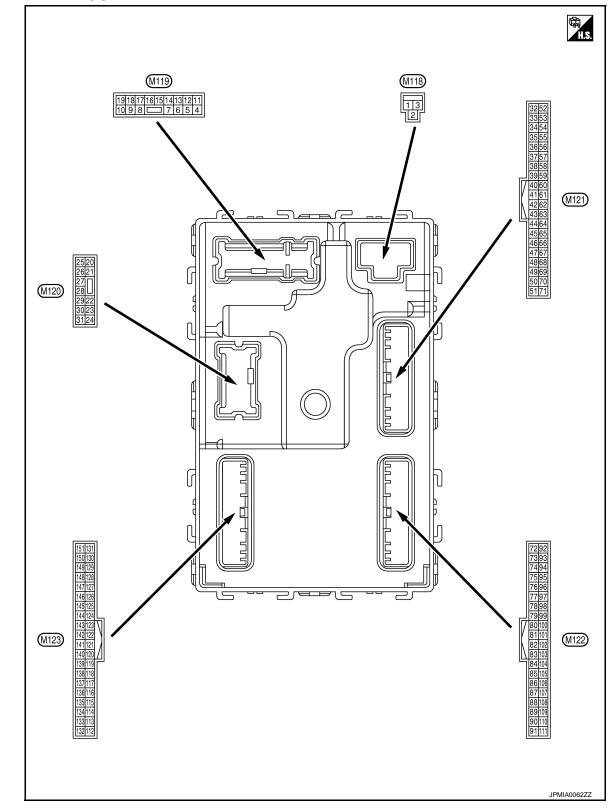
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TERMINAL LAYOUT



PHYSICAL VALUES

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	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch (OFF	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch (OFF	12 V
3 (BG)	Ground	P/W power supply (RAP)	Output	Ignition switch ON		12 V
					np battery saver is activated. r room lamp power supply)	0 V
4 (LG)	Ground	Interior room lamp power supply	Output	vated.	mp battery saver is not acti- erior room lamp power sup-	12 V
5	Ground	Passenger door UN-	Output	Passenger	UNLOCK (Actuator is activated)	12 V
(P)	Ground	LOCK	Output	door	Other than UNLOCK) Actuator is not activated	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(SB)	Cround	Grop lamp	Output	Otop ramp	OFF	12 V
8	Ground	All doors, fuel lid	Output All doors, fuel lid	LOCK (Actuator is activated)	12 V	
(V)	Cround	LOCK		lid	Other than LOCK (Actuator is not activated)	0 V
9	Ground	Driver door, fuel lid	Output Driver door,	UNLOCK (Actuator is activated)	12 V	
(G)	0.000	UNLOCK	o a.p a.	fuel lid	Other than UNLOCK (Actuator is not activated)	0 V
10	Ground	Rear RH door and rear LH door UN-	Output	Rear RH door and rear LH	UNLOCK (Actuator is activated)	12 V
(P)		LOCK		door	Other than UNLOCK (Actuator is not activated)	0 V
11 (R)	Ground	Battery power supply	Input	Ignition switch (DFF	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch (NO	0 V
14* ¹ (W)	Ground	_	_		_	_
15 (BG)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(50)					ACC	0 V
					Turn signal switch OFF	0 V
17 (W)	Ground	Turn signal RH (Front)	Output	Ignition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s
						6.5 V

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

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	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					Turn signal switch OFF	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	Ground	Interior room lamp	Output	Interior room	OFF	12 V
(V)	0.00	control	- Carpar	lamp	ON	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	Ground	Trunk lid open	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	12 V
(LG)	Cround	Traine na opon	Output	Trank na	Other than OPEN (Trunk lid opener actuator is not activated)	0 V
					Turn signal switch OFF	0 V
25 (Y)	Ground	Turn signal LH (Rear)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
30	Ground	Trunk room lamp	Output	Trunk room	ON	0 V
(P)	Giouria	типк тоотп атпр	Output	lamp	OFF	12 V

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	nal No.	Description	ı	O an disting		Value	
+	color)	Signal name	Input/ Output		Condition	(Approx.)	
34	Ground	Trunk room antenna		Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 11 1 s JMKIA0062GB	
(SB)	Glound	(-)	Output		When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
35	Ground	Trunk room antenna		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
(V)	Ground (+) Output OFF	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB			
38	Ground	Rear bumper anten-	Qutout	When the trunk lid opener request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(B)	Ground	na (–)	Cutput		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			Condition	Value								
+	_	Signal name	Input/ Output		Condition	(Approx.)								
39		Rear bumper anten-		When the trunk lid opener re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB								
(W)	Ground	na (+)	Output	quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB								
47 (Y)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	12 V 0 V								
50 (BG)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (Trunk lid is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB								
					ON (Trunk lid is opened)	0 V								
		Starter relay control	Starter relay control	Starter relay control	Starter relay control Ou				Ignition switch ON (A/T mod-	When selector lever is in P or N position	12 V	ŀ		
52													els)	When selector lever is not in P or N position
(R)	Ground					Output -	Ignition switch	When the clutch pedal is depressed	Battery voltage					
				ON (M/T mod- els)	When the clutch pedal is not depressed	0 V								
60	C=2:::===1	Push-button ignition	lmm::4	Push-button ig-	Pressed	0 V								
(BR)	Ground	switch (Push switch)	Input	nition switch (push switch)	Not pressed	Battery voltage								
					ON (Pressed)	0 V								
61 (SB)	Ground	Trunk lid opener request switch	Input	Trunk lid open- er request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB								
		Intelligent Key warn-		Intelligent Key	Sounding	1.0 V 0 V								
64 (G)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	12 V								

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value
+ (vvire	–	Signal name	Input/ Output		Condition	(Approx.)
73	Crowd	Room antenna 2 (+)	Outout	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)	Ground	(Center console)	Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB
74	2	Passenger door antenna (-)	Output	When the passenger door request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(SB)	Ground				When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
75	Ground	Passenger door antenna (+) Output		When the passenger door re-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)	Glound		quest switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Terminal No. (Wire color)		Description	Description			Value	
+	-	Signal name	Input/ Output		Condition	(Approx.)	
79 (BR) Gro		Room antenna 1 (+) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
	Ground				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
80 (GR)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
81 (W)	Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
82 (SB)	Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC	0 V 12 V	
83 (Y) Groun	Ground	Remote keyless entry receiver communication	Input/ Output	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB	
	Giodila			When operating gent Key	geither button on the Intelli-	(V) 15 10 5 0 1 ms JMKIA0065GB	

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< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+	color)	Signal name	Input/ Output	Condition		(Approx.)
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
87 (Y)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB
					Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 6 Wiper volume dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

	nal No.	Description		0 111		Value	Λ
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)	Α
		Combination switch INPUT 3	Input	Combination switch	All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	ВС
88	Ground				Lighting switch HI (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB	E F
(BG)	Clound				Lighting switch 2ND (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	G H I
					Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB	PWC
90 (P)	Ground	CAN-L	Input/ Output		_	_	
91 (L)	Ground	CAN-H	Input/ Output		_	_	M
92 (LG)	Ground	Key slot illumination	Output	Key slot illumination	OFF Blinking ON	12 V (V) 15 10 5 0 JPMIA0015GB 6.5 V 0 V	N O P
93 (GR)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage	
(GK)		·			ON	0 V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
95	Ground	ACC relay control	Output	Ignition switch	OFF	0 V
(BG)	Ground	Acc relay control	Output	ignition switch	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (Detention switch) power supply	Output		-	12 V
		Selector lever P position switch (A/T models)		Selector lever	P position	0 V
				Selector lever	Any position other than P	12 V
99		ASCD clutch switch (M/T models without ICC)		ASCD clutch	OFF (Clutch pedal is depressed)	0 V
(R)* ² (BR)* ³	Ground		Input	switch	ON (Clutch pedal is not depressed)	12 V
		ICC clutch switch (M/ T models with ICC)		ICC clutch switch	OFF (Clutch pedal is depressed)	0 V
					ON (Clutch pedal is not depressed)	12 V
					ON (Pressed)	0 V
100 (Y)	Ground	Passenger door request switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0 V
-					ON (Pressed)	0 V
101 (P)	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	Cround	Blower fan motor re- lay control	Output	Ignition switch	OFF or ACC	0 V
(BG)	Ground				ON	12 V
103 (P)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch (12 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. Description (Wire color)					Value	
+ (Wire o	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
					Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
107 (LG)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper volume dial 4)	Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
+ (Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB 1.4 V
108	Ground	Combination switch	Input	Combination	Lighting switch AUTO (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3 V
(R)		INPUT 4		switch	Lighting switch 1ST (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6	(V) 15 10 5 0 2 ms JPMIA0039GB 1.3 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description	1			Value
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
					Lighting switch PASS	(V) 15 10 5 0 2 ms JPMIA0037GB
109 (W)	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper volume dial 4)	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3 V
					Front wiper switch INT/ AUTO	(V) 15 10 5 0 2 ms JPMIA0038GB
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3 V
					ON	0 V
110 (G)	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V

< ECU DIAGNOSIS INFORMATION >

		Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	Value (Approx.)
112 (R)	Ground	Rain sensor serial link	Input/ Output	Ignition switch (DN	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1
113	Cround	Ontical concer	Innut	Ignition switch	When bright outside of the vehicle	Close to 5 V
(BG)	Ground Rain sensor link Ground Optical sensor link Ground Clutch interlessitch Ground Stop lamp ser (Without ICC) Stop lamp ser (Without ICC) Ground Front door losembly drive (Unlock sensor) Ground Key slot switch	Optical sensor	Input	ON	When dark outside of the vehicle	Close to 0 V
114	Ground	Clutch interlock	Input	Clutchinterlock	OFF (Clutch pedal is not depressed)	0 V
(R)	Ground	switch	прис	switch	ON (Clutch pedal is depressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage
		Stop lamp switch 2		Stop lamp	OFF (Brake pedal is not depressed)	0 V
118	Ground	(Without ICC)	Input	switch	ON (Brake pedal is depressed)	Battery voltage
118 (BR)	Giouna	Stop lamp switch 2	Input			0 V
		(With ICC)		Stop lamp switch ON (Brake pedal is depressed) or ICC brake hold relay ON		Battery voltage
119 (SB)	Ground	Front door lock assembly driver side (Unlock sensor)	Input	LOCK status (Unlock sensor switch OFF) Driver door		(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V
					UNLOCK status (Unlock switch sensor ON)	0 V
121	Ground	Key slot switch	Input	When the Intellig	gent Key is inserted into key	12 V
(SB)	Sibulia	rtoy siot switch	Прис	When the Intelli- key slot	gent Key is not inserted into	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(V)	Cisana	. ST. 100abaok	put	.g.m.o.r ownor	witch ON When bright outside of the vehicle When dark outside of the vehicle OFF (Clutch pedal is not depressed) ON (Clutch pedal is depressed) ON (Brake pedal is not depressed) P switch OFF (Brake pedal is not depressed) D switch OFF (Brake pedal is not depressed) D switch ON (Brake pedal is depressed) LOCK status (Unlock sensor switch OFF) UNLOCK status (Unlock sensor switch OFF) UNLOCK status (Unlock sensor switch OFF) I to the little sensor on the little sensor on on on other sensor on other sensor on on other sensor on on other sensor other sensor on other sensor on other sensor o	Battery voltage

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB
				Passenger door switch Trunk lid opener cancel switch Ignition switch Ignition switch of lumination Push-button ignition switch illumination tott lock indicator lamp Ignition switch of lumination tott lignition switch of lumination	ON (Door open)	0 V
129 (BG)	Ground	Trunk lid opener can- cel switch	Input		CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1 V
					ON	0 V
132 (V)	Ground	Power window switch communication	Input/ Output	Ignition switch C	DN	(V) 15 10 5 0 10 ms JPMIA0013GB
			Output		OFF or ACC	12 V
133	Ground	Push-button ignition	Output	Push-button ig-	ON (Tail lamps OFF)	9.5 V
(L)	Ground	switch illumination	Input er cancel switch Input/ Output Ignition switch Ignition switch Output Push-button ignition switch illumination Double Output LOCK indicato lamp Input Ignition switch	OFF	0 V	
134	Ground	LOCK indicator lamp	Output	LOCKindicator	OFF	Battery voltage
(LG)			1	ıamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch C	ON	0 V
138	Ground	Receiver and sensor	Output	lanition switch	OFF	0 V
(V)	Ciodila	power supply	Caiput	Input door switch ON (Door open) Trunk lid opener cancel switch ON ON Input/ Output Ignition switch OFF or ACC Push-button ignition switch illumination Output LOCK indicator lamp Input Ignition switch ON OFF ON Input Ignition switch ON	5.0 V	

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	nal No.	Description				Value	
+ (VVire	color)	Signal name	Input/ Output		Condition	(Approx.)	
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 4 2 0 + 0.2s	
(L)	Glound	er communication	Output ON Input Selector lever Output Security indicator lamp	When receiving the signal from the transmitter	(V) 6 4 2 0 • 0.2s		
140	Ground	Selector lever P/N	Innut	Selector lever	P or N position	12 V	
(B)	Ground	position	mput	Ociector level	Except P and N positions	0 V	
					ON	0 V	
141 (W)	Ground	Security indicator lamp	Output Security indicator lamp Combination switch (Wiper volume			Blinking	(V) 15 10 5 0 JPMIA0014GB 11.3 V
				OFF	12 V		
142 (BR)	Ground	Combination switch OUTPUT 5	Output	switch	All switches OFF Lighting switch 1ST Lighting switch HI Lighting switch 2ND	0 V	
				dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	
					All switches OFF (Wiper volume dial 4) Front wiper switch HI	0 V	
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	(Wiper volume dial 4) Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 2 Wiper volume dial 3 Wiper volume dial 6 Wiper volume dial 7	(V) 15 10 2 ms JPMIA0032GB	

< ECU DIAGNOSIS INFORMATION >

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	nal No.	Description				Value
+ (vvire	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper volume dial 4)	0 V
					Front washer switch ON (Wiper volume dial 4)	(V)
144 (G)	Ground	Combination switch OUTPUT 2	Output	Combination switch	Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6	10 5 0 JPMIA0033GB 10.7 V
					All switches OFF	0 V
				.	Front wiper switch INT/ AUTO	(V)
145	0	Combination switch OUTPUT 3	Output	Combination switch (Wiper volume dial 4)	Front wiper switch LO	15
(L)	Ground				Lighting switch AUTO	2 ms JPMIA0034GB
				Combination	All switches OFF	0 V
					Front fog lamp switch ON	
					Lighting switch 2ND	(V) 15
146 (SB)	Ground Combination sw OUTPUT 4	Combination switch OUTPUT 4	Output	switch (Wiper volume dial 4)	Lighting switch PASS Turn signal switch LH	10 5 0 2 ms
		Ground Combination switch Output Switch (Wipe				10.7 V
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
151	Ground	Rear window defog-	Output	Rear window	Active	0 V
(G)	2.300	ger relay control		defogger	(Wiper volume dial 4) Front washer switch ON (Wiper volume dial 4) Any of the conditions below with all switches OFF Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6 All switches OFF Front wiper switch INT/AUTO Front wiper switch LO Lighting switch AUTO Lighting switch 2ND Lighting switch PASS Turn signal switch LH OFF (Door close) ON (Door open)	Battery voltage

^{• *1:} This harness is not used.

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Revision: 2013 February PWC-151 2012 G Sedan

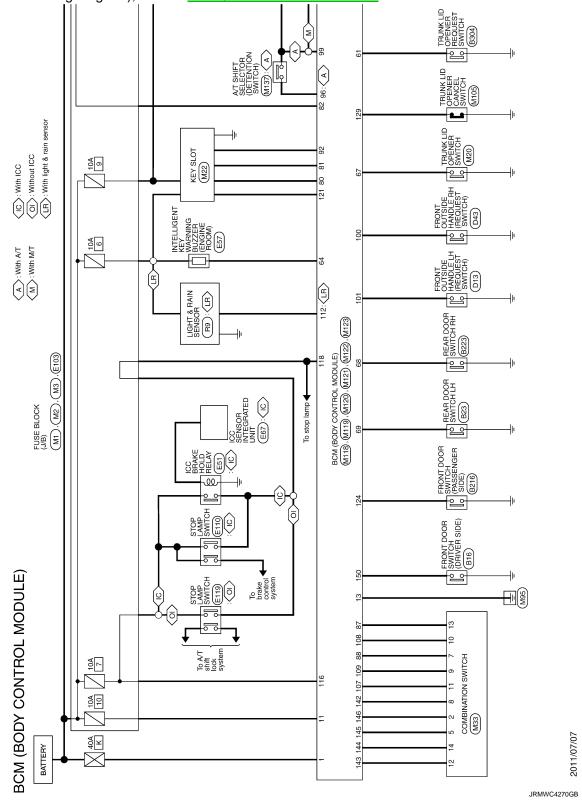
^{• *2:} A/T models

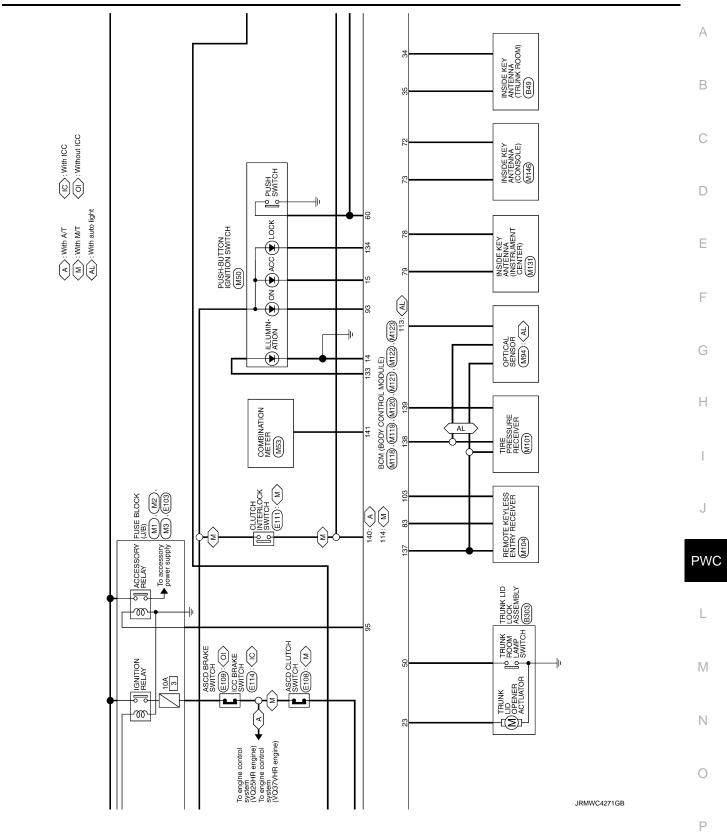
^{• *3:} M/T models

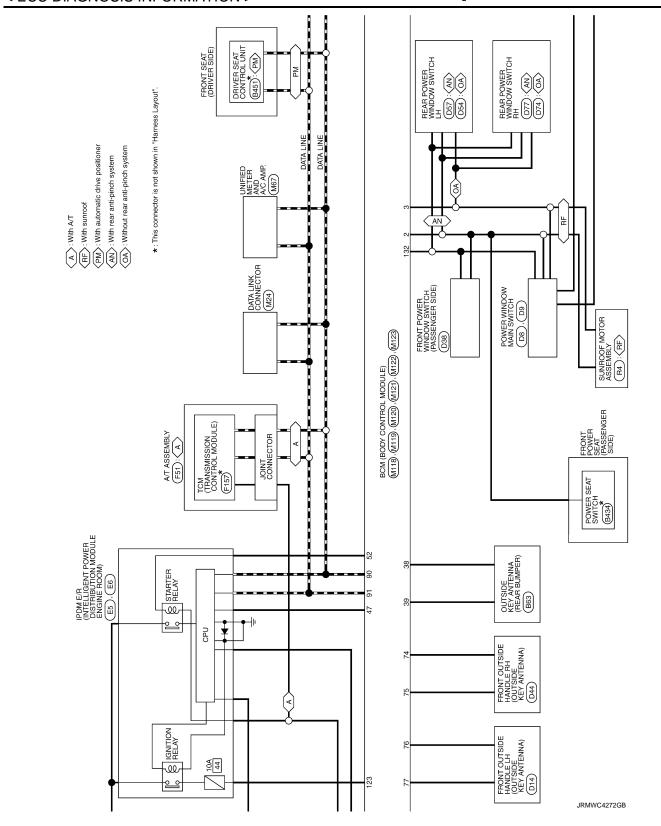
Wiring Diagram - BCM -

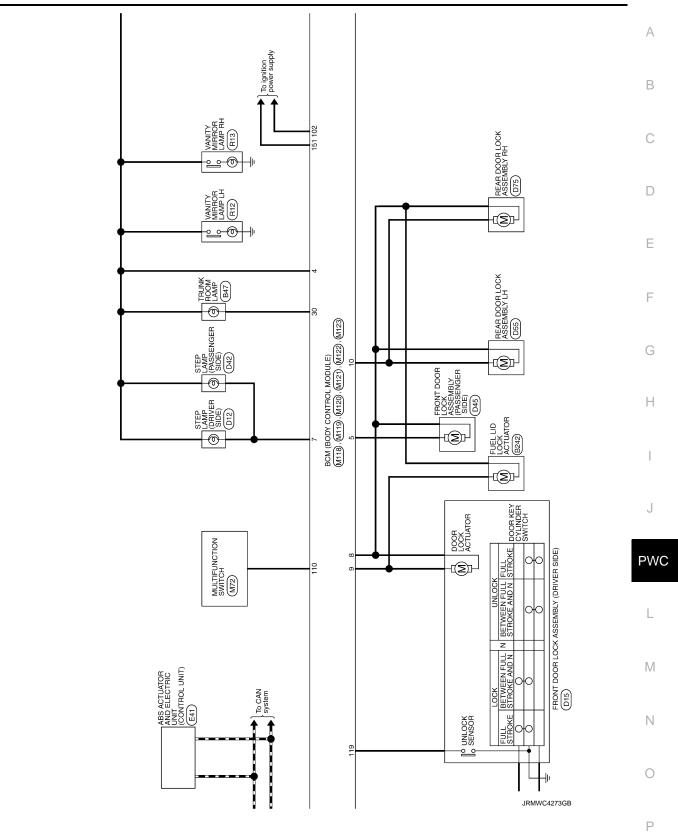
INFOID:0000000007796106

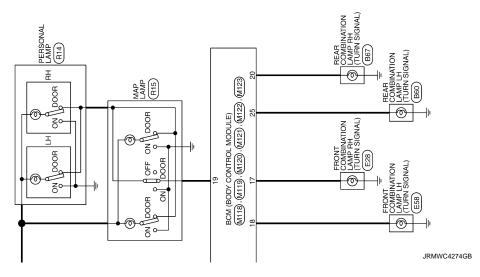
For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".











Fail-safe

FAIL-SAFE CONTROL BY DTC

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

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation	Α
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC	
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC	Б
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC	В
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC	
B2195: ANTI-SCANNING	Inhibit engine cranking	Ignition switch ON → OFF	С
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	D
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)	Е
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (12 V) Ignition ON signal (CAN to IPDM E/R): OFF (Request signal) Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal) 	F
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)	G
B2617: BCM	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal	Н
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	
B26E8: CLUTCH SW	Inhibit engine cranking	When any of the following BCM recognition conditions are fulfilled • Status 1 - Clutch switch signal (CAN from ECM): ON - Clutch interlock switch signal: OFF (0 V) • Status 2 - Clutch switch signal (CAN from ECM): OFF - Clutch interlock switch signal: ON (Battery voltage)	J PWC

DTC Inspection Priority Chart

INFOID:0000000007796108

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

Priority	DTC	
1	B2562: LOW VOLTAGE	
2	U1000: CAN COMM U1010: CONTROL UNIT(CAN)	
3	 B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM B2195: ANTI-SCANNING 	

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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Priority	DTC
4	 B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: STARTER RELAY B2606: STARTER RELAY B2607: ENG STATE SIG LOST B2614: BCM B2615: BCM B2616: BCM B2617: BCM B2618: BCM B2618: VEHICLE TYPE B2626: CLUTCH SW B2626: KEY REGISTRATION C1729: VHCL SPEED SIG ERR U0415: VEHICLE SPEED
5	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1734: CONTROL UNIT
6	B2621: INSIDE ANTENNA B2622: 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 <u>BCS-16, "COM-MON ITEM"</u>.

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	Refer- ence page
No DTC is detected. further testing may be required.	_	_	_	_	_
U1000: CAN COMM	_	_	_	_	BCS-35
U1010: CONTROL UNIT(CAN)	_	_	_	_	BCS-36
U0415: VEHICLE SPEED	_	_	_	_	BCS-37
B2190: NATS ANTENNA AMP	×	_	_	_	SEC-44

< 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	Refer- ence page	
B2191: DIFFERENCE OF KEY	×	_	_	_	SEC-47	
B2192: ID DISCORD BCM-ECM	×	_	_	_	SEC-48	
B2193: CHAIN OF BCM-ECM	×	_	_	_	SEC-50	
B2195: ANTI-SCANNING	×	_	_	_	SEC-51	
B2553: IGNITION RELAY	_	×	_	_	PCS-48	
B2555: STOP LAMP	_	×	_	_	SEC-52	
B2556: PUSH-BTN IGN SW	_	×	×	_	SEC-54	
B2557: VEHICLE SPEED	×	×	×	_	SEC-56	
B2560: STARTER CONT RELAY	×	×	×	_	SEC-57	
B2562: LOW VOLTAGE	_	×	_	_	BCS-38	
B2601: SHIFT POSITION	×	×	×	_	SEC-58	
B2602: SHIFT POSITION	×	×	×	_	<u>SEC-61</u>	
B2603: SHIFT POSI STATUS	×	×	×	_	<u>SEC-64</u>	
B2604: PNP/CLUTCH SW	×	×	×	_	SEC-67	
B2605: PNP/CLUTCH SW	×	×	×	_	SEC-69	
B2608: STARTER RELAY	×	×	×	_	<u>SEC-71</u>	
B260A: IGNITION RELAY	×	×	×	_	PCS-50	
B260F: ENG STATE SIG LOST	×	×	×	_	SEC-73	
B2614: BCM	_	×	×	_	PCS-52	
B2615: BCM	_	×	×	_	PCS-54	
B2616: BCM	_	×	×	_	PCS-56	
B2617: BCM	×	×	×	_	SEC-78	
B2618: BCM	×	×	×	_	PCS-58	_
B261A: PUSH-BTN IGN SW	_	×	×	_	PCS-59	
B261E: VEHICLE TYPE	×	×	× (Turn ON for 15 seconds)	_	SEC-80	
B2621: INSIDE ANTENNA	_	×	_	_	DLK-59	
B2622: INSIDE ANTENNA	_	×	_	_	DLK-61	
B2623: INSIDE ANTENNA	_	×	_	_	DLK-63	
B26E8: CLUTCH SW	×	×	×	_	SEC-75	
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-77</u>	
C1704: LOW PRESSURE FL	_	_	_	×		
C1705: LOW PRESSURE FR	_	_	_	×	WT 00	
C1706: LOW PRESSURE RR	_	_	_	×	<u>WT-20</u>	
C1707: LOW PRESSURE RL	_	_	_	×		
C1708: [NO DATA] FL	_	_	_	×		
C1709: [NO DATA] FR	_	_	_	×	WEGO	
C1710: [NO DATA] RR	_	_	_	×	<u>WT-22</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	Refer- ence page
C1716: [PRESSDATA ERR] FL	_	_	_	×	
C1717: [PRESSDATA ERR] FR	_	_	_	×	WT-25
C1718: [PRESSDATA ERR] RR	_	_	_	×	<u> </u>
C1719: [PRESSDATA ERR] RL	_	_	_	×	
C1729: VHCL SPEED SIG ERR	_	_	_	×	<u>WT-26</u>
C1734: CONTROL UNIT	_	_	_	×	<u>WT-27</u>

POWER WINDOW MAIN SWITCH

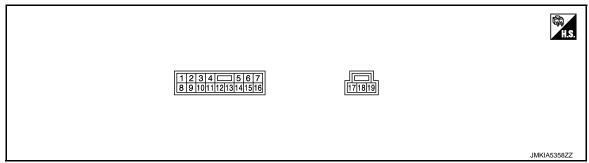
< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (wire 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 power window main switch is UP at operated.	12	
2 (LG)	Ground	Encoder ground	_	_	0	
3 (GR)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is DOWN at operated.	12	
4 (V)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral → Locked)	5 → 0	
5 (BG)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	12	
6 (Y)	Ground	Door key cylinder switch 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.	12	
8 (L)	Ground	Front driver side power window motor UP signal	Output	When front LH switch in power window main switch is UP at operated.	12	
9 (BG)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms	

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
				IGN SW ON	12
10	0	D	1	Within 45 second after ignition switch is turned to OFF	12
(SB)	Ground	Rap signal	Input	When driver side or passenger side door is opened during retained power operation	0
11 (G)	Ground	Front driver side power window motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	12
13 (P)	Ground	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
14 (V)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
15 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	12
17 (B)	Ground	Ground	_	_	0
19 (Y)	Ground	Battery power supply	Input	_	12

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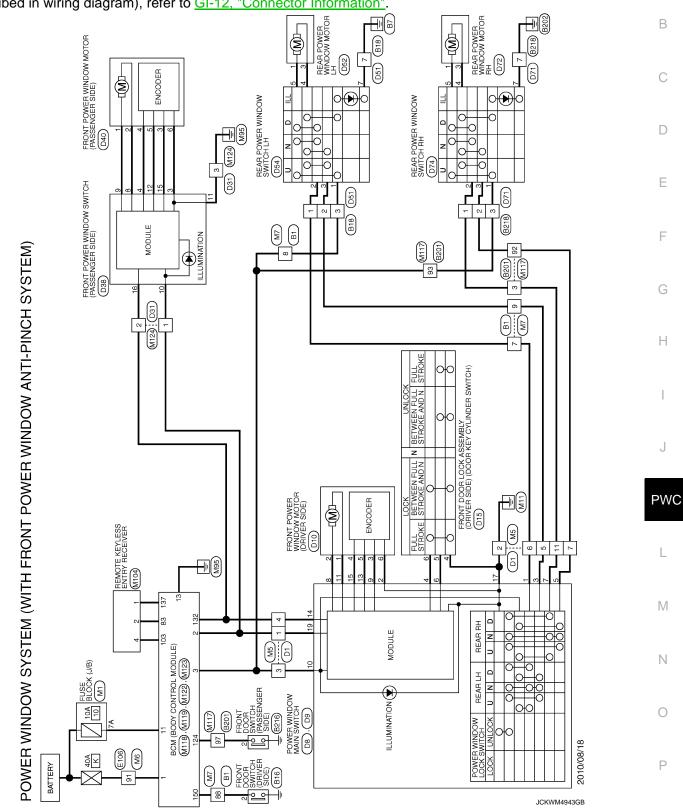
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Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information"



Fail-safe INFOID:0000000007467510

FAIL-SAFE CONTROL

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

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.

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.

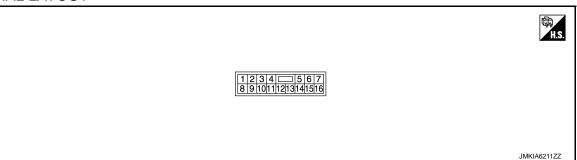
- Auto-up operation
- Anti-pinch function
- Retained power function

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.

FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

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

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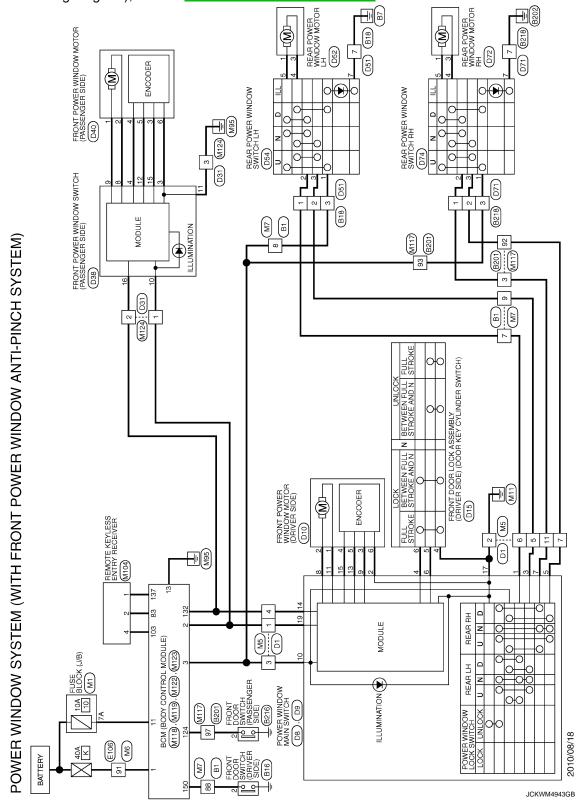
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Wiring Diagram - POWER WINDOW CONTROL SYSTEM -

INFOID:0000000007803057

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".



FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Fail-safe INFOID:0000000007467513

FAIL-SAFE CONTROL

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

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
- Retained power 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.

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POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:0000000007467514

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-39, "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-43, "Intermittent Incident".

NO >> GO TO 1.

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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< SYMPTOM DIAGNOSIS >	OW ANTI-I INCIT
DRIVER SIDE POWER WINDOW DOES NOT OPERATE	
Diagnosis Procedure	INFOID:0000000007467515
1. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT	Т
Check power window switch power supply and ground circuit.	
Refer to PWC-107, "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-113 , "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.	
<u>Is the result normal?</u>	
YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident". NO >> GO TO 1.	

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FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000007467516

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

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

Refer to PWC-126, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED

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

Diagnosis Procedure

NFOID:000000000746751

1. REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side).

Refer to PWC-183, "Removal and Installation"

>> INSPECTION END

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

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

1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT

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

Refer to PWC-108, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE): Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK PASSENGER SIDE POWER WINDOW MOTOR CIRCUIT

Check passenger side power window motor circuit.

Refer to PWC-114, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

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

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

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REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

REAR LH SIDE POWER WINDOW DOES NOT OPERATE WHEN POWER WINDOW MAIN SWITCH IS OPERATED

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000007467519

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-111, "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-43, "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:0000000007467520

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

Check rear power window switch power supply and ground circuit.

Refer to PWC-109, "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-183, "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-115, "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-43, "Intermittent Incident".

NO >> GO TO 1.

REAR RH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

< SYMPTOM DIAGNOSIS >	[FRONT WINDOW ANTI-PINCH]
REAR RH SIDE POWER WINDOW DOE WHEN POWER WINDOW MAIN SWITCH	
WHEN POWER WINDOW MAIN SWITCH IS	
1. CHECK REAR POWER WINDOW SWITCH	
Check rear power window switch. Refer to PWC-111, "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-43, "Ir NO >> GO TO 1.	ntermittent Incident".
WHEN REAR POWER WINDOW SWITCH	RH IS OPERATED
WHEN REAR POWER WINDOW SWITCH R	H IS OPERATED : Diagnosis Procedure
1. CHECK REAR POWER WINDOW SWITCH POWER S	SUPPLY AND GROUND CIRCUIT
Check rear power window switch power supply and groun Refer to PWC-109, "REAR POWER WINDOW SWITCH:	
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-183, "Removal and Installation".	
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SV SWITCH RH ARE OPERATED	VITCH AND REAR POWER WINDOW
WHEN BOTH POWER WINDOW MAIN SWITCH RH ARE OPERATED : Diagnosis P	
1. CHECK REAR POWER WINDOW MOTOR RH	
Check rear power window motor RH. Refer to PWC-116, "REAR RH: Component Function Che	eck".
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-43, "Ir	ntermittent Incident".
NO >> GO TO 1.	

ANTI-PINCH FUNCTION DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007467525

1. CHECK POWER WINDOW AUTO OPERATION

Check AUTO operation when anti-pinch function does not operate.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Refer to PWC-175, "Diagnosis Procedure".

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY

Diagnosis Procedure

INFOID:0000000007467526

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1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-99, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

2. CHECK ENCODER CIRCUIT

Check encoder circuit. Refer to the following.

- Driver side: Refer to PWC-118, "DRIVER SIDE: Component Function Check".
- Passenger side: Refer to <u>PWC-120</u>, "<u>PASSENGER SIDE</u>: <u>Component Function Check</u>".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000007467527

1. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-66, "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-43. "Intermittent Incident".

NO >> GO TO 1.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS [FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-**DOWS**

Diagnosis Procedure

INFOID:0000000007467528

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1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to PWC-99, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END

NO >> GO TO 2.

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

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

Refer to PWC-123, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".

NO >> GO TO 1.

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PWC-177 Revision: 2013 February 2012 G Sedan

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description INFOID:000000007467529

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

Diagnosis Procedure

INFOID:0000000007467530

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-160, "Description".

2.check power window operation

Check power window operation.

Does power window up/down with power window main switch?

YES >> GO TO 3.

NO >> Refer to PWC-169, "Diagnosis Procedure".

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

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

Refer to DLK-51, "DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)".

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-43, "Intermittent Incident".

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

[FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS > POWER WINDOW LOCK SWITCH DOES NOT FUNCTION Α Diagnosis Procedure INFOID:0000000007467531 1. REPLACE POWER WINDOW MAIN SWITCH В Replace power window main switch. Refer to PWC-183, "Removal and Installation". C >> INSPECTION END D Е F G Н J PWC L M

PWC-179 Revision: 2013 February 2012 G Sedan

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POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

Diagnosis Procedure

INFOID:0000000007467532

1. REPLACE POWER WINDOW SWITCH

Replace power window switch.

Refer to PWC-183, "Removal and Installation".

>> INSPECTION END

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.

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[FRONT WINDOW ANTI-PINCH]

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000007698222

Tool name		Description	
Remover tool	JMKIA3050ZZ	Removes the clips, pawls and metal clips	

POWER WINDOW MAIN SWITCH

< REMOVAL AND INSTALLATION >

[FRONT WINDOW ANTI-PINCH]

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

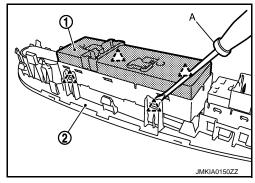
- 1. Remove the power window main switch finisher (2). Refer to INT-11, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using remover tool (A).



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

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 PWC-100, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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