SECTION POWER WINDOW CONTROL SYSTEM

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BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

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DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

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

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

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

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

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

>> GO TO 4.

4. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

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

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

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

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.

NO >> GO TO 3.

INSPECTION AND ADJUSTMENT

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INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

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 NEGATIV	/E TERMINAL : Spe-
cial Repair Requirement	INFOID:00000006210944

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

- 1. Fully open door glass.
- 2. Place a piece of wood near the fully closed position.
- 3. Close door glass completely using AUTO-UP.
- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering.
- **CAUTION:**
- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder power window function

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

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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.

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.

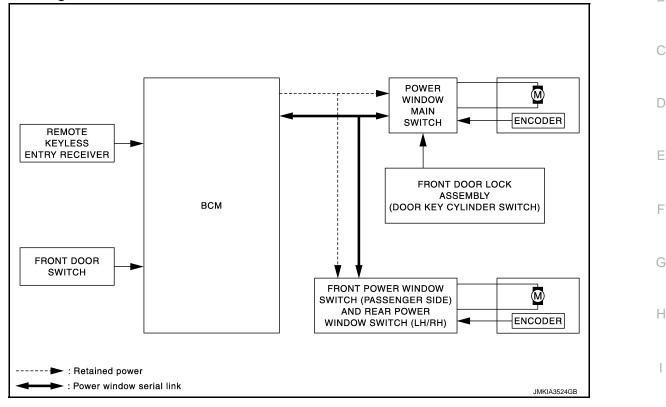
CHECK ANTI-PINCH FUNCTION

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- 2. Place a piece of wood near the fully closed position.
- 3. Close door glass completely using AUTO-UP.
- Check that door glass lowers approximately 150 mm (5.9 in) without pinching piece of wood and stops.
- Check that door glass does not rise when operating power window main switch while lowering. CAUTION:
- Perform initialization when AUTO-UP operation or anti-pinch function does not operate normally.
- Check that AUTO-UP operates before inspection when initialization is performed.
- Never check with hands or other body parts because they may be pinched. Never get pinched.
- Finish initialization. Otherwise, the next operation cannot be done.
- 1. AUTO-UP operation
- 2. Anti-pinch function
- 3. Door key cylinder power window function

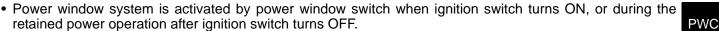
< SYSTEM DESCRIPTION > SYSTEM DESCRIPTION

POWER WINDOW SYSTEM

System Diagram



System Description



- 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) \rightarrow OPEN (door switch ON).
- When ignition switch turns ON again.

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[FRONT & REAR WINDOW ANTI-PINCH]

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[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 <u>DLK-52, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)"</u>. **NOTE:**

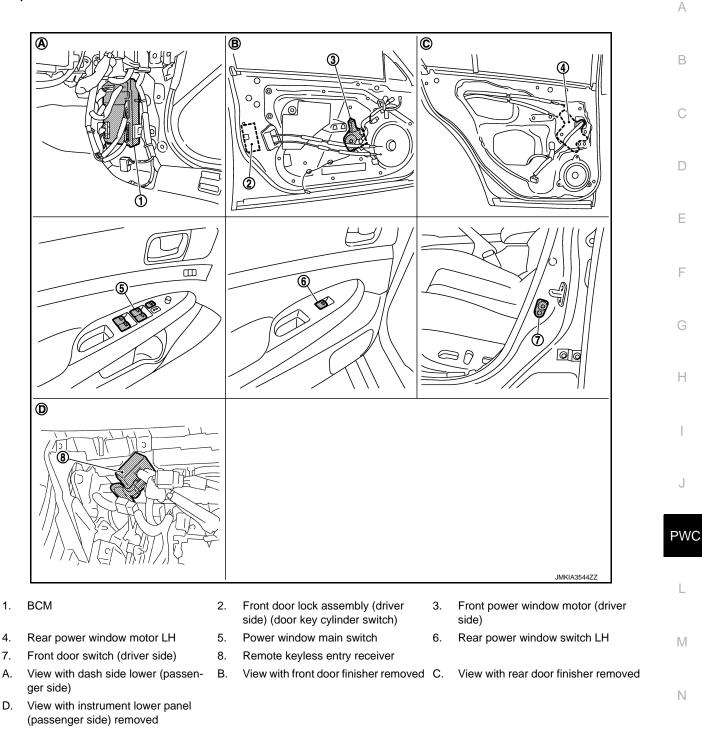
Use CONSULT-III to change settings. MODE 1 (3 sec) / MODE 2 (OFF) / MODE 3 (5 sec)

< SYSTEM DESCRIPTION >

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

Component Parts Location

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Component Description

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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.	

Revision: 2011 November

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 > DIAGNOSIS SYSTEM (BCM) COMMON ITEM

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

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[FRONT & REAR WINDOW ANTI-PINCH]

APPLICATION ITEM

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

Diagnosis mode	Function Description	
Work Support	Changes the setting for each system function.	
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	L
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion manual.	
Data Monitor	The BCM input/output signals are displayed.	E
Active Test	The signals used to activate each device are forcibly supplied from BCM.	
Ecu Identification	The BCM part number is displayed.	F
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.

				$\times\!\!:$ Applicable item	Н
Sustem	Sub system aslastian item		Diagnosis mode		
System	Sub system selection item	Work Support Data M		Active Test	
Door lock	DOOR LOCK	×	×	×	
Rear window defogger	REAR DEFOGGER		×	×	
Warning chime	BUZZER		×	×	J
Interior room lamp timer	INT LAMP	×	×	×	
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	PW
Turn signal and hazard warning lamps	FLASHER	×	×	×	
	AIR CONDITONER*				L
Intelligent Key systemEngine start system	INTELLIGENT KEY	×	×	×	
Combination switch	COMB SW		×		M
Body control system	ВСМ	×			
IVIS - NATS	IMMU		×	×	
Interior room lamp battery saver	BATTERY SAVER	×	×	×	Ν
Trunk lid open	TRUNK		×	×	
Vehicle security system	THEFT ALM	×	×	×	0
RAP system	RETAINED PWR		×)
Signal buffer system	SIGNAL BUFFER		×	×	
TPMS	TPMS (AIR PRESSURE MONITOR)	×	×	×	Ρ

NOTE:

*: This item is displayed, but is not used.

FREEZE FRAME DATA (FFD)

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

PWC-13

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

[FRONT & REAR WINDOW ANTI-PINCH]

CONSULT screen item	Indication/Unit	Description				
Vehicle Speed	km/h	Vehicle speed of the mo	ment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odomete	r 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"			
CF RL AC Vehicle Condition OF	RUN>ACC	Power position status of the moment a particular DTC is detected	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" (Emer- gency 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 posi- tion is "LOCK".) to low power consumption mode			
	LOCK		Power supply position is "LOCK" (Ignition switch OFF with steer- ing 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-III 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.

< DTC/CIRCUIT DIAG	POWER SUP	PLY AN			C R WINDOW ANTI-PINCH]
DTC/CIRCU	IT DIAGNO	SIS			
POWER SUPPL	Y AND GROUI		CUIT		
POWER WINDO			0011		
POWER WINDOW			osis Pro	cedure	INFOID:000000006210954
1.CHECK POWER SL	JPPLY CIRCUIT 1				
3. Turn ignition switch	window main switch c			connector and gro	ound.
	(+)				Voltage (V)
Power	Power window main switch (-)		(Approx.)		
Connector	Termina	al			
D8	10			Ground	12
 CHECK POWER SI Turn ignition switch Disconnect BCM co Check continuity be 	n OFF. onnector.	connector	and powe	er window main sv	witch harness connector.
, 	CM		•	w main switch	
Connector	Terminal		rower windo	Terminal	Continuity
	2)9	19	
M118	3	C)8	10	Existed
1. Check continuity be	etween BCM harness	connector	and grour	nd.	
	BCM				
Connector	Termina	al		Oracia	Continuity
M118	2			Ground —	Not existed
NO >> Repair or ro 3.CHECK GROUND C 1. Turn ignition switch	CM. Refer to <u>BCS-82</u> eplace harness. CIRCUIT	-			
2. Check continuity be	etween power windov	v main swit	icn narnes	s connector and g	grouna.
	window main switch	-1		Orana	Continuity
Connector D9	Termina 17	ai		Ground	Evistod
					Existed
Is the inspection result YES >> INSPECTION NO >> Repair or ro FRONT POWER	ON END eplace harness.	CH (PA	SSENG	ER SIDE)	

PWC-15

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH] FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006210955

1.CHECK POWER SUPPLY CIRCUIT 1

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

(· Front power window se	(+) Front power window switch (passenger side)		Voltage (V) (Approx.)	
Connector	Terminal		(//pp/0x.)	
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) har-2 ness connector.

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

Check continuity between BCM harness connector and ground. 3.

BC	CM		
Connector	Terminal	Ground	Continuity
M118	2		Not existed

Is the inspection result normal?

>> Replace BCM. Refer to BCS-82, "Exploded View". YES

NO >> Repair or replace harness.

${ m 3.}$ 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:000000006210956

1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition switch OFF.

Disconnect rear power window switch LH connector or power window switch RH connector. 2.

3. Turn ignition switch ON.

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

PWC-16

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

Rear pow Connector LH RH the measurement value within YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY of Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I BCM	CIRCUIT 2		(-)		Voltage (V) (Approx.) 12			
LH RH the measurement value withing (ES >> GO TO 3. NO >> GO TO 2. CHECK POWER SUPPLY (C) Turn ignition switch OFF. Disconnect BCM connector Check continuity between I	D77 In the specifica CIRCUIT 2 r.	10 Ition?	Ground		12			
RH the measurement value within YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I	D77 In the specifica CIRCUIT 2 r.	<u>ition?</u>	Ground		12			
the measurement value withi YES >> GO TO 3. NO >> GO TO 2. • CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I	n the specifica	<u>ition?</u>						
YES >> GO TO 3. NO >> GO TO 2. CHECK POWER SUPPLY O Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I	CIRCUIT 2							
 NO >> GO TO 2. CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I 	r.							
CHECK POWER SUPPLY Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I	r.							
Turn ignition switch OFF. Disconnect BCM connecto Check continuity between I	r.							
Disconnect BCM connecto Check continuity between		, I						
Check continuity between I								
BCM		connector and rea	ar power window s	witch harne	ess connector			
		Rear power	window switch					
Connector	al	Connector		Terminal Continu				
			D57					
M118 2		RH	D77	10 E				
Check continuity between I								
BCM			Ground		Continuity			
Connector	Terminal				-			
M118	2			No	ot existed			
the inspection result normal?								
YES >> Replace BCM. Ref		"Exploded View".						
CHECK GROUND CIRCUIT								
Turn ignition switch OFF. Check continuity between	rear power win	dow switch harne	ess connector and	around.				
				J - - -				
	or window owitch				Continuity			
Rear pow					Continuity			
Connector		Terminal	Ground		Continuity			
Connector LH	D57	Terminal	Ground		Existed			
Connector			Ground		· · ·			
Connector LH RH the inspection result normal?	D57 D77		Ground					
Connector LH RH	D57 D77		Ground					

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE : Component Function Check

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 <u>PWC-18</u>, "DRIVER SIDÉ : Diagnosis Procedure".

DRIVER SIDE : Diagnosis Procedure

INFOID:000000006210959

INFOID-000000006210957

INFOID:000000006210958

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				(* + +)
	4	4		NEUTRAL	0
D10	I	Ground	Ground Power window main switch	DOWN	12
010	2			NEUTRAL	0
	2				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 window main switch		Front power window	Front power window motor (driver side)		
Connector	Terminal	Connector Terminal		Continuity	
D8	8	D10	2	Existed	
Do	11		1	LAISIEU	

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

Power windo	w main switch		Continuity
Connector	Terminal	Ground	Continuity
 D8	8	Ground	Not existed
Do	11		NUL EXISIEU

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >	[FRONT & REAR WINDOW ANTI-PINCH]
PASSENGER SIDE	
PASSENGER SIDE : Description	INF0ID:00000006210961
Door glass moves UP/DOWN by receiving the signal power (passenger side).	window main switch or front power window switch
PASSENGER SIDE : Component Function Che	eck INFOID:000000006210962
1. CHECK FRONT POWER WINDOW MOTOR (PASSEN	GER SIDE) OPERATION
Check front power window motor (passenger side) operation window switch (passenger side).	on with power window main switch or front power
Is the inspection result normal?	
YES >> Power window motor (passenger side) is OK. NO >> Refer to <u>PWC-19</u> , " <u>PASSENGER SIDE</u> : Diagno	osis Procedure".
PASSENGER SIDE : Diagnosis Procedure	INFOID:000000006210963
1. CHECK FRONT POWER WINDOW MOTOR (PASSENG	GER SIDE) INPUT SIGNAL
 Turn ignition switch OFF. Disconnect front power window motor (passenger side) Turn ignition switch ON. 	connector.

3. Check voltage between front power window motor (passenger side) harness connector and ground. 4.

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

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

Front power window switch (passenger side)		Front power window r	motor (passenger side)	Continuity	N	
Connector	Terminal	Connector	Terminal	Continuity	14	
D28	8	D40 2 1	D40	2	Eviated	
D38	9		1	Existed	0	

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

	Front power window s	witch (passenger side)		Continuity	Р
	Connector	Terminal	Ground	Continuity	
_	D38	8	Ground	Not existed	
		9		NOI EXISIED	

Is the inspection result normal?

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

В

D

Ε

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PWC

< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness. REAR LH

REAR LH : Description

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

REAR LH : Component Function Check

1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

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

Is the inspection result normal?

YES >> Power window motor LH is OK.

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

REAR LH : Diagnosis Procedure

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

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

(+) Rear power window motor LH		()	Condition		Voltage (V) (Approx.)
Connector	Terminal				(
				NEUTRAL	0
D52	I	Oracial	Rear power window switch LH	UP	12
002	Ground 3	Giouna		NEUTRAL	0
				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

- 1. 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 wi	Rear power window motor LH		
Connector	Terminal	Connector Terminal		Continuity	
D57	8	D52	1	Existed	
100	9	002	3	LAISIEU	

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

Rear power wi	ndow switch LH		Continuity
Connector	Terminal	Ground	Continuity
D57	8	Ground	Not existed
057	9		Not existed

Is the inspection result normal?

INFOID:000000006210966

INFOID-000000006210967

INFOID:000000006210965

.	TC/CIRCUIT DIAG			L	FRONT	& REAR WI	NDOW ANTI-PINCH]
N	ES >> Replace re D >> Repair or r AR RH			ch LH.			
٦E	AR RH : Descri	iption					INFOID:0000000621096
	or glass moves UP/l tch RH.	DOWN by rec	eiving th	ne signal from powe	r window	main switch	or rear power window
RE	AR RH : Comp	onent Fund	ction C	heck			INFOID:0000000621097
1.	CHECK REAR POV		N МОТС	R RH OPERATION			
		low motor RH	operatio	on with power windc	w main :	switch or rea	r power window switch
RH s tl	he inspection result	normal?					
	ES >> Power wind	dow motor RH					
N	D >> Refer to P	<u> VC-21, "REAI</u>	<u>R RH : D</u>	iagnosis Procedure'			
۶E	AR RH : Diagn	osis Proce	dure				INFOID:0000000621097
	CHECK REAR POW	/ER WINDOV	и мото	R RH INPUT SIGNA	L		
	Turn ignition switch						
	Disconnect rear po	wer window n	notor RH	connector.			
•	Turn ignition switch Check voltage betw		ver windo	ow motor RH harnes	s conneo	ctor and grou	nd.
-	(+)	•				U	
_	(+) Rear power window	v motor RH	()	-) Condition	Condition		Voltage (V)
_	-	Terminal					(Approx.)
-	Connector						
_	Connector	4				NEUTRAL	0
-		1	Groupe	Rear power window s	witch RH	NEUTRAL UP	0 12
_	D72	1	- Ground	Rear power window s	witch RH		
-	D72	3			switch RH	UP	12
	D72	3 lue within the	specifica	ation?	switch RH	UP NEUTRAL	12 0
YE	D72 <u>ne measurement va</u> ES >> Replace re	3 lue within the	specifica	ation?	switch RH	UP NEUTRAL	12 0
YE	D72 <u>ne measurement va</u> ES >> Replace re	3 lue within the ar power wind	specification sp	ation? or RH.	switch RH	UP NEUTRAL	12 0
	D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch	3 ar power wind /ER WINDOV	specifica dow moto V MOTO	ation? or RH. R RH CIRCUIT	switch RH	UP NEUTRAL	12 0
	D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po	3 lue within the ar power wind /ER WINDOV OFF. wer window s	specifica dow moto V MOTO witch RF	ation? or RH. R RH CIRCUIT I connector.		UP NEUTRAL DOWN	12 0 12
	D72 <u>ne measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po	3 ar power wind /ER WINDOV OFF. wer window s etween rear po	specifica dow moto V MOTO witch RF	ation? or RH. R RH CIRCUIT I connector.		UP NEUTRAL DOWN	12 0
	D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne	3 ar power wind /ER WINDOV OFF. wer window s etween rear po ctor.	specifica dow moto V MOTO witch RF	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn	ess conr	UP NEUTRAL DOWN	12 0 12
YE N(D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne	3 ar power wind /ER WINDOV OFF. wer window s etween rear po	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector.	ess conr	UP NEUTRAL DOWN	12 0 12
	D72 The measurement van ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector	3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear pe ctor.	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector	ess conr	UP NEUTRAL DOWN	12 0 12 ar power window moto Continuity
	D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win	3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear pe ctor.	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi	ess conr	UP NEUTRAL DOWN	12 0 12 ar power window moto
	D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector D77	3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector	ess conr	UP NEUTRAL DOWN	ar power window moto Continuity Existed
	D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power wit Connector D77 Check continuity be	3 lue within the ar power wind /ER WINDOV OFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72	ess conr	UP NEUTRAL DOWN	ar power window moto Continuity Existed round.
YE	D72 <u>he measurement va</u> ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power wit Connector D77 Check continuity be	3 lue within the ar power wind /ER WINDOV DOFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 etween rear p	specifica dow moto V MOTO witch RH ower win	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72 ndow switch RH harr	ess conr ndow moto Tr ness con	UP NEUTRAL DOWN	ar power window moto Continuity Existed
	D72 he measurement va ES >> Replace re D >> GO TO 2. CHECK REAR POW Turn ignition switch Disconnect rear po Check continuity be RH harness conne Rear power win Connector D77 Check continuity be Rear power win	3 lue within the ar power wind /ER WINDOV DOFF. wer window s etween rear per ctor. ndow switch RH Termina 8 9 etween rear p	specifica dow moto V MOTO witch RH	ation? or RH. R RH CIRCUIT I connector. dow switch RH harn Rear power wi Connector D72 ndow switch RH harr	ess conr	UP NEUTRAL DOWN	ar power window moto Continuity Existed round.

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

- YES >> Replace rear power window switch RH.
- NO >> Repair or replace harness.

			ENCODER			
	TC/CIRCUIT DIAG	NOSIS >		[FRONT & REA	R WINDOW ANTI-PINCH]	
	NCODER RIVER SIDE					А
DF	RIVER SIDE : De	escription			INFOID:00000006210973	В
	tects condition of the tch as the pulse sign		motor (driver side)	operation and trar	smits to power window main	
DF	RIVER SIDE : Co	mponent Functi	on Check		INFOID:00000006210974	С
1.	CHECK ENCODER (OPERATION				
	eck driver side door g he inspection result r		open/close operati	on normally by po	wer window main switch.	D
	ES >> Encoder op		E : Diagnosis Proc	edure".		Е
DF	RIVER SIDE : Dia	agnosis Procedu	ure		INFOID:00000006210975	
1.	CHECK ENCODER \$	SIGNAL				F
1. 2.	Turn ignition switch Check signal betwe		ain switch harness	connector and gro	ound using oscilloscope.	G
_		(+)			Signal	
_		window main switch		()	Signal (Reference value)	Н
_	Connector	Termina	al			
_	D8	9 13		Ground	Refer to following signal	
	Encoder signal 1 Encoder signal 2 Encoder signal 2 (Encoder signal 2	10 ms Window UP coder signal 2 starts 1/4 puls	Encoder si Encoder si Encoder si es earlier)		DOWN	J >W
<u>ls t</u>	he inspection result r	ormal?				Μ
YI N		wer window main sw	itch.			IVI
2.	CHECK ENCORDER	R SIGNAL CIRCUIT				Ν
1. 2. 3.		vindow main switch c etween power window			otor (driver side) connector. d front power window motor	0
-	Power window	w main switch	Front power wind	low motor (driver side)) Continuity	Ρ
_	Connector	Terminal	Connector	Terminal		1
_	D8	9 13	D10	3	Existed	
4.	Check continuity be	tween power windov	v main switch harne	ess connector and	ground.	

< DTC/CIRCUIT DIAGNOSIS >

Power windo	w main switch		Continuity	
Connector	Terminal	Ground	Continuity	
D8	9	Ground	Not existed	
D8	13		NOI EXISIED	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
D10	4	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

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

Power 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

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	w motor (driver side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D8	2	D10	6	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT 2

< DTC/CIRCUIT DIAGNOSIS >

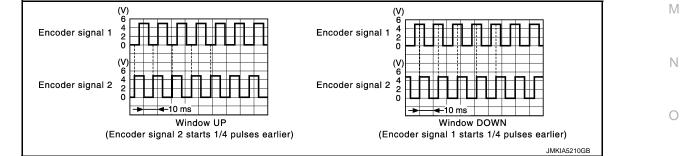
А

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

Fower window	main switch		Continuity
Connector	Terminal	Ground	Continuity
D8	2		Existed
s the inspection result norma	<u> ?</u>		
YES >> Replace front pov NO >> Replace power w PASSENGER SIDE	ver window motor (driver indow main switch.	side).	
PASSENGER SIDE : D	escription		INFOID:0000000621097
Detects condition of the front vindow switch (passenger sic		assenger side) operation	and transmits to front power
PASSENGER SIDE : C	component Function	Check	INFOID:0000000621097
.CHECK ENCODER OPER	ATION		
Check passenger side door gl or front power window switch		close operation normally l	by power window main switch
s the inspection result norma	<u>l?</u>		
YES >> Encoder operatio NO >> Refer to <u>PWC-25</u>	n is OK. , "PASSENGER SIDE : D	iagnosis Procedure".	
ASSENGER SIDE . D	iagnosis Procedure		INFOID:0000000621097
, COLINCER OIDE . D			

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

(+)			PWC
Front power window sw	vitch (passenger side)	(-)	Signal (Reference value)	
Connector	Terminal			
D38	12	Ground	Defer to following signal	L
030 -	15	Ground	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
- 1. Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.

Ρ

< DTC/CIRCUIT DIAGNOSIS >

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 r	motor (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D38	12	D40	5	Existed
030	15	040	3	LAISIEU

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

Front power window s	witch (passenger side)		Continuity
Connector	Terminal	Ground	Continuity
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 r	+) notor (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

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

Front power window s	witch (passenger side)	Front power window r	motor (passenger side)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D38	4	D40	4	Existed

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

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

Is the inspection result normal?

- YES >> Replace front power window switch (passenger side).
- NO >> Repair or replace harness.

5.CHECK GROUND CIRCUIT 1

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



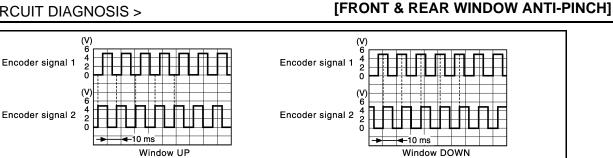
< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

	(passenger side)		motor (passenger sic	Continuity
Connector	Terminal	Connector	Terminal	
D38	3	D40	6	Existed
the inspection result norn (ES >> GO TO 6. IO >> Repair or replace CHECK GROUND CIRC Connect front power wi	ce harness. CUIT 2	senger side) conner	stor	
				ss connector and ground.
Front power window	switch (passenger sid	de)		Continuity
Connector	Termina	l	Ground	Continuity
D38	3			Existed
NO >> Replace front p EAR LH	ower window swi	tor (passenger side) tch (passenger side		
EAR LH : Descriptio	n			INFOID:000000062105
etects condition of the rea	r power window n	notor LH operation a	and transmits to re	ear power window switch L
EAR LH : Compone	nt Function C	heck		INFOID:00000006210
CHECK ENCODER OPE	ERATION			
	erform AUTO ope	en/close operation n	ormally by power	window main switch or rea
ower window switch LH.				
the inspection result norn				
the inspection result norn (ES >> Encoder operat	tion is OK.	iagnosis Procedure	'.	
the inspection result norm (ES >> Encoder operation of the second	tion is OK. 27, "REAR LH : D	iagnosis Procedure	<u>.</u>	
the inspection result norn (ES >> Encoder operat	tion is OK. 27, "REAR LH : D	iagnosis Procedure	<u>'</u> .	INF01D:000000006210
the inspection result norm (ES >> Encoder operation of the second	tion is OK. 27, "REAR LH : D 3 Procedure	iagnosis Procedure	<u>.</u>	INF0/D:000000062105
the inspection result norm YES >> Encoder operation YO >> Refer to <u>PWC-2</u> EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON	tion is OK. 27, "REAR LH : D 5 Procedure NAL 1.	-	_	INFOID:000000000210
the inspection result norm (ES >> Encoder operation of the second secon	tion is OK. 27, "REAR LH : D 5 Procedure NAL 1.	-	_	round using oscilloscope.
the inspection result norm (ES >> Encoder operation >> Refer to PWC-2 EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between i	tion is OK. 27, "REAR LH : D Procedure NAL I. rear power windov	-	_	
the inspection result norm (ES >> Encoder operation >> Refer to PWC-2 EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between i	tion is OK. 27, "REAR LH : D Procedure NAL I. rear power window (+)	w switch LH harnes	s connector and g	round using oscilloscope. Signal
the inspection result norm (ES >> Encoder operation >> Refer to <u>PWC-2</u> EAR LH : Diagnosis .CHECK ENCODER SIG Turn ignition switch ON Check signal between to Rear power w	tion is OK. 27, "REAR LH : D Procedure NAL I. rear power windov (+) vindow switch LH	w switch LH harnes	s connector and g	round using oscilloscope.

Ρ

< DTC/CIRCUIT DIAGNOSIS >



(Encoder signal 1 starts 1/4 pulses earlier)

JMKIA5210GB

Is the inspection result normal?

YES >> Replace rear power window switch LH.

(Encoder signal 2 starts 1/4 pulses earlier)

NO >> GO TO 2.

2. CHECK ENCORDER SIGNAL CIRCUIT

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

Rear power v	vindow switch LH	Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D57	12	D52	5	Existed
007	15	052	6	

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

Rear power wi	Rear power window switch LH		Continuity
Connector	Terminal	Ground	Continuity
D57	12	Ground	Not existed
	15		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 rear power window switch LH connector.
- 2. 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	Terminal		(********)
D52	2	Ground	12

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4.CHECK ENCORDER POWER SUPPLY CIRCUIT 2

1. Turn ignition switch OFF.

2. 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.

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

	indow switch LH		ar power window		Continuity
Connector	Terminal	Conne		Terminal	
D57	4	D52		2	Existed
Check continuity b	etween rear power wi	indow switch	LH harness	connector and	l ground.
Rear po	ower window switch LH				Continuity
Connector	Termina	al	Grour	nd	Continuity
D57	4				Not existed
NO >> Repair or CHECK GROUND Turn ignition switc Disconnect rear po	h OFF. ower window switch Lł etween rear power wi	H harness co		connector and	rear power window mo
	indow switch LH		ar power window		Continuity
Connector D57	Terminal 3	Conne D52		Terminal 4	Existed
YES >> GO TO 6. NO >> Repair or CHECK GROUND Connect rear powe	replace harness. CIRCUIT 2 er window switch LH h				
YES >> GO TO 6. NO >> Repair or CHECK GROUND COnnect rear power Check continuity b	replace harness. CIRCUIT 2			connector and	
YES >> GO TO 6. NO >> Repair or CHECK GROUND Connect rear power. Check continuity b	replace harness. CIRCUIT 2 er window switch LH h etween rear power wi	ndow switch			ground. Continuity
YES >> GO TO 6. NO >> Repair or D. CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57	replace harness. CIRCUIT 2 er window switch LH h etween rear power window switch LH ower window switch LH Termina 3	ndow switch	1 LH harness		
NO >> Repair or D.CHECK GROUND 1. Connect rear power 2. Check continuity by Rear pro- Connector D57 s the inspection result YES >> Replace result	replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mot ear power window swit	al tor LH.	1 LH harness		Continuity
YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH : Desci	replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH wer window switch LH Termina 3 normal? ear power window mot ear power window swit ciption he rear power window	al tor LH. tch LH.	Grour	nd	Continuity Existed
YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH Contects condition of the	replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH wer window switch LH Termina 3 normal? ear power window mot ear power window swit ciption he rear power window	tor LH. tch LH.	Grour	nd	Continuity Existed
YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH Contects condition of the	replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mot ear power window swit ription he rear power window swit conent Function C	tor LH. tch LH.	Grour	nd	Continuity Existed
YES >> GO TO 6. NO >> Repair or D .CHECK GROUND 1. Connect rear powe 2. Check continuity b Rear po Connector D57 s the inspection result YES >> Replace re NO >> Replace re REAR RH REAR RH : Desci Detects condition of th RH as the pulse signal REAR RH : Comp 1. CHECK ENCODER	replace harness. CIRCUIT 2 er window switch LH h etween rear power window ower window switch LH Termina 3 normal? ear power window mote ear power window switch ription he rear power window switch conent Function C COPERATION ass perform AUTO op	tor LH. tch LH. motor RH o	DEPERATION AND	transmits to	Continuity Existed

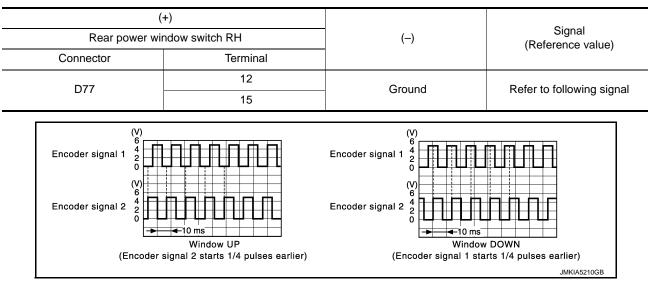
REAR RH : Diagnosis Procedure

INFOID:000000006210984

1.CHECK ENCODER SIGNAL

1. Turn ignition switch ON.

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



Is the inspection result normal?

- YES >> Replace rear power window switch RH.
- NO >> GO TO 2.

2. CHECK ENCODER SIGNAL CIRCUIT

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

Rear power w	indow switch RH	Rear power wi	ndow motor RH	Continuity
Connector	Terminal	Connector	Terminal	Continuity
D77	12	D72	5	Existed
UTT	15		6	

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

Rear power wi	ndow switch RH		Continuity
Connector	Terminal	Terminal Ground	
D77	12	Ground	Not existed
	15		

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.

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

	(+)				
Rear po	ower window motor RH		(-)		Voltage (V) (Approx.)
Connector	Termin	nal			, , , ,
D72	2		Grour	nd	12
the inspection result YES >> GO TO 5. NO >> GO TO 4.	normal?	IRCUIT 2			
	ower window switch R etween rear power wi			connector and	d rear power window m
Rear power w	indow switch RH	Re	ar power window	motor RH	Continuity
Connector	Terminal	Conne	ector	Terminal	Continuity
D77	4	D7	2	2	Existed
Check continuity b	etween rear power w	indow switcl	h RH harness	connector an	d ground.
	ower window switch RH				Continuity
					,
Connector	Termin	nal	Grour	nd	
Connector D77 the inspection result (ES >> Replace re NO >> Repair or r	Termin 4 normal? ear power window swi replace harness.		Grour	nd	Not existed
Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND Turn ignition switch Disconnect rear po	Termin 4 <u>normal?</u> ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi	itch RH.	connector.		
Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND (. Turn ignition switcl Disconnect rear po . Check continuity b RH harness connect	Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector.	itch RH. RH harness o indow switch	connector.	connector and	d rear power window m
Connector D77 the inspection result YES >> Replace re NO >> Repair or r CHECK GROUND (. Turn ignition switcl Disconnect rear po Check continuity b RH harness connect	Termin 4 <u>normal?</u> ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi	itch RH. RH harness o indow switch	connector. n RH harness o ar power window	connector and	Not existed
Connector D77 the inspection result YES >> Replace re NO >> Repair or r O.CHECK GROUND (. Turn ignition switch . Disconnect rear po . Check continuity b RH harness connect Rear power w	Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector.	itch RH. RH harness o indow switch	connector. n RH harness of ar power window ector	connector and	d rear power window m
Connector D77 S the inspection result YES >> Replace re NO >> Repair or no D.CHECK GROUND (C) Turn ignition switch Disconnect rear point Check continuity b RH harness conne Rear power w Connector D77 S the inspection result YES >> GO TO 6.	Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. indow switch RH Terminal 3 normal? replace harness.	itch RH. RH harness o indow switch Re Conne	connector. n RH harness of ar power window ector	connector and motor RH Terminal	d rear power window m
Connector D77 S the inspection result YES >> Replace re NO >> Repair or re D.CHECK GROUND (Connect rear point) Check continuity b RH harness connect Rear power w Connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or re D.CHECK GROUND (Connect rear power) Connect result	Termin 4 normal? ear power window swi replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wi ector. indow switch RH Terminal 3 normal? replace harness.	itch RH. RH harness of indow switch Re Conne D7	connector. n RH harness of ar power window actor 2 nnector.	connector and motor RH Terminal 4	d rear power window m Continuity Existed
Connector D77 S the inspection result YES >> Replace re NO >> Repair or re D.CHECK GROUND (Connect rear point) Check continuity b RH harness connect Rear power w Connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or re D.CHECK GROUND (Connect rear power) Connect rear power) CHECK GROUND (Connect rear power) Connect rear power) Check continuity b Repair or re D.CHECK GROUND (Connect rear power) Connect rear power) Check continuity b Rear power)	Termin 4 107 107 107 107 107 107 107 107	itch RH. RH harness of indow switch Re Conne D7 harness cor indow switch	connector. n RH harness of ar power window ector 2 nnector. h RH harness	connector and motor RH Terminal 4 connector an	d rear power window m Continuity Existed
Connector D77 S the inspection result YES >> Replace result YES >> Repair or result NO >> Repair or result D.CHECK GROUND (Connect rear point) Disconnect rear point Disconnect rear power we connector D77 S the inspection result YES YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> GO TO 6. NO >> Repair or result YES >> Check continuity b	Termin 4 normal? ear power window swir replace harness. CIRCUIT 1 h OFF. ower window switch R etween rear power wir ector. indow switch RH Terminal 3 normal? replace harness. CIRCUIT 2 er window switch RH between rear power w	itch RH. RH harness of indow switch Re Conne D7 harness cor indow switch	connector. n RH harness of ar power window actor 2 nnector.	connector and motor RH Terminal 4 connector an	d rear power window m Continuity Existed

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Description

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

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 SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

Monitor item		Condition	
KEY CYL LK-SW	Lock	: ON	
RET OTE ER-SW	Neutral / Unlock	: OFF	
KEY CYL UN-SW	Unlock	: ON	
REF CTL UN-SW	Neutral / Lock	: OFF	

Is the inspection result normal?

- YES >> Door key cylinder switch is OK.
- NO >> Refer to <u>PWC-32</u>, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000006626064

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.
- 4. 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	
015	6	Ground	5	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH 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 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	
D8	4	D15	6	Existed
20	6		5	LXISIEU

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

INFOID:000000006626062

INEOID:000000006626063

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT & REAR WINDOW ANTI-PINCH]

	low main switch		Continuity
Connector	Terminal	Ground	Continuity
D8	4	Cround	Not existed
20	6		Not existed
the inspection result norm	<u>al?</u>		
	window main switch.		
NO >> Repair or replac			
CHECK DOOR KEY CYL	INDER SWITCH GROUN	D CIRCUIT	
	ont door lock assembly (dr	iver side) (key cylinder swite	ch) harness connector ar
round.			
Eront door lock a	ssembly (driver side)		
	inder switch)		Continuity
Connector	Terminal	Ground	,
D15	4		Existed
the inspection result norm	al?		
YES >> GO TO 4.			
NO >> Repair or replac	e harness.		
CHECK DOOR KEY CYL	INDER SWITCH		
heck front door lock assem	bly (driver side) (key cyling	ter switch)	
efer to <u>PWC-33, "Compone</u>			
the inspection result norm	al?		
YES >> GO TO 5.			
NO >> Replace front do	oor lock assembly (driver si	de) (key cylinder switch).	
CHECK INTERMITTENT	INCIDENT		
CHECK INTERMITTENT			
CHECK INTERMITTENT	Incident".		
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E	Incident". ND		
CHECK INTERMITTENT	Incident". ND		INFOID:00000006626
CHECK INTERMITTENT Refer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspectior	Incident". ND		INFCID:00000006620
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection	Incident". ND N		INFOID:000000006620
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL	Incident". ND N N INDER SWITCH		INFOID:00000006620
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL	Incident". ND N ON INDER SWITCH		
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection CMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo	Incident". ND ON INDER SWITCH : ck assembly (driver side) (I	key cylinder switch) connect	or.
CHECK INTERMITTENT efer to <u>GI-43, "Intermittent</u> >> INSPECTION E Component Inspection CMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo	Incident". ND ON INDER SWITCH : ck assembly (driver side) (I	key cylinder switch) connect ylinder switch) terminals und	or.
CHECK INTERMITTENT efer to <u>GI-43</u> , "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as Front door lock as	Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy		or.
CHECK INTERMITTENT efer to <u>GI-43</u> , "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as Front door lock as	Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy		or.
CHECK INTERMITTENT efer to <u>GI-43</u> , <u>"Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo Check front door lock as (key cylin	Incident". ND ON INDER SWITCH ck assembly (driver side) (I sembly (driver side) (key cy	ylinder switch) terminals und	or. er the following conditior
CHECK INTERMITTENT efer to GI-43, "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as (key cylin Term	Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side)	ylinder switch) terminals und	or. er the following conditior
CHECK INTERMITTENT efer to <u>GI-43</u> , <u>"Intermittent</u> >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL Turn ignition switch OFF Disconnect front door lo Check front door lock as (key cylin	Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side) der switch) minal	ylinder switch) terminals und Key position	or. er the following conditior Continuity
CHECK INTERMITTENT efer to GI-43, "Intermittent >> INSPECTION E Component Inspection COMPONENT INSPECTION CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lo . Check front door lock as (key cylin Term	Incident". ND ON INDER SWITCH ck assembly (driver side) (l sembly (driver side) (key cy sembly (driver side)	Vlinder switch) terminals und Key position Unlock	or. er the following condition Continuity Existed

Is the inspection result normal?

YES >> INSPECTION END

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

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : Description

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

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

Keyless power window down signal

The 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:000000006210986

INFOID-000000006210985

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-III

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

Monitor item		Condition	
CDL LOCK SW	LOCK	: ON	
CDE LOCK SW	UNLOCK	: OFF	
CDL UNLOCK SW	LOCK	: OFF	
ODE UNEOCK SW	UNLOCK	: ON	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to <u>PWC-34</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006210987

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		()	Signal (Reference value)	
Connector	Terminal			
D8	14	Ground	(V) 15 10 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 >

1. Turn ignition switch OFF.

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

	(+)			Voltage (V)	
Power window main switch			(—)	Voltage (V) (Approx.)	
Connector	Terminal	I			
D8 the measurement value	14		Ground	12	
ES >> Replace power IO >> GO TO 3. CHECK POWER WIND Turn ignition switch OF Disconnect BCM connect	window main switc OW SERIAL LINK C F. ector.	h. CIRCUIT			
Check continuity betwe	en BCM connector				
BCM	Terminal		ow main switch	Continuity	
Connector M123	132	Connector D8	Terminal 14	Existed	
-		-			
Connector	BCM Terminal		Ground	Continuity	
M123	132			Not existed	
O >> Repair or repla CHECK INTERMITTEN fer to <u>GI-43, "Intermitten</u> >> INSPECTION	T INCIDENT <u>t Incident"</u> . END				
RONT POWER WI		,			
RONT POWER WIN	NDOW SWITCH	I (PASSENGE	R SIDE) : Dese		
nsmit and receive the signal mentioned belo itch (passenger side) an Keyless power window do	gnal by power windc ow is transmitted fr d rear power windov own signal	ow serial link. om BCM to powe w switch.	er window main sw	r window switch and BCM ritch, front power window	
e signal mentioned belov nger side) and rear powe Front passenger side doc Power window control by Power window lock switcl Retained power operatior	er window switch. or window and rear of key cylinder switch h signal	door window opera		ower window switch (pas-	
	-				

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

[FRONT & REAR WINDOW ANTI-PINCH]

А

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

With CONSULT-III

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

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 <u>PWC-36</u>, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006210990

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.

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

(+) Front power window switch (passenger side) Connector Terminal		()	Signal (Reference value)	
D38	16	Ground	(V) 15 0 0 10 10 10 10 10 10 10 10 10 10 10 10	

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. Turn ignition switch OFF.

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

Power window main switch		Front power window switch (passenger side)		Continuity	
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

REAR LH : Diagnosis Procedure

YES

NO

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

>> Refer to PWC-37, "REAR LH : Diagnosis Procedure".

>> Power window serial link is OK.

1. Turn ignition switch ON.

Is the inspection result normal?

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

(+)			
Rear power window switch LH		()	Signal (Reference value)
Connector	Terminal	_	
D57	16	Ground	(V) 15 0 10 10 10 10 10 10 10 10 10 10 10 10 1

Is the inspection result normal?

```
>> Replace rear power window switch LH.
YES
```

NO >> GO TO 2.

2.CHECK POWER WINDOW SERIAL LINK CIRCUIT

[FRONT & REAR WINDOW ANTI-PINCH]

REAR LH : Description Power window main switch, front power window switch (passenger side), rear power window switch and BCM transmit and receive the signal by power window serial link. The signal mentioned below is transmitted from BCM to power window main switch, front power window switch (passenger side) and rear power window switch.

Keyless power window down signal

< DTC/CIRCUIT DIAGNOSIS >

>> Repair or replace harness.

NO

REAR LH

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

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(P) With CONSULT-III

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

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

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INFOID:000000006210991

INFOID:000000006210992

PWC INFOID:000000006210993

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

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

Power windo	Power window main switch		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	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.

REAR RH

REAR RH : Description

INFOID:000000006210994

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:000000006210995

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

(I) With CONSULT-III

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

Monitor item		Condition
CDL LOCK SW	LOCK	: ON
CDE 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-38</u>, "REAR RH : Diagnosis Procedure".

REAR RH : Diagnosis Procedure

INFOID:000000006210996

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.

PWC-38

POWER WINDOW SERIAL LINK

< DTC/CIRCUIT DIAGNOSIS >

IFRONT & REAR WINDOW ANTI-PINCH1

(1	-)			N 1
Rear power win	dow switch RH	()		Signal ence value)
Connector	Terminal			,
D77	16	Ground	(V) 15 10 5 0 10 ms	
•	ear power window sw	vitch RH.		
>> GO TO 2. HECK POWER W Turn ignition switch Disconnect power	INDOW SERIAL LIN OFF. window main switch etween power windo	IK CIRCUIT	ar power window switcl arness connector and i	
S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne	INDOW SERIAL LIN OFF. window main switch etween power windo ctor.	IK CIRCUIT connector and rea ow main switch ha	arness connector and	rear power window
S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne	INDOW SERIAL LIN OFF. window main switch etween power windo	IK CIRCUIT connector and rea ow main switch ha		
S >> Replace re >> GO TO 2. HECK POWER W Furn ignition switch Disconnect power Check continuity b RH harness conne	INDOW SERIAL LIN n OFF. window main switch etween power windo ctor.	IK CIRCUIT connector and rea ow main switch ha	er window switch RH	rear power window
S >> Replace re >> GO TO 2. CHECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8	INDOW SERIAL LIN o OFF. window main switch etween power windo ctor. w main switch Terminal 14	IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77	er window switch RH	Continuity Existed
S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8 Check continuity b	INDOW SERIAL LIN o OFF. window main switch etween power windo ctor. w main switch Terminal 14	IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77	er window switch RH Terminal 16	Continuity Continuity Existed round.
S >> Replace re >> GO TO 2. HECK POWER W Turn ignition switch Disconnect power Check continuity b RH harness conne Power windo Connector D8 Check continuity b	INDOW SERIAL LIN n OFF. window main switch etween power windo ctor. w main switch Terminal 14 etween power windo	IK CIRCUIT connector and rea ow main switch ha Rear pow Connector D77 ow main switch har	er window switch RH Terminal 16	Continuity Existed

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[FRONT & REAR WINDOW ANTI-PINCH]

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

INFOID:000000006847494

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status
FR WIPER HI	Other than front wiper switch HI	Off
	Front wiper switch HI	On
FR WIPER LOW	Other than front wiper switch LO	Off
	Front wiper switch LO	On
FR WASHER SW	Front washer switch OFF	Off
TR WASHER SW	Front washer switch ON	On
FR WIPER INT	Other than front wiper switch INT/AUTO	Off
	Front wiper switch INT/AUTO	On
FR WIPER STOP	Front wiper is not in STOP position	Off
FR WIPER STOP	Front wiper is in STOP position	On
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial posi- tion
	Other than turn signal switch RH	Off
TURN SIGNAL R	Turn signal switch RH	On
	Other than turn signal switch LH	Off
TURN SIGNAL L	Turn signal switch LH	On
	Other than lighting switch 1ST and 2ND	Off
TAIL LAMP SW	Lighting switch 1ST or 2ND	On
	Other than lighting switch HI	Off
HI BEAM SW	Lighting switch HI	On
	Other than lighting switch 2ND	Off
HEAD LAMP SW 1	Lighting switch 2ND	On
	Other than lighting switch 2ND	Off
HEAD LAMP SW 2	Lighting switch 2ND	On
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Other than lighting switch AUTO	Off
AUTO LIGHT SW	Lighting switch AUTO	On
	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
	Driver door closed	Off
DOOR SW-DR	Driver door opened	On
	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
DOOR SW-RR	Rear LH door opened	On

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	Off
JOOK JW-KL	Rear LH door opened	On
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
ODE ONLOOK OW	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK	Off
NET CTL LK-SW	Driver door key cylinder LOCK	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK	Off
VET CTE UN-SW	Driver door key cylinder LOCK	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
HAZARD SW	Hazard switch is OFF	Off
	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
FR CANCEL SW	Trunk lid opener cancel switch OFF	Off
IN CANCEL SW	Trunk lid opener cancel switch ON	On
TR/BD OPEN SW	Trunk lid opener switch OFF	Off
IN/BD OPEN 3W	While the trunk lid opener switch is turned ON	On
FRNK/HAT MNTR	Trunk lid closed	Off
	Trunk lid opened	On
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
KKE-LUCK	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
KE-UNLOCK	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
	TRUNK OPEN button of the Intelligent Key is pressed	On
	PANIC button of the Intelligent Key is not pressed	Off
RKE-PANIC	PANIC button of the Intelligent Key is pressed	On
	UNLOCK button of the Intelligent Key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta- neously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
	Bright outside of the vehicle	Close to 5 V
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V
	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	On
	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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
REQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off
LEQ 3W -BD/TR	Trunk lid opener request switch is pressed	On
PUSH SW	Push-button ignition switch (push switch) is not pressed	Off
-038 300	Push-button ignition switch (push switch) is pressed	On
GN RLY2 -F/B	Ignition switch in OFF or ACC position	Off
GN RETZ -T/D	Ignition switch in ON position	On
ACC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off
	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 nor- mal	On
	The brake pedal is not depressed	Off
BRAKE SW 2	The brake pedal is depressed	On
	 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
	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	Steering is unlocked	Off
D/L-LUCK	Steering is locked	On
S/L -UNLOCK	Steering is locked	Off
5/L-ONEOCK	Steering is unlocked	On
S/L RELAY-F/B	Ignition switch in OFF or ACC position	Off
D/L RELAT-F/D	Ignition switch in ON position	On
JNLK SEN -DR	Driver door is unlocked	Off
JNLK SEN -DK	Driver door is locked	On
PUSH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off
	Push-button ignition switch (push-switch) is pressed	On
GN RLY1 -F/B	Ignition switch in OFF or ACC position	Off
	Ignition switch in ON position	On
DETE SW -IPDM	Selector lever in any position other than P	Off
	Selector lever in P position	On
	Selector lever in any position other than P and N (Except M/T models) The clutch pedal is not depressed (M/T models)	Off
SFT PN -IPDM	 Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) 	On
	Selector lever in any position other than P	Off
SFT P -MET	Selector lever in P position	On
	Selector lever in any position other than N	Off
SFT N -MET	Selector lever in N position	On

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< ECU DIAGNOSIS INFORMATION >

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	Steering is unlocked	Off
S/L LOCK-IF DIVI	Steering is locked	On
S/L UNLK-IPDM	Steering is locked	Off
3/L UNLK-IPDIVI	Steering is unlocked	On
	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
S/L RELAY-REQ	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK	On
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
ID OK FLAG	Steering is locked	Reset
ID OK FLAG	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SWA SLOT	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.	_
	The key ID that the key slot receives is not recognized by any key ID registered to BCM.	Yet
CONFRM 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
	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

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID reg- istered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
	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
TP 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
IFS	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
TP 2	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
	The ID of first Intelligent Key is registered to BCM	Done
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	Done
ID REGOT FLT	ID of front LH tire transmitter is not registered	Yet
ID REGST FR1	ID of front RH tire transmitter is registered	Done
ID REGGI FRI	ID of front RH tire transmitter is not registered	Yet
ID REGST RR1	ID of rear RH tire transmitter is registered	Done
	ID of rear RH tire transmitter is not registered	Yet
	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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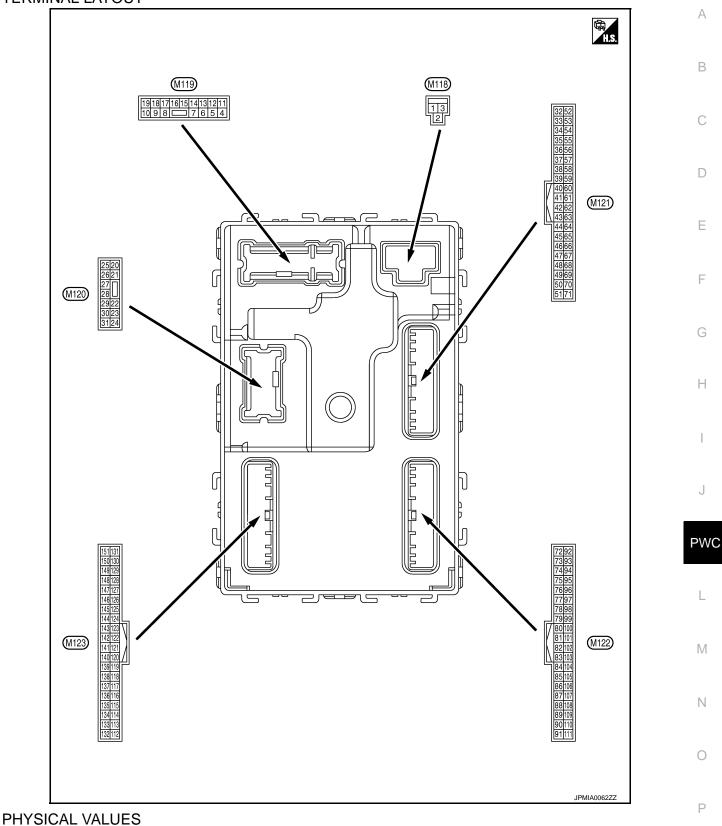
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TERMINAL LAYOUT



< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)
1 (W)	Ground	Battery power supply	Input	Ignition switch (DFF	Battery voltage
2 (Y)	Ground	P/W power supply (BAT)	Output	Ignition switch (DFF	12 V
3 (BG)	Ground	P/W power supply (RAP)	Output	Ignition switch (NC	12 V
				Interior room lamp battery saver is activated. (Cuts the interior 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)	Cround	LOCK	Output	door	Other than UNLOCK) Ac- tuator is not activated	0 V
7	Ground	Step lamp	Output	Step lamp	ON	0 V
(SB)	Cround		Output		OFF	12 V
8	Ground	All doors, fuel lid	Output	All doors, fuel	LOCK (Actuator is activated)	12 V
(V)	Cround	LOCK	Other than LOCK	Other than LOCK (Actuator is not activated)	0 V	
9	Ground	Driver door, fuel lid	Output Driver do	Driver door,	UNLOCK (Actuator is activated)	12 V
(G)	Cround	UNLOCK	Output	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)	Cround	LOCK	Output	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 (NC	0 V
					OFF	0 V
14	Crownel	Push-button ignition	Outrait	Toillonn		NOTE: When the illumination brighten- ing/dimming level is in the neutral position
(W)	Ground	switch illumination ground	Output	Tail lamp	ON	10 0 2 ms JSNIA0010GB
15 (BG)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(30)					ACC	0 V

< ECU DIAGNOSIS INFORMATION >

Imput/ (W) Condition Condition (Approx.) 1 - Signal name Input/ Output Turn signal switch OFF 0 V B 17 (W) Ground Turn signal RH (Fort) Output Ignition switch ON Turn signal switch OFF 0 V B 18 (BG) Ground Turn signal LH (Front) Output Ignition switch ON Turn signal switch OFF 0 V E 19 (V) Ground Room Ismp timer Control Output Interior room Iamp OFF 12 V H 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Turn signal switch OFF 0 V I 23 (LG) Ground Turn signal LH (Rear) Output Turn kild OPEN (Trunk kild opener actutator is not activated) 0 V <th></th> <th>nal No.</th> <th colspan="2">Description</th> <th colspan="2"></th> <th colspan="2">Value</th>		nal No.	Description				Value	
17 (W) Ground Turn signal RH (Frong) Output Ignition switch ON Turn signal switch RH Image: State of the system of th			Signal name			Condition	Value (Approx.)	A
17 (W) Ground Turn signal RH (Font) Output Ignition switch N Turn signal switch RH Image: Signal Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Switch Chief Signal Chief						Turn signal switch OFF	0 V	В
$ \begin{array}{c c c c c c } \hline \begin{tabular}{ c c c } \hline \begin{tabular}{ c c c c c } \hline \begin{tabular}{ c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$		Ground		Output		Turn signal switch RH		
$ \begin{array}{c c c c c c } 18\\ (BG) \\ $							PKID0926E	D
18 (BG) Ground Turn signal LH (Front) Output Ignition switch ON Turn signal switch LH Image: Constraint of the synthesis of the synthesyntem synte synthesis of the synthesynthesis of the synt						Turn signal switch OFF	0 V	E
19 (V) Ground Room lamp timer control Output Interior room lamp OFF 12 V H 20 (V) Ground Turn signal RH (Rear) Output Interior room lamp Turn signal switch OFF 0 V H 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 23 (LG) Ground Trunk lid open Output Trunk lid OPEN (Trunk lid opener actuator is activated) 12 V L 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V N 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON ON 0 V N		Ground	Turn signal LH (Front)	Output		Turn signal switch LH		F
$ \begin{array}{c c c c c c } \hline 19 \\ (V) \\ \hline (V) \\ (V$							PKID0926E	G
(V) Ground control Output lamp ON 0 V 20 Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V I 23 (LG) Ground Trunk lid open Output Trunk lid OPEN (Trunk lid opener actuator is activated) 12 V L 23 Ground Turn signal LH (Rear) Output Ignition switch ON OPEN (Trunk lid opener actuator is not activated) 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition Group N O 30 Ground Turk kroom lamp Output Trunk room ON ON OV N	19	Oneveral	Room lamp timer	Outrast	Interior room	OFF		Н
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Ground		Output	lamp	ON		
20 (V) Ground Turn signal RH (Rear) Output Ignition switch ON Turn signal switch RH Ignition switch Image: Solution State Image: Solut						Turn signal switch OFF	0 V	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Ground	Turn signal RH (Rear)	Output		Turn signal switch RH		J
(LG) Ground Hunk lid open Output Hunk lid Other than OPEN (Trunk lid opener actuator is not activated) OV M 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch OFF 0 V N 25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Image: State of the state	23		—	0.1.1		(Trunk lid opener actuator	6.5 V	L
25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition switch Is Ignit switch Is Ignition switc		Ground	i runk lid open	Output	i runk lid	(Trunk lid opener actuator	0 V	M
25 (Y) Ground Turn signal LH (Rear) Output Ignition switch ON Turn signal switch LH Ignition switch Is Ignit switch Is Ignition switc						Turn signal switch OFF	0 V	
30 Ground Trunk room lamp Output Trunk room ON 0 V		Ground	Turn signal LH (Rear)	Output		Turn signal switch LH		N O P
Ground Trunk room lamp Output I renk room					Truck	ON		-
		Ground	Trunk room lamp	Output		OFF	12 V	

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

Instruction Signal name Unput Curbuicht		nal No.	Description				Value	0
39 (W) Ground Rear bumper anten- na (+) Output When the turn uld opener re- operate witch is operate w			Signal name			Condition		A
(W) Ground na (+) Output operated with ignition switch OFF When Intelligent Key is not in the antenna detection area (V) Image: State is in the antenna detection area (V) Image: State is in the antenna detection area (V) Image: State is in the antenna detection area (V)	39		Rear humper anten-		lid opener re-	the antenna detection		B C D
47 (Y) Ground Ignition relay (IPDM E/R) control Output Ignition switch Or P O ACC 12 V 50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) 15 15 15 10 10 ms (V) 15 15 10 10 ms Input Trunk room lamp switch OFF (Trunk lid is closed) 11 18 V Input Inp		Ground		Output	operated with ignition switch	in the antenna detection		E
(Y) Ground E/R) controi Output Ignition switch ON 0 V 50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) 0 V Imput Imput Imput OFF (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput OFF (Trunk lid is closed) 0 V Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput Imput Imput Imput Imput Imput Imput Imput ON (Trunk lid is closed) 0 V Imput	47		Ignition relay (IPDM			OFF or ACC	12 V	G
50 (BG) Ground Trunk room lamp switch Input Trunk room lamp switch OFF (Trunk lid is closed) Imput for the second secon		Ground		Output	Ignition switch	ON	0 V	
52 (R) Ground Starter relay control Output Ignition switch ON (A/T mod- els) When selector lever is in P or N position 12 V PV 52 (R) Ground Starter relay control Output Ignition switch ON (M/T mod- els) When selector lever is not in P or N position 0 V L 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch OFF (Not pressed) 0 V N 64 (G) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Sounding 0 V N		Ground		Input		OFF (Trunk lid is closed)	15 10 5 0 10 ms JPMIA0011GB	H I J
52 (R) Ground Starter relay control Output Ignition switch on (A/T mod- els) or N position 0 V 0 V Ignition switch (N) Output Ignition switch on (M/T mod- els) When selector lever is not in P or N position 0 V L Ignition switch (SB) Ground Starter relay control Output When the clutch pedal is depressed Battery voltage N 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Sounding 0 V OV						ON (Trunk lid is opened)	0 V	
52 (R) Ground Starter relay control Output els) When selector lever is not in P or N position 0 V Ignition switch ON (M/T mod- els) Ignition switch ON (M/T mod- els) When the clutch pedal is depressed Battery voltage M 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Intelligent Key warning buzzer Intelligent Key warning buzzer Sounding 0 V				Outrut	ON (A/T mod-		12 V	PWC
(R) Ignition switch ON (M/T mod- els) When the clutch pedal is depressed Battery voltage When the clutch pedal is not depressed 0 V M 61 (SB) Ground Trunk lid opener re- quest switch Input Trunk lid open- er request switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warningbuzzer Sounding 0 V N	52	Ground	Starter relay control				0 V	L
61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener switch ON (Pressed) 0 V N 64 (C) Ground Intelligent Key warn- ing buzzer (Engine Output Intelligent Key warning buzzer Intelligent Key warning buzzer Output Sounding 0 V N	(R)	Ground	Statter relay control	Output			Battery voltage	
61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener request switch OFF (Not pressed) Imput 10 ms Imput 10 ms </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0 V</td> <td>M</td>							0 V	M
61 (SB) Ground Trunk lid opener request switch Input Trunk lid opener request switch OFF (Not pressed) Imput 10 ms Imput 10 ms </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>ON (Pressed)</td> <td>0 V</td> <td></td>						ON (Pressed)	0 V	
G Ground ing buzzer (Engine Output warning buzzer		Ground		Input	er request	OFF (Not pressed)	15 10 5 10 ms JPMIA0016GB	N O P
(C) Ground Ing buzzer (Engine Output warning buzzer	64					Sounding	0 V	
(Engine room) (Chaine room) (Not sourceing) (2 V	(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	Value (Approx.)
					Pressed	0 V
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid open- er switch	Not pressed	(V) 15 0 0 10 10 10 10 10 10 10 11.8 V
68 (BG)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8 V
					ON (When rear RH door opens)	0 V
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 JPMIA0011GB 11.8 V
					ON (When rear LH door opens)	0 V
72	Ground	Room antenna 2 (-)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(R)	Stound	(Center console)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s 1 5 0 1 s 1 5 0 1 s 1 5 0 1 s 10 5 0 1 s 10 5 0 1 s 10 5 0 1 s 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 5 0 10 10 5 0 10 10 10 10 10 10 10 10 10 10 10 10 1

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description) /= l++=	
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
73	Ground	Room antenna 2 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 5 0 1 5 0 1 5 0 1 5 0 1 5 10 5 0 1 5 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	B C D
(G)		(Center console)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 15 0 15 0 15 0 15 15 10 15 15 10 10 10 10 10 10 10 10 10 10 10 10 10	E
74	Ground	Passenger door an-		When the pas- senger door re- quest switch is	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 15 15 15 15 15 15 15 15 15	G H I
(SB)		tenna (-)	Output	operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 15 10 15 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15	J PWC
75	Ground	Bround Passenger door an- tenna (+)		When the pas- senger door re- quest switch is	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 0 1	M
(BR)			Output	operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB	O P

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
76	Ground	Driver door antenna	Output	When the driv- er door request switch is oper-	When Intelligent Key is in the antenna detection area	(V) 15 0 15 0 15 0 15 0 15 0 15 0 15 0 15	
(V)	Giouna	(-)	Cutput	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		When the driv- er door request	When Intelligent Key is in the antenna detection area	(V) 15 0 0 15 0 15 0 15 0 15 0 15 0 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	
(LG)		(+)	Output	switch is oper- ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB	
78		Room antenna 1 (–) (Instrument panel)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 5 0 1 s JMKIA0062GB	
(Y)	Ground				When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 1 s JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

nal No.	Description		2		Value	
	Signal name	Input/ Output		Condition	(Approx.)	
0	Room antenna 1 (+)	0.4-14	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 15 15 15 15 15 15 15 15 15 15	
Ground	(Instrument panel)	Output	ŎFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	
Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
Ground	NATS antenna amp.	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelli- gent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
Ground	Ignition relay [Fuse block (J/B)] control	Output	Ignition switch	OFF or ACC ON	0 V 12 V	
Ground	Remote keyless entry		During waiting		(V) 15 10 5 0 1 1 1 ms JMKIA0064GB	
Ground	tion	Output	When operating gent Key	either button on the Intelli-	(V) 15 10 5 0 1 1 ms JMKIA0065GB	
	color) - Ground Ground Ground	Signal name	Input/ Output-Signal nameInput/ OutputRoom antenna 1 (+) (Instrument panel)OutputGroundRoom antenna 1 (+) (Instrument panel)OutputGroundNATS antenna amp.Input/ OutputGroundNATS antenna amp.Input/ OutputGroundIgnition relay [Fuse block (J/B)] controlOutput	color) Signal name Input/ Output - Signal name Input/ Output Ground Room antenna 1 (+) (Instrument panel) Output Ignition switch OFF Ground NATS antenna amp. Input/ Output During waiting Ground NATS antenna amp. Input/ Output During waiting Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch Marcine Remote keyless entry receiver communica- tion Input/ Output Uring waiting	color) Signal name Input/ Output Condition - Signal name Input/ Output When Intelligent Key is in the passenger compart- ment Ground Room antenna 1 (+) (Instrument panel) Output Ignition switch OFF When Intelligent Key is not in the passenger compart- ment Ground NATS antenna amp. Input/ Output During waiting Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Ground NATS antenna amp. Input/ Output During waiting Ignition switch is pressed while inserting the Intelli- gent Key into the key slot. Ground Ignition relay [Fuse block (J/B)] control Output Ignition switch OFF or ACC ON Ground Remote keyless entry receiver communica- tion Input/ Output During waiting OFF or ACC When operating either button on the Intelli- Input/ Output When operating either button on the Intelli-	

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< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(vvire +	color) -	Signal name	Input/ Output		Condition	(Approx.)
					All switches OFF (Wiper volume dial 4)	(V) 15 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 be- low 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 >

Imput * Signal name Input Output Condition * - Signal name Output * -	Terminal No. (Wire color)		Description				Value	
88 (BC) Ground Combination switch INPUT 3 Input Combination switch Lighting switch HI (Wper volume dial 4) Viewson 1.1 V 88 (BC) Ground Combination switch INPUT 3 Input Combination switch Lighting switch HI (Wper volume dial 4) Viewson 1.3 V Imput Imput<		-	Signal name			Condition		/
$ \begin{array}{ c c c } \hline \\ \hline $							10 5 0 2 ms JPMIA0041GB	E
(BG) Ground INPUT 3 Input switch Imput switch Imput switch Imput			Combination switch		Combination		10 0 2 ms JPMIA0036GB	
$ \begin{array}{c c c c c c c c c } \hline & & & & & & & & & & & & & & & & & & $		Ground	INPUT 3	mput	SWITCH		10 0 2 ms JPMIA0037GB	ŀ
89 (BR) Ground Push-button ignition switch (Push switch) Input Push-button ignition nition switch (push switch) Pressed 0 V 90 (P) Ground CAN-L Input/ Output 91 (L) Ground CAN-H Input/ Output 91 (L) Ground CAN-H Input/ Output 92 (LG) Ground Key slot illumination Output Key slot illumination OFF 0 V 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking OFF 0 V						low with all switches OFFWiper volume dial 1Wiper volume dial 2		P
(BR)Groundswitch (Push switch)Input (push switch)Not pressedBattery voltage90 (P)GroundCAN-LInput/ Output———91 (L)GroundCAN-HInput/ Output———92 (LG)GroundKey slot illuminationOutputV——92 (LG)GroundKey slot illuminationOutputVInput/ OutputOFFO V92 (LG)GroundKey slot illuminationOutputKey slot illuminationInput/ OutputInput/ OutputInput/ OutputInput/ OUtputInput/ OUtput92 (LG)GroundKey slot illuminationOutputKey slot illuminationInput/ OutputInput/ Key slot illuminationInput/ OutputInput/ Input/ OutputInput/ Input/ OUtputInput/ <br< td=""><td>89</td><td></td><td>Push-button ignition</td><td></td><td></td><td>Pressed</td><td></td><td></td></br<>	89		Push-button ignition			Pressed		
(P) Ground CAN-L Output — — 91 (L) Ground CAN-H Input/ Output — — — 91 (L) Ground CAN-H Input/ Output — — — 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking If If 92 (LG) Ground Key slot illumination Output Key slot illumi- nation Blinking If If If		Ground	switch (Push switch)	Input		Not pressed	Battery voltage	[
(L) Ground CAN-H Output 92 (LG) Ground Key slot illumination Output Key slot illumi- nation OFF 0 V		Ground	CAN-L			_	_	
92 (LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking Dutput A Sector 2015		Ground	CAN-H			_	_	
92 (LG) Ground Key slot illumination Output Key slot illumination Blinking Blinking Blinking JPMIA0015GB						OFF	0 V	
	92 (LG) Ground	Ground	Key slot illumination	Output		Blinking	15 10 5 0 1 s JPMIA0015GB	
						ON		

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)
93 (GR)	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(GR)					ON	0 V
95 (BG)	Ground	ACC relay control	Output	Ignition switch	OFF ACC or ON	0 V 12 V
96 (GR)	Ground	A/T shift selector (De- tention switch) power supply	Output		_	12 V
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)		tion No. 1		g	UNLOCK status	12 V
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	12 V
(P)		tion No. 2		5	UNLOCK status	0 V
		Selector lever P posi- tion switch (A/T mod-		Selector lever	P position	0 V
		els)		Selector level	Any position other than P	12 V
99		ASCD clutch switch		ASCD clutch	OFF (Clutch pedal is de- pressed)	0 V
(R)* ¹ (BR)* ²	Ground	(M/T models without ICC)	Input	switch	ON (Clutch pedal is not depressed)	12 V
		ICC clutch switch (M/		ICC clutch	OFF (Clutch pedal is de- pressed)	0 V
		T models with ICC)		switch	ON (Clutch pedal is not depressed)	12 V
					ON (Pressed)	0 V
100 (Y)	Ground	Passenger door re- quest switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 0 10 10 ms JPMIA0016GB 1.0 V
					ON (Pressed)	0 V
101 (P)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 10 10 10 10 10 1.0 V
102	Ground	Blower fan motor re-	Output	Ignition owitch	OFF or ACC	0 V
(BG)	Ground	lay control	Output	Ignition switch	ON	12 V
103 (P)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch C	DFF	12 V
106	Ground	Steering lock unit	Output	Ignition switch	OFF or ACC	12 V
(SB)	Ground	power supply	Cuiput		ON	0 V

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No. (Wire color)		Description				Value	
(vvire +		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 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 1.3 V	
					Front wiper switch LO	(V) 15 10 2 ms JPMIA0038GB 1.3 V	
					Front washer switch ON	(V) 10 5 0 2 ms JPMIA0039GB 1.3 V	

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< 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	
108	Ground	Combination switch INPUT 4	Input	Combination	Lighting switch AUTO (Wiper volume dial 4)	(V) 15 10 0 2 ms JPMIA0038GB 1.3 V	
(R)					Lighting switch 1ST (Wiper volume dial 4)	(V) 15 0 0 2 ms JPMIA0036GB 1.3 V	
					Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	(V) 15 10 5 2 ms JPMIA0039GB 1.3 V	

< ECU DIAGNOSIS INFORMATION >

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

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
					LOCK status	12 V
111 (Y)	Ground	Steering lock unit communication	Input/ Output	Steering lock	LOCK or UNLOCK	(V) 15 10 50 50 ms JMKIA0066GB
					For 15 seconds after UN- LOCK	12 V
					15 seconds or later after UNLOCK	0 V
112 (R)	Ground	Light and rain sensor serial link	Input/ Output	Ignition switch C	DN	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10
113	Crownd	d Optical sensor	Input	Input Ignition switch ON	When bright outside of the vehicle	Close to 5 V
(BG)	Ground				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		switch	ON (Clutch pedal is de- pressed)	Battery voltage
116 (SB)	Ground	Stop lamp switch 1	Input			Battery voltage
		Stop lamp switch 2 (Without ICC) d Stop lamp switch 2 (With ICC)	- Input	Stop lamp	OFF (Brake pedal is not depressed)	0 V
118	Ground			switch	ON (Brake pedal is de- pressed)	Battery voltage
(BR)	Ground			Stop lamp switch OFF (Brake pedal is not depressed) and ICC brake hold relay OFF		0 V
				Stop lamp switch ON (Brake pedal is de- pressed) or ICC brake hold relay ON		Battery voltage
119 (SB)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF) UNLOCK status	(V) 15 0 10 ms JPMIA0012GB 1.1 V
					(Unlock switch sensor ON)	0 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value
(VVire +	color)	Signal name	Input/ Output		Condition	(Approx.)
121	Ground	Key slot switch	Input	slot	gent Key is inserted into key	12 V
(SB)	Cround Rey slot switch			When the Intellig	gent Key is not inserted into	0 V
123 (V)	Ground	IGN feedback	Input	Ignition switch	OFF or ACC ON	0 V Battery voltage
124 (R)	Ground	Passenger door switch	Input	Passenger door switch	OFF (Door close)	(V) 15 0 0 10 ms JPMIA0011GB 11.8 V
					ON (Door open)	0 V
129 (BG)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid open- er cancel switch	CANCEL	(V) 15 0 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 10 ms 10.2 V
				Ignition switch C	OFF or ACC	12 V
					ON (Tail lamps OFF)	9.5 V
133 (L)	Ground	Push-button ignition switch illumination	Output	Push-button ig- nition switch il- lumination	ON (Tail lamps ON)	NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 0 JPMIA0159GB 0 V
134				LOCK indicator	OFF	Battery voltage
(LG)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch C	DN	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)
. <u> </u>	_	Receiver and sensor	Output		OFF	0 V
138 (V)	Ground	power supply	Output	Ignition switch	ACC or ON	5.0 V
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 4 2 0 + 0.2s OCC3881D
(L)		er communication	Output	ON	When receiving the signal from the transmitter	(V) 6 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
140	Ground	Selector lever P/N	Input	Selector lever	P or N position	12 V
(B)	0.00.00	position			Except P and N positions	0 V 0 V
141 (W)	Ground	Security indicator	Output	Security indica- tor	Blinking	(V) 15 0 15 0 15 15 15 15 15 15 15 15 15 15
					OFF	12 V
					All switches OFF Lighting switch 1ST	0 V
		Combination switch			Lighting switch HI	(V) 15
142				Combination switch	Lighting switch 2ND	
(BR)	Ground	OUTPUT 5	Output	(Wiper volume dial 4)	Turn signal switch RH	10 5 0 2 ms JPMIA0031GB 10.7 V
					All switches OFF (Wiper volume dial 4)	0 V
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	Front wiper switch HI (Wiper volume dial 4) Any of the conditions be- low 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 0 2 ms JPMIA0032GB 10.7 V

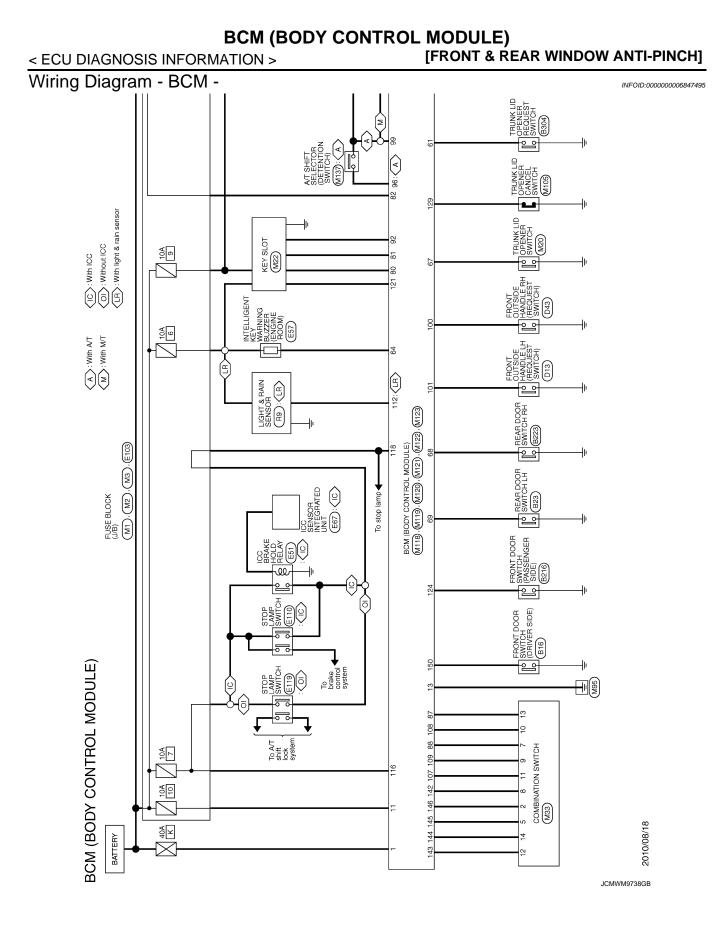
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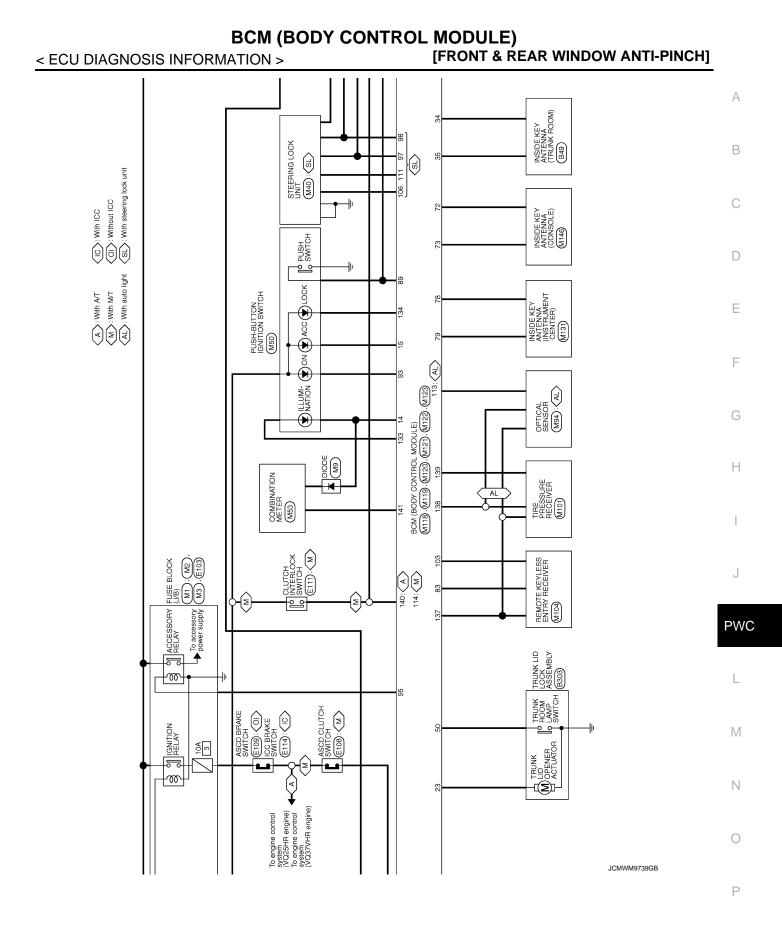
[FRONT & REAR WINDOW ANTI-PINCH]

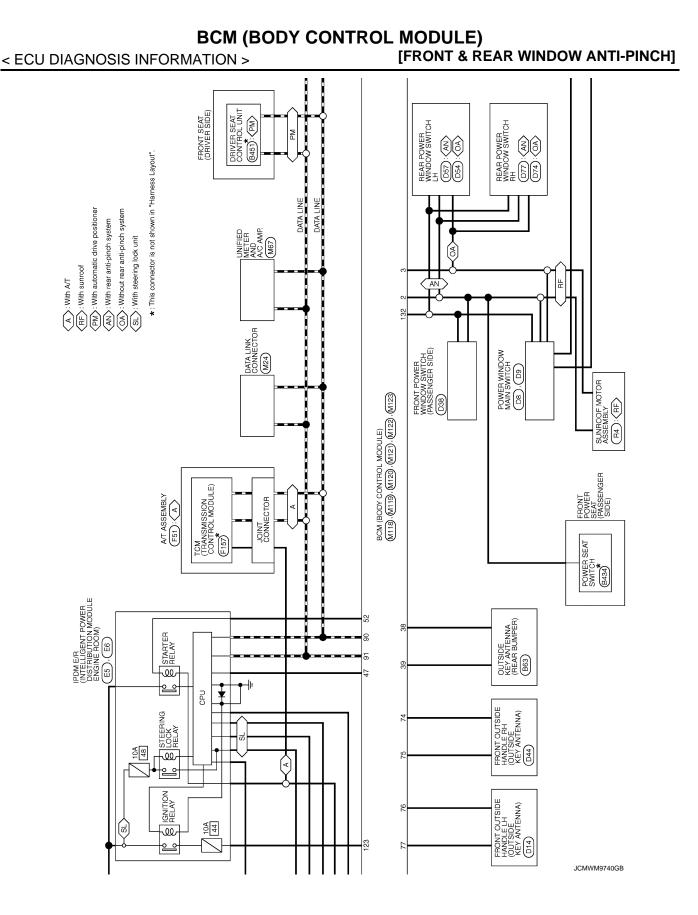
Terminal No. (Wire color)		Description				Value	
(vvire +	- color)	Signal name Input/ Output		Condition		(Approx.)	
					All switches OFF (Wiper volume dial 4)	0 V	
				Combination switch	Front washer switch ON (Wiper volume dial 4)	(V) 15	
144 (G)	Ground	Combination switch OUTPUT 2			Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5	10 5 0 	
					Wiper volume dial 6	JPMIA0033GB 10.7 V	
					All switches OFF	0 V	
					Front wiper switch INT/ AUTO	(V)	
145		Combination switch		Combination switch	Front wiper switch LO		
(L)	Ground	OUTPUT 3	Output	(Wiper volume dial 4)	Lighting switch AUTO	5 2 ms JPMIA0034GB 10.7 V	
		Combination switch OUTPUT 4			All switches OFF	0 V	
					Front fog lamp switch ON		
				Combination	Lighting switch 2ND	(V) 15	
146 (SB)	Ground		Output	switch (Wiper volume	Lighting switch PASS		
	dial 4)	dial 4)	Turn signal switch LH	2 ms JPMIA0035GB 10.7 V			
						(V)	
150 (GR)	Ground	Driver door switch	Input	Driver door switch	OFF (Door close)	15 0 0 10 ms JPMIA0011GB	
					ON (Door open)	11.8 V 0 V	
151		Rear window defog-		Rear window	Active	0 V	
(G)	Ground	ger relay control	Output	defogger	Not activated	Battery voltage	

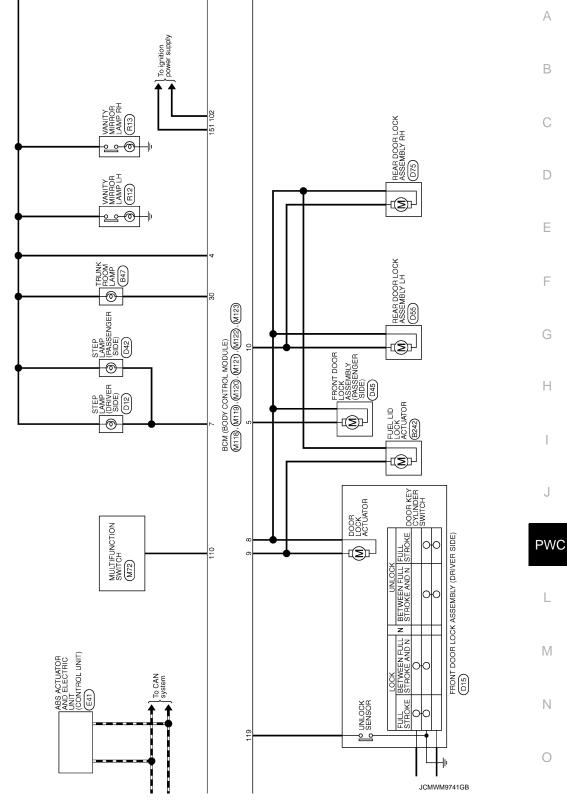
• *2: M/T models

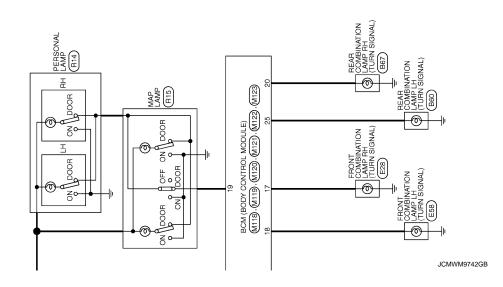
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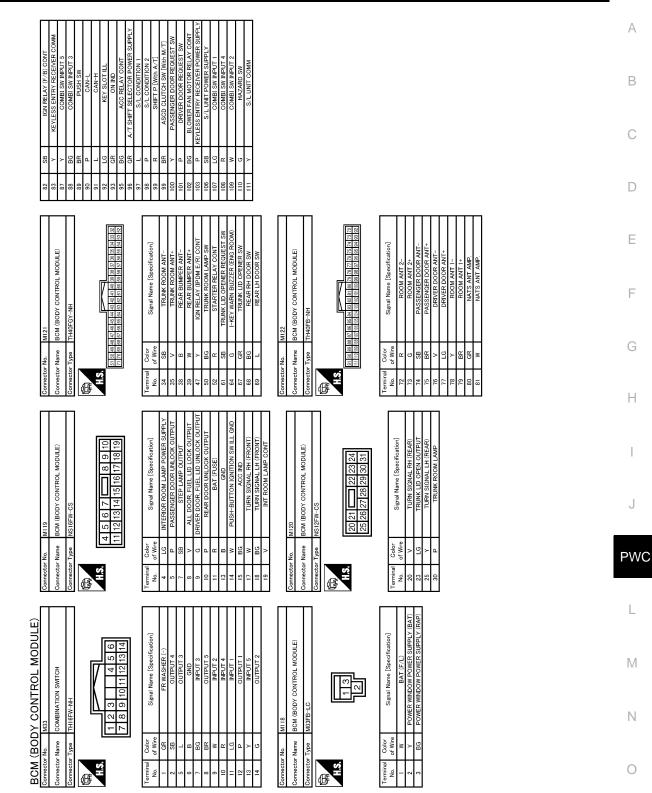






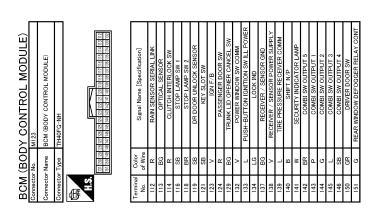
< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



JCMWM9743GB

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JCMWM9744GB

Fail-safe

FAIL-SAFE CONTROL BY DTC

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

INFOID:000000006847496

< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS 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 $ON \rightarrow OFF$
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actua- tor and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status be- comes consistent Starter control relay signal Starter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (12 V) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation	
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistentStarter motor relay control signalStarter relay status signal (CAN)	
B2609: S/L STATUS	Inhibit engine crankingInhibit steering lock	 When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status 	
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (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 fulfilledPower position changes to ACCReceives engine status signal (CAN)	
B2612: S/L STATUS	 Inhibit engine cranking Inhibit steering lock 	 When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R) 	
B2617: 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 be- comes normal	
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control in- side BCM becomes normal	
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization	
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) 	
B26E9: S/L STATUS	 Inhibit engine cranking Inhibit steering lock 	 When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (12 V) 	

DTC Inspection Priority Chart

INFOID:000000006847497

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

BCM (BODY CONTROL MODULE)

IFRONT & REAR WINDOW ANTI-PINCH1

CU DIAGNOSIS INFORMATION > Priority B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B26004: IGNITION RELAY 		[FRONT & REAR WINDOW ANTI-PINCH]
Priority		DTC
4	 B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSITION B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2609: S/L STATUS B2604: IGNITION RELAY 	
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] 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 BCS-15, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)".

INFOID:000000006847498

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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-34
U1010: CONTROL UNIT(CAN)	_	—	—	_	BCS-35
U0415: VEHICLE SPEED	_	—	—	_	BCS-36
B2013: ID DISCORD BCM-S/L	×	×	—	_	<u>SEC-55</u>
B2014: CHAIN OF S/L-BCM	×	×		_	<u>SEC-56</u>
B2190: NATS ANTENNA AMP	×	—	_	_	<u>SEC-47</u>
B2191: DIFFERENCE OF KEY	×			_	<u>SEC-50</u>
B2192: ID DISCORD BCM-ECM	×			_	SEC-51
B2193: CHAIN OF BCM-ECM	×	_		_	<u>SEC-53</u>
B2195: ANTI-SCANNING	×	_	—	_	<u>SEC-54</u>
B2553: IGNITION RELAY	_	×	_	_	PCS-49
B2555: STOP LAMP	_	×	_	_	<u>SEC-59</u>
B2556: PUSH-BTN IGN SW	_	×	×	_	<u>SEC-61</u>
B2557: VEHICLE SPEED	×	×	×	_	<u>SEC-63</u>
B2560: STARTER CONT RELAY	×	×	×	_	SEC-64
B2562: LOW VOLTAGE	_	×		_	BCS-37
B2601: SHIFT POSITION	×	×	×		<u>SEC-65</u>
B2602: SHIFT POSITION	×	×	×		<u>SEC-68</u>
B2603: SHIFT POSI STATUS	×	×	×	_	<u>SEC-70</u>
B2604: PNP/CLUTCH SW	×	×	×		<u>SEC-73</u>
B2605: PNP/CLUTCH SW	×	×	×	_	<u>SEC-75</u>
B2606: S/L RELAY	×	×	×	_	<u>SEC-77</u>
B2607: S/L RELAY	×	×	×		<u>SEC-78</u>
B2608: STARTER RELAY	×	×	×		SEC-80
B2609: S/L STATUS	×	×	×		<u>SEC-82</u>
B260A: IGNITION RELAY	×	×	×		PCS-51
B260B: STEERING LOCK UNIT		×	×		<u>SEC-86</u>
B260C: STEERING LOCK UNIT		×	×		<u>SEC-87</u>
B260D: STEERING LOCK UNIT		×	×		<u>SEC-88</u>
B260F: ENG STATE SIG LOST	×	×	×		<u>SEC-89</u>
B2612: S/L STATUS	×	×	×		<u>SEC-94</u>
B2614: BCM	_	×	~ ×		<u>PCS-53</u>
B2615: BCM		× *	×	_	PCS-55
B2616: BCM		× ×	×		<u>PCS-55</u> <u>PCS-57</u>
B2617: BCM	~				<u>SEC-98</u>
B2618: BCM	×	×	×		
	×	×	×		PCS-59
B2619: BCM	×	×	×		SEC-100
B261A: PUSH-BTN IGN SW		×	×		PCS-60
B261E: VEHICLE TYPE	×	×	imes (Turn ON for 15 seconds)	—	<u>SEC-101</u>

Revision: 2011 November

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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	A
B2621: INSIDE ANTENNA	—	×	—	—	DLK-59	В
B2622: INSIDE ANTENNA	—	×	—	—	DLK-61	
B2623: INSIDE ANTENNA	—	×	—	—	DLK-63	
B26E8: CLUTCH SW	×	×	×	—	<u>SEC-90</u>	С
B26E9: S/L STATUS	×	×	imes (Turn ON for 15 seconds)	_	<u>SEC-92</u>	
B26EA: KEY REGISTRATION	_	×	× (Turn ON for 15 seconds)	_	<u>SEC-93</u>	D
C1704: LOW PRESSURE FL	—	—	—	×		Е
C1705: LOW PRESSURE FR	—	—	—	×		
C1706: LOW PRESSURE RR	—	—	—	×	<u>WT-24</u>	
C1707: LOW PRESSURE RL	—	—	—	×		F
C1708: [NO DATA] FL	—	—	—	×		
C1709: [NO DATA] FR	_	—	—	×		
C1710: [NO DATA] RR	_	—	—	×	<u>WT-26</u>	G
C1711: [NO DATA] RL	—	—	—	×		
C1716: [PRESSDATA ERR] FL	_	—	—	×		Н
C1717: [PRESSDATA ERR] FR	—	—	_	×	WT 00	
C1718: [PRESSDATA ERR] RR	—	_	—	×	<u>WT-29</u>	
C1719: [PRESSDATA ERR] RL	—	—	—	×		
C1729: VHCL SPEED SIG ERR	—	_	—	×	<u>WT-30</u>	
C1734: CONTROL UNIT	—	—	—	×	<u>WT-31</u>	J

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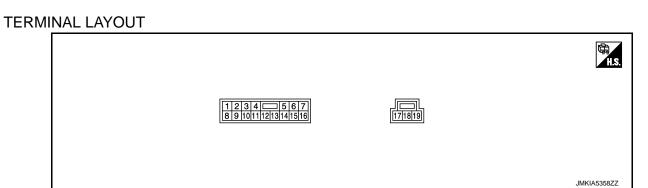
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< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000006211002



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 \rightarrow Locked)	$5 \rightarrow 0$
6 (Y)	Ground	Door key cylinder switch UNLOCK signal	Input	Key position (Neutral \rightarrow Unlocked)	$5 \rightarrow 0$
8 (L)	Ground	Front driver side power win- dow 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 mo- tor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
				Ignition switch ON	12
10	Ground	Rap signal	Input	Within 45 second after ig- nition switch is turned to OFF	12
(SB)				When driver side or pas- senger side door is opened during retained power operation	0
11 (G)	Ground	Front driver side power win- dow motor DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	12

< ECU DIAGNOSIS INFORMATION >

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[FRONT & REAR WINDOW ANTI-PINCH]

Terminal No. (wire color)		Description		Condition	Voltage (V)	
+	_	Signal name	Input/ Output	Condition	(Approx.)	
13 (P)	Ground	Encoder pulse signal 1	Input	When power window mo- tor operates.	(V) 6 4 2 0 10 ms	
14 (V)	Ground	Power window serial link	Input/ Output	Ignition switch ON or pow- er window timer operat- ing.	(V) 15 0 10 ms JPMA0013GB	
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	

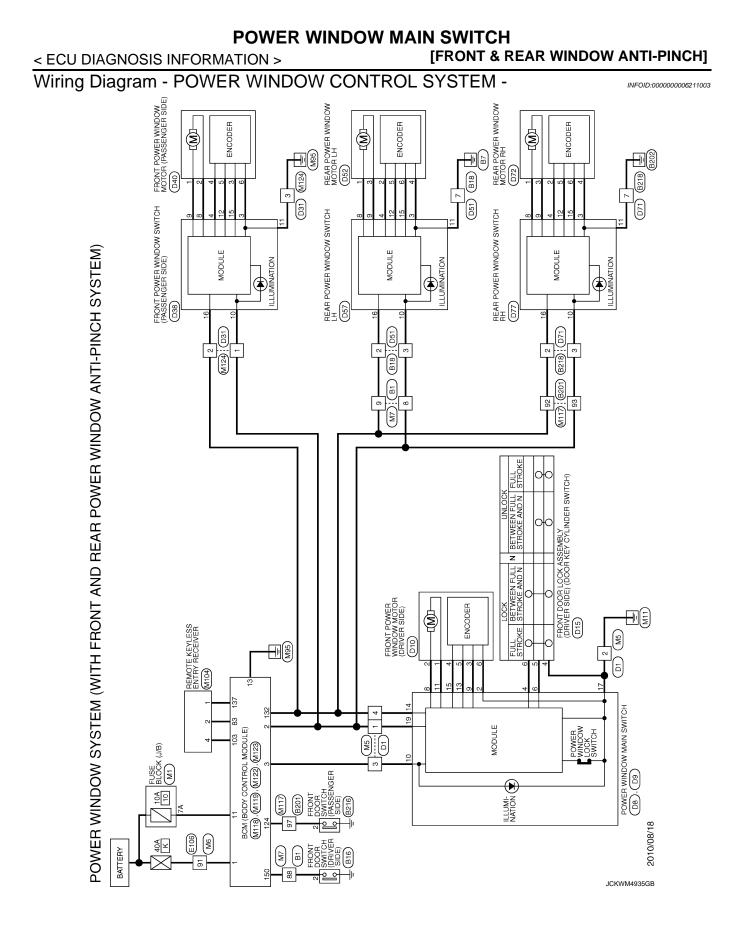
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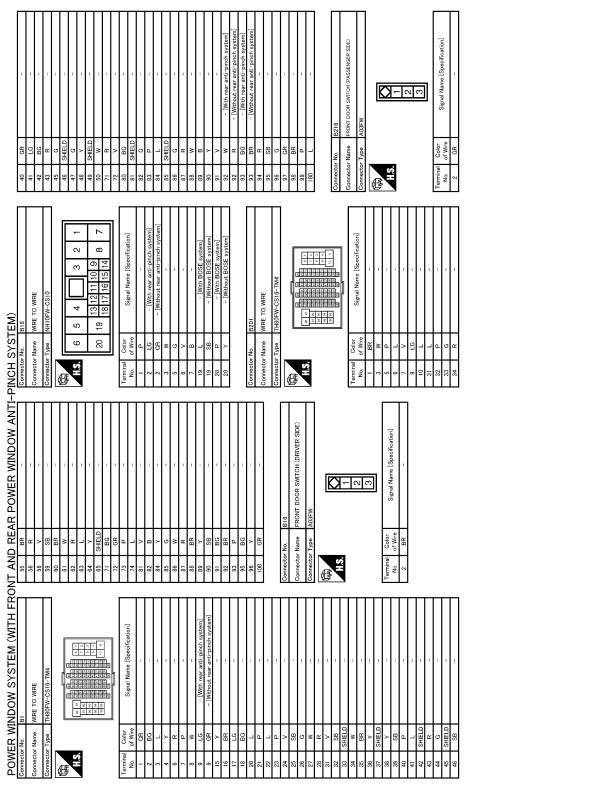
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Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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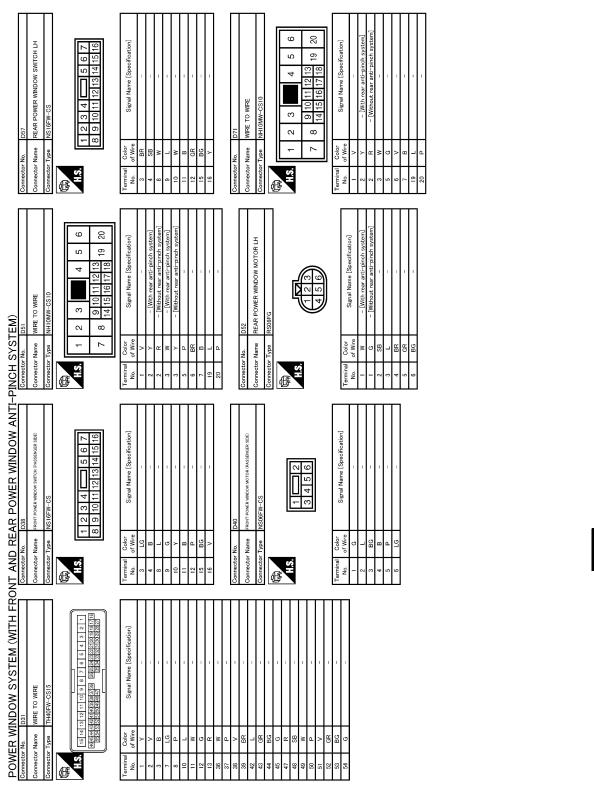
FRONT DOOR LOCK ASSEMBLY (DRIVER SIDE) Signal Name [Specification] 56 1 2 Color of Wire ector Name 9 ª H.S. erminal No. 倨 FRONT POWER WINDOW MOTOR (DRIVER SIDE Signal Name [Specification] Signal Name [Specification] POWER WINDOW MAIN SWITCH 17 18 19 2 6 1 1 3 4 5 AND REAR POWER WINDOW ANTI-PINCH SYSTEM) 28 8 с ч > в Color of Wire ype Connector Type Color of Wire - 8 8 4 5 Connector Name Connector Name nnector No. Connector No. H.S. Terminal No. H.S. Ferminal No. 9 2 G ß đ Signal Name [Specification] 6 1 2 3 4 5 6 8 9 10 11 12 13 14 15 POWER WINDOW MAIN SWITCH Color of Wire W GR GR - H a H a H a a a R nnector Name nnector Type ᆔᇣᇣᇻ œ # ᆂᄧ ≊≥ BG 租 H.S. Š POWER WINDOW SYSTEM (WITH FRONT [15] [14] 13 12 1 (15) [14] 13 [12] 1 (15) [16] [16] [16] [16] [16] (15) [16] [16] [16] [16] [16] [16] [16] (15) [16] [-Signal Name [Specification] Signal Name [Specification] N ω o 14 ო 5 6 WIRE TO WIRE WIRE TO WIRE 4 13 ß 19 Color of Wire Color of Wire SB GR BG BG L L BR 9 20 nnector Name nnector Name 비기미 Tvpe яB ۵ H.S.H erminal No. H.S.H rminal No. ß ß

JCKWM4937GB

Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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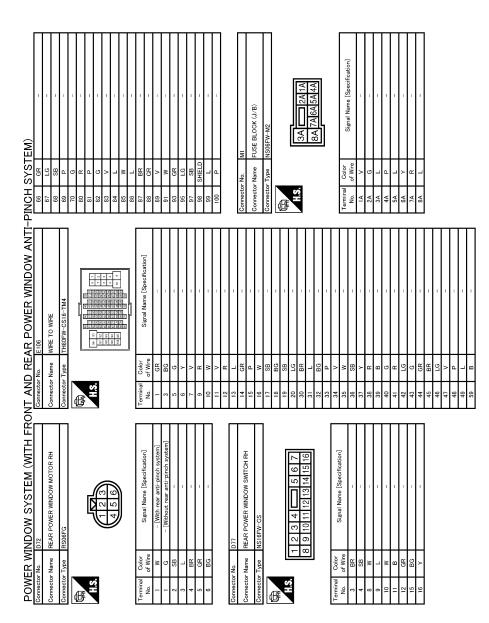
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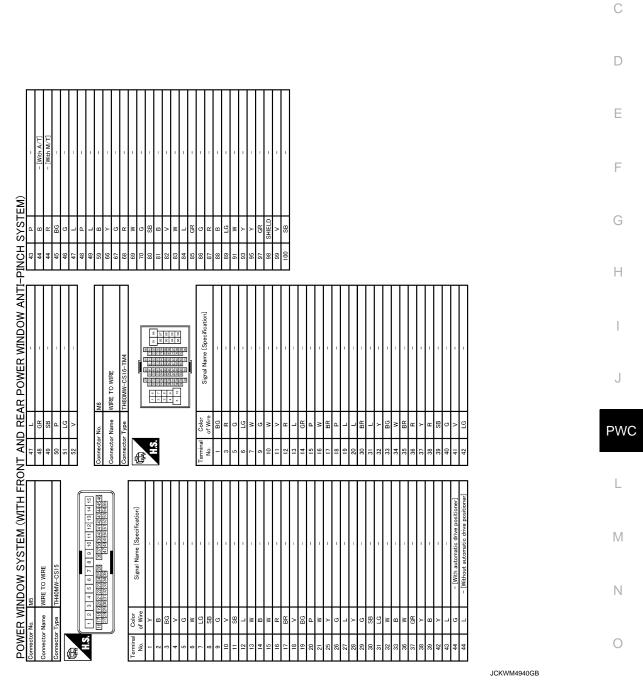
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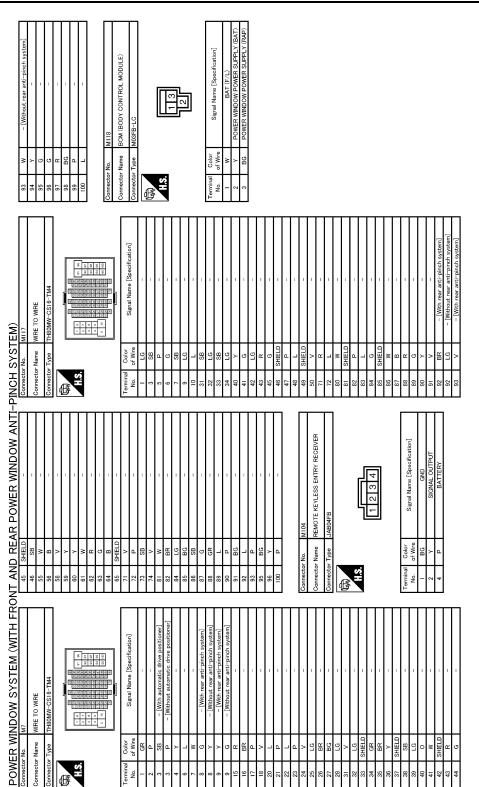
[FRONT & REAR WINDOW ANTI-PINCH]



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< ECU DIAGNOSIS INFORMATION >

< ECU DIAGNOSIS INFORMATION >	[FRONT & REAR WINDOW ANTI-PINCH]	
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	Signal Name [Specification]	F
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REAR POWER WINDOW ANT W MATS ANT ANP SB MATS ANT ANP Y MATS ANT ANP Y RELAY (F.B) CONT Y REUT Y COMBLSW INPUT 5 BR PUNL 4 D COMBLSW INPUT 3 BR PUNL 4 COMBLSW INPUT 3 COMBLSW INPUT 3 BR COMBLSW INPUT 3 COMBLSW INPUT 3 COMBLSW INPUT 3 COMBLSW INPUT 3 COMPLEX COMBLSW INPUT 3 COMPLEX COMPLST COMPLEX COMBLSW INPUT 3 COMPLEX COMBLSW INPUT 3 COMPLEX COMPLST COMPLEX COMBLSW INPUT 1 COMBLSW INPUT 1 COMBLSW INPUT 1 COMBLSW INPUT 1 R COMBLSW INPUT 2 R COMBLSW INPUT 2 R COMBLSW INPUT 1 <t< td=""><td>DY CONTROL MODULE) NH decargation decargation Signal Name (Specification) ann SENSOR SERIAL LINK OPTICAL SENSOR COTTCAH INTERCOK SW COTTCAH INTERC</td><td>I</td></t<>	DY CONTROL MODULE) NH decargation decargation Signal Name (Specification) ann SENSOR SERIAL LINK OPTICAL SENSOR COTTCAH INTERCOK SW COTTCAH INTERC	I
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Fail-safe

INFOID:000000006211004 Ρ C

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.

< ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow 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.

1234 567 8910111213141516

< ECU DIAGNOSIS INFORMATION >

FRONT POWER WINDOW SWITCH

Reference Value

INFOID:000000006211005



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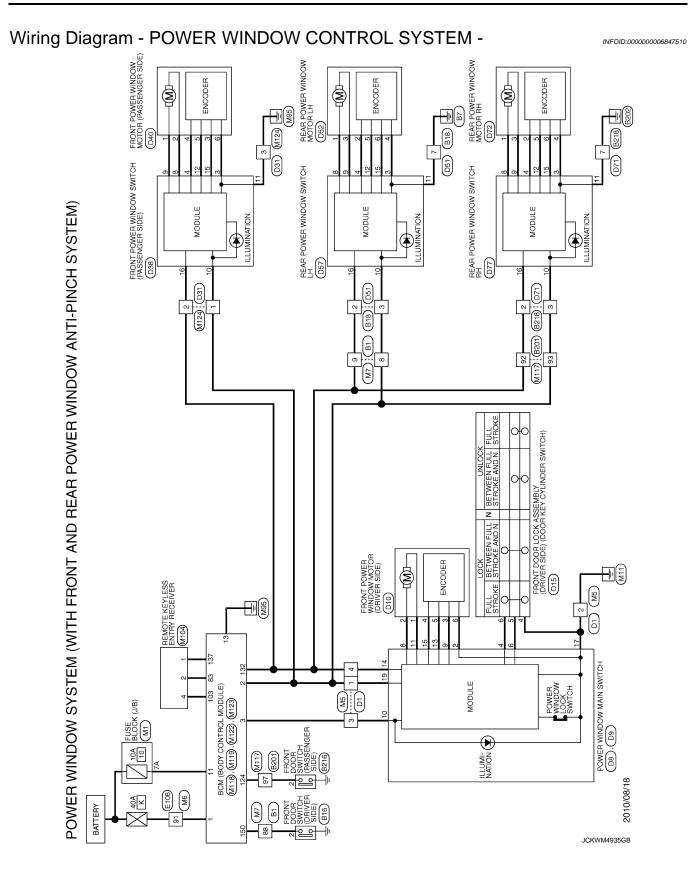
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PHYSICAL VALUES

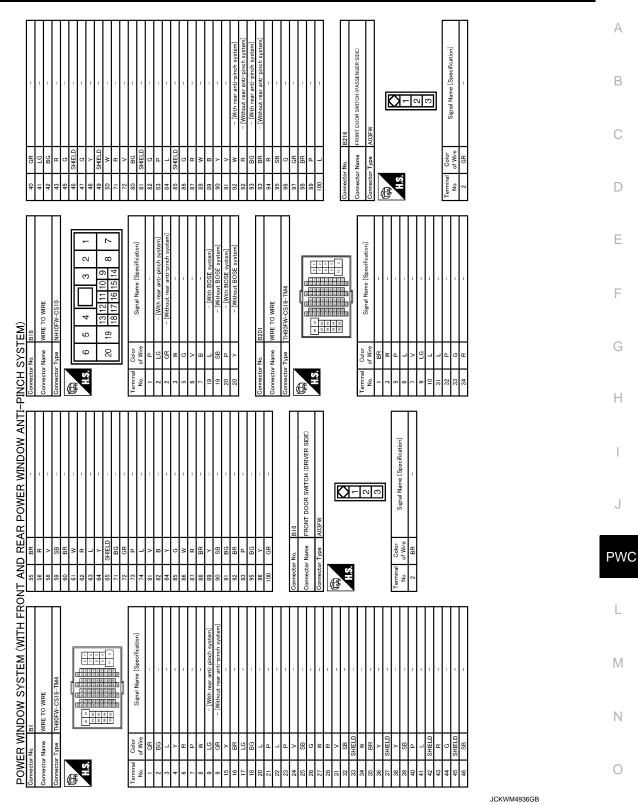
	inal No. e color)	Description		Condition	Voltage (V)
+	_	Signal name	Input/ Output	Condition	(Approx.)
3 (LG)	Ground	Encoder ground	_	_	0
4 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	12
8 (L)	Ground	Power window motor DOWN signal	Output	When power window 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 20 10 ms JMKIA0070GB
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

Revision: 2011 November



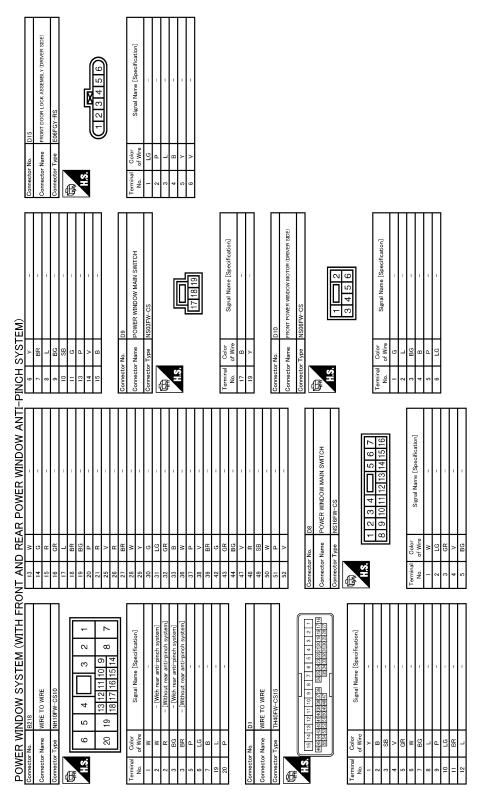
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[FRONT & REAR WINDOW ANTI-PINCH]



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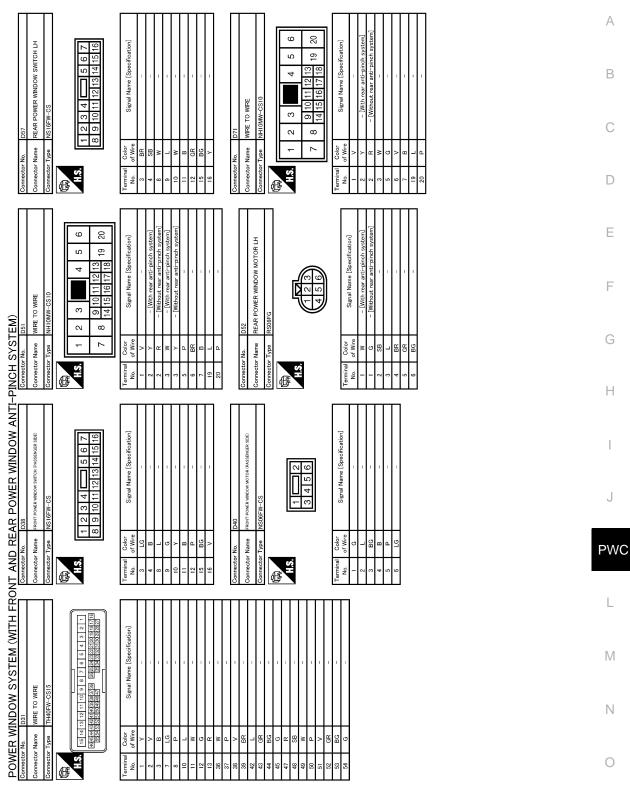
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< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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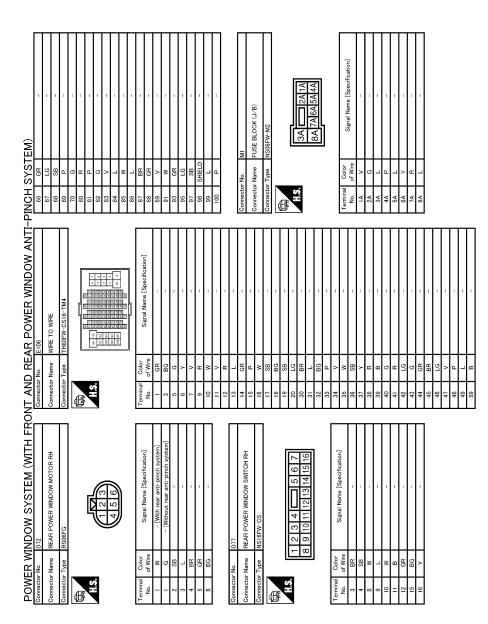
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FRONT POWER WINDOW SWITCH < ECU DIAGNOSIS INFORMATION > [FRONT & REAR WINDOW ANTI-PINCH]

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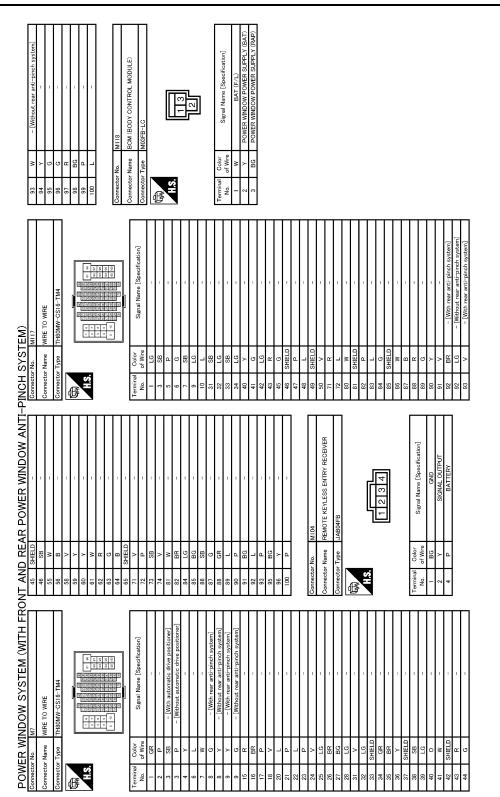
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Fail-safe

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JCKWM4942GB

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.

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

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

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

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

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

< ECU DIAGNOSIS INFORMATION >

REAR POWER WINDOW SWITCH

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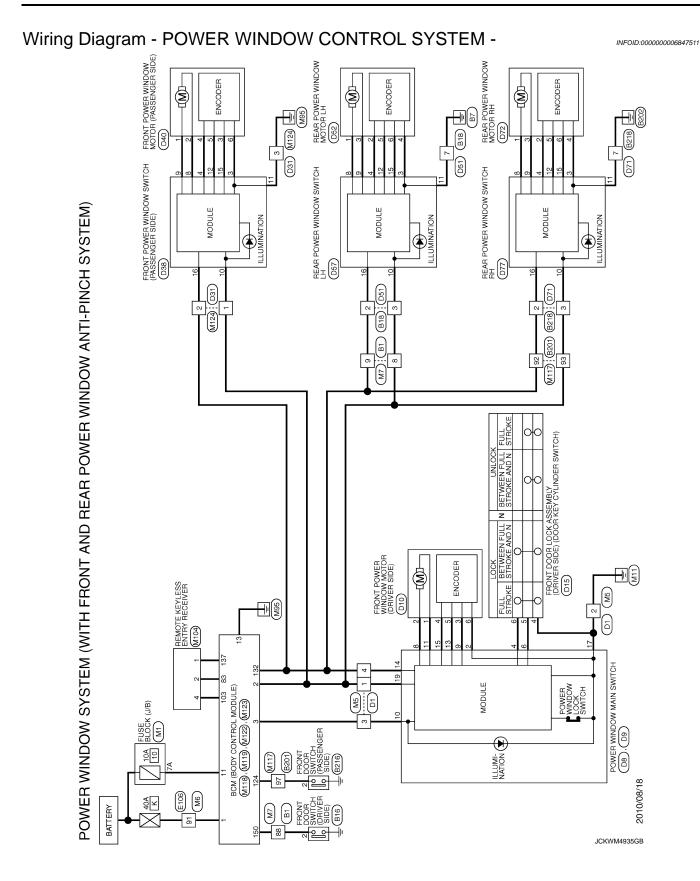
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PHYSICAL VALUES

	iinal No. e 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 pow- er 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 oper- ates.	(V) 6 4 2 0 10 ms JMKIA0070GB
15 (BG)	Ground	Encoder pulse signal 2	Input	When power window motor oper- ates.	(V) 6 2 0 10 ms JMKIA0070GB
16 (Y)	Ground	Power window serial link	Input/ Output	Ignition switch ON or power win- dow timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB

Revision: 2011 November

2011 G Sedan



< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]

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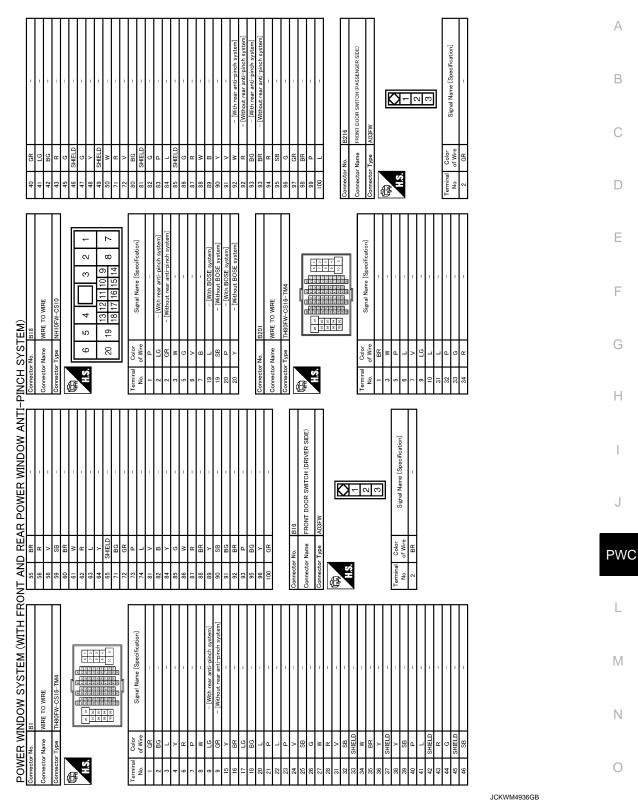
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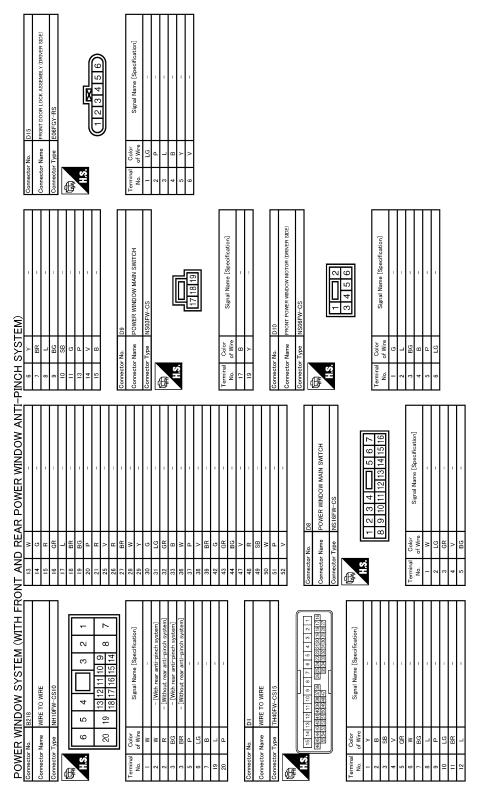
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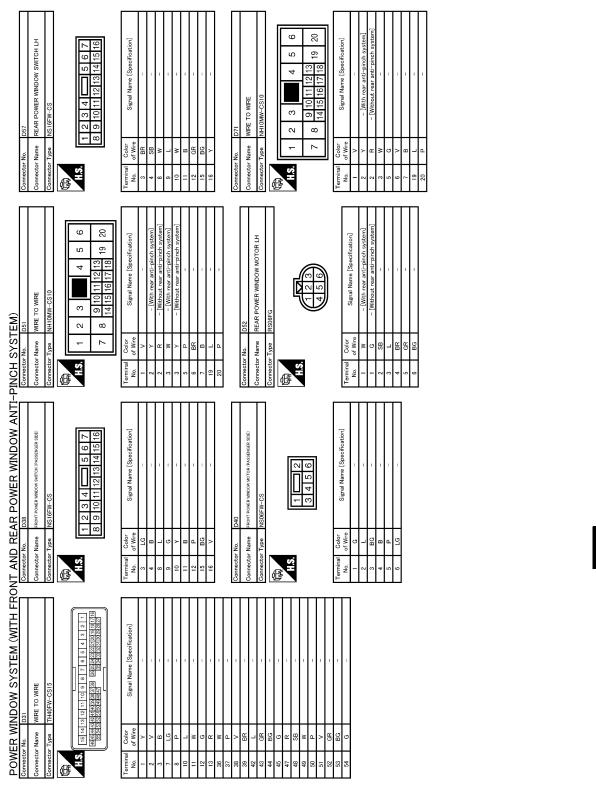
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< ECU DIAGNOSIS INFORMATION >

[FRONT & REAR WINDOW ANTI-PINCH]



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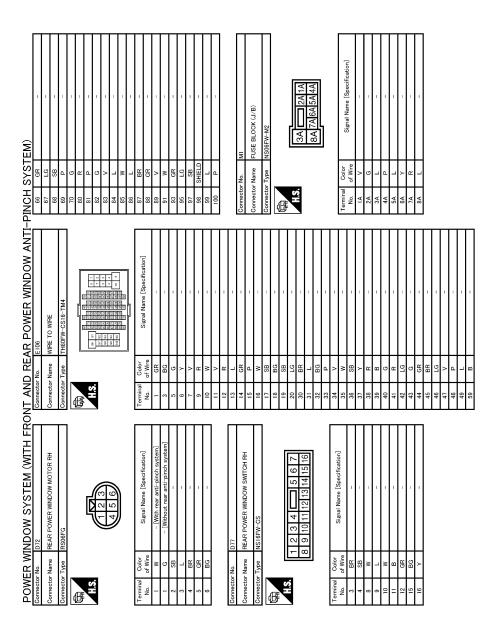
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REAR POWER WINDOW SWITCH < ECU DIAGNOSIS INFORMATION > [FRONT & REAR WINDOW ANTI-PINCH]

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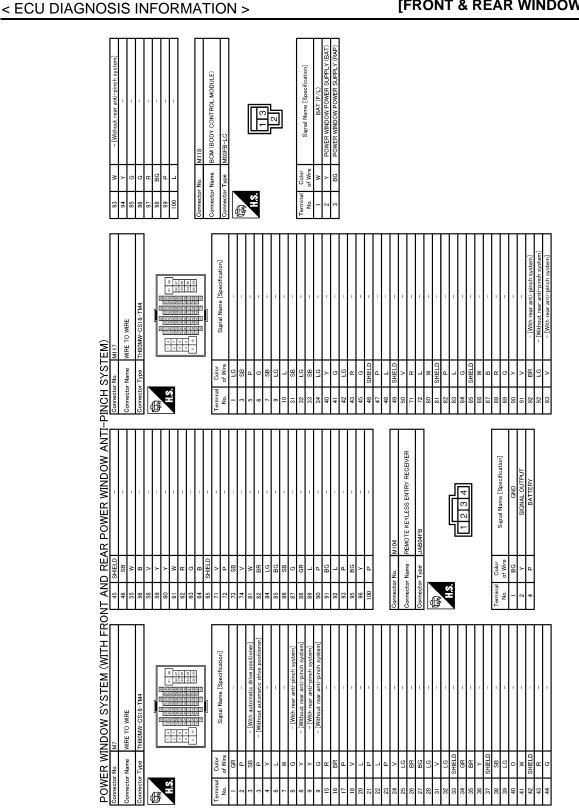
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Fail-safe

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FAIL-SAFE CONTROL

< ECU DIAGNOSIS INFORMATION >

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.

Revision: 2011 November

REAR POWER WINDOW SWITCH

[FRONT & REAR WINDOW ANTI-PINCH]

< ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
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If fail-safe control, the system changes to a non-initialized condition and the following function do not operate.

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

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

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCH-

ES	
< SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]	
SYMPTOM DIAGNOSIS	0
POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES	A
Diagnosis Procedure	D
1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT	С
Check BCM power supply and ground circuit. BCS-38, "Diagnosis Procedure".	
Is the inspection result normal?	D
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 <u>PWC-34, "POWER WINDOW MAIN SWITCH : Component Function Check"</u> .	F
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	G
3.CONFIRM THE OPERATION	
Confirm the operation again.	Н
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1.	I

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DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

DRIVER SIDE POWER WINDOW DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006211012

[FRONT & REAR WINDOW ANTI-PINCH]

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

Check power window switch power supply and ground circuit. Refer to <u>PWC-15</u>, "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 <u>PWC-18, "DRIVER SIDE : Component Function Check"</u>.

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 <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]				
FRONT PASSENGER SIDE POWER W	INDOW DOES NOT OPERATE			
WHEN POWER WINDOW MAIN SWITCH				
WHEN POWER WINDOW MAIN SWITCH IS	SOPERATED : Diagnosis Procedure			
1.CHECK FRONT POWER WINDOW SWITCH (PASSE				
Check front power window switch (passenger side) serial Refer to <u>PWC-35. "FRONT POWER WINDOW SWITCH (</u> <u>Is the inspection result normal?</u> 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, "In	ntermittent Incident".			
NO >> GO TO 1.				
WHEN FRONT POWER WINDOW SWITC	H (PASSENGER SIDE) IS OPERATED			
WHEN FRONT POWER WINDOW SWITCH Diagnosis Procedure	(PASSENGER SIDE) IS OPERATED : INFOID:000000006211014			
1.REPLACE FRONT POWER WINDOW SWITCH (PASS	SENGER SIDE)			
Replace front power window switch (passenger side). Refer to <u>PWC-120, "Removal and Installation"</u>				
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SW SWITCH ARE OPERATED	/ITCH AND FRONT POWER WINDOW			
WHEN BOTH POWER WINDOW MAIN SWI SWITCH ARE OPERATED : Diagnosis Proce				
1.CHECK FRONT POWER WINDOW SWITCH (PASSEN	NGER SIDE) POWER SUPPLY AND GROUND CIR-			
Check front power window switch (passenger side) power Refer to <u>PWC-16. "FRONT POWER WINDOW SWITCH (</u> <u>Is the inspection result normal?</u> YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	(PASSENGER SIDE) : Diagnosis Procedure".			
2.CHECK PASSENGER SIDE POWER WINDOW MOTO	OR CIRCUIT			
Check passenger side power window motor circuit. Refer to <u>PWC-19. "PASSENGER SIDE : Component Func</u>	ction 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 <u>GI-43, "In</u>	ntermittent Incident"			
NO $>>$ GO TO 1.				

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:000000006211016

1.CHECK REAR POWER WINDOW SWITCH LH SERIAL LINK CIRCUIT

Check rear power window switch LH serial link circuit. Refer to <u>PWC-37, "REAR LH : Component Function Check"</u>.

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:000000006211017

1.REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH. Refer to <u>PWC-120</u>, "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 <u>PWC-16</u>, "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 <u>PWC-20, "REAR LH : 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 <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

REAR LH SIDE POWER WINDOW DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]	
REAR LH SIDE POWER WINDOW DOES NOT OPERATE	Δ
WHEN POWER WINDOW MAIN SWITCH IS OPERATED	A
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	В
1. CHECK REAR POWER WINDOW SWITCH RH SERIAL LINK CIRCUIT	
Check rear power window switch RH serial link circuit. Refer to <u>PWC-38, "REAR RH : Component Function Check"</u> .	С
<u>Is the inspection result normal?</u> YES >> GO TO 2.	D
NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	E
Confirm the operation again. Is the result normal?	L
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	F
NO >> GO TO 1. WHEN REAR POWER WINDOW SWITCH RH IS OPERATED	
WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure	G
1. REPLACE REAR POWER WINDOW SWITCH RH	Н
Replace rear power window switch RH. Refer to <u>PWC-120, "Removal and Installation"</u>	I
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED	J
WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED : Diagnosis Procedure	PWC
1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT	L
Check rear power window switch power supply and ground circuit.	
Refer to <u>PWC-16, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> . <u>Is the inspection result normal?</u>	Μ
YES >> GO TO 2.	
NO >> Repair or replace the malfunctioning parts.	
2. CHECK REAR POWER WINDOW MOTOR RH	Ν
Check rear power window motor RH. Refer to <u>PWC-21, "REAR RH : Component Function Check"</u> .	0
Is the inspection result normal?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	F
3. CONFIRM THE OPERATION	Ρ
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 >

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006211022

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 <u>PWC-113</u>, "Diagnosis Procedure".

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-

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< SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]	
AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES	
NORMALLY	А
Diagnosis Procedure	В
1.PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-7</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".	С
Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2.	D
2.CHECK ENCODER CIRCUIT	Е
 Check encoder circuit. Refer to the following. Driver side: Refer to <u>PWC-23</u>, "DRIVER SIDE : Component Function Check". Passenger side: Refer to <u>PWC-25</u>, "<u>PASSENGER SIDE</u> : Component Function Check". Rear LH side: Refer to <u>PWC-27</u>, "<u>REAR LH</u> : Component Function Check". Rear RH side: Refer to <u>PWC-29</u>, "<u>REAR RH</u> : Component Function Check". 	F
Is the inspection result normal?	G
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	
3. CONFIRM THE OPERATION	Н
Confirm the operation again.	
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	I
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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:000000006211030

1. CHECK DOOR SWITCH

Check door switch. Refer to <u>DLK-66, "Component Function Check"</u>.

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

< SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH]	
DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-	
DOWS	А
Diagnosis Procedure	В
1.PERFORM INITIALIZATION PROCEDURE	_
Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-7</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".	С
Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2.	D
2. CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (DOOR KEY CYLINDER SWITCH)	Е
Check driver side door lock assembly (door key cylinder switch). Refer to <u>PWC-32, "Component Function Check"</u> .	
Is the inspection result normal?	F
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	
3. CONFIRM THE OPERATION	G
Confirm the operation again.	
Is the result normal?	Н
YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> . NO >> GO TO 1.	

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

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

Diagnosis Procedure

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 <u>DLK-187, "Description"</u>.

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 <u>PWC-108</u>, "Diagnosis Procedure".

3.CHECK "PW DOWN SET" SETTING IN "WORK SUPPORT"

Check "PW DOWN SET" setting in "WORK SUPPORT". Refer to DLK-52, "INTELLIGENT KEY : CONSULT-III 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 <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

INFOID:000000006211032

[FRONT & REAR WINDOW ANTI-PINCH]

INFOID:000000006211033

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION < SYMPTOM DIAGNOSIS > [FRONT & REAR WINDOW ANTI-PINCH] POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

		А
Diagnosis Procedure	INFOID:000000006211034	
1.REPLACE POWER WINDOW MAIN SWITCH		В
Replace power window main switch.		
>> Refer to PWC-120, "Removal and Installation".		С
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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:000000006211035

1.REPLACE POWER WINDOW SWITCH

Replace power window switch. Refer to <u>PWC-120</u>, "Removal and Installation".

>> INSPECTION END

< PRECAUTION > PRECAUTION PRECAUTIONS

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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 & REAR WINDOW ANTI-PINCH]

INFOID:000000006211040

REMOVAL AND INSTALLATION POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

- Remove the power window main switch finisher (2). Refer to <u>INT-12, "Removal and Installation"</u>.
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

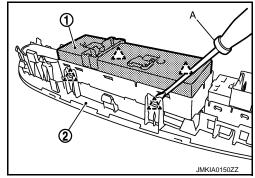
The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).

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



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 mal- function 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 "COMPONENT DIAGNOSIS"	
Perform the diagnosis with "Component diagnosis" of the applicable system.	
>> GO TO 5.	
5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS	
Repair or replace the specified malfunctioning parts.	ł
>> 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.	

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INSPECTION AND ADJUSTMENT

INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description INFOID:000000006603369

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 INFOID:000000006603370

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.
- 6. Inspect anti-pinch function.

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- Place a piece of wood near fully closed position. 2.
- Close door glass completely with AUTO-UP. 3.
- 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

INFOID:000000006603371

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.

PWC-122

< 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 	A
ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-	
quirement	С
 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. 	D
3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is	Е
 already fully open) 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. Initializing procedure is completed. Inspect anti-pinch function. 	F
CHECK ANTI-PINCH FUNCTION Fully open the door window. Place a piece of wood near fully closed position. 	G
 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. 	Н
 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.	I
 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. Auto-up operation 	J
2. Anti-pinch function	PW
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INSPECTION AND ADJUSTMENT

Revision: 2011 November

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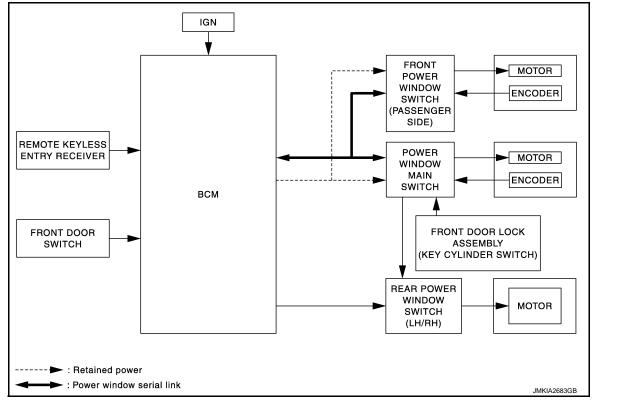
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INFOID:00000006603373

SYSTEM DESCRIPTION POWER WINDOW SYSTEM

System Diagram



System Description

INFOID:000000006603374

- 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

PWC-124

POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

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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 D 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 Н door glass closes and is fully closed).

NOTE:

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

DOOR KEY CYLINDER SWITCH OPERATION

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

OPERATION CONDITION

- Ignition switch OFF.
- PWC 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 Μ 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-52, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY)". NOTE:

Use CONSULT-III to change settings.

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

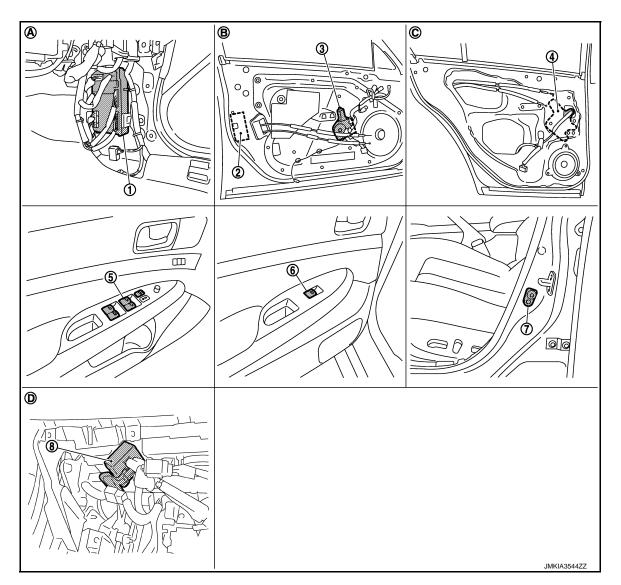
POWER WINDOW SYSTEM

< SYSTEM DESCRIPTION >

Component Parts Location

INFOID:000000006604484

[FRONT WINDOW ANTI-PINCH]



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

Component Description

- 2. Front door lock assembly (driver side) (door key cylinder switch)
- 5. Power window main switch
- 8. Remote keyless entry receiver
- B. View with front door finisher removed C.
- 3. Front power window motor (driver side)
- 6. Rear power window switch LH
 - View with rear door finisher removed

INFOID:000000006603376

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.

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.	

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DIAGNOSIS SYSTEM (BCM) COMMON ITEM

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

INFOID:000000006603377

APPLICATION ITEM

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

Diagnosis mode	Function Description	
Work Support	Changes the setting for each system function.	
Self Diagnostic Result	Displays the diagnosis results judged by BCM.	
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III opera- tion 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.

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

*: This item is displayed, but is not used.

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[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 sup 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 en- gine 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 powe consumption mode	
LOCK>SLEEP	While turning BCM status from normal mode (Power supply position is "LOCK".) to low pow- er 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 → 2 → 3...38 → 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-III 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.	C
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

INFOID:000000006603380

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		(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
D8	10	Ground	12
D9	19	Ground	12

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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

Power windo	w 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.

B	BCM		Power window main switch		
Connector	Terminal	Connector	Terminal	Continuity	
M118	2	D9	19	Existed	
IVIIIO	3	D8	10	Existed	

4. Check continuity between BCM harness connector and ground.

-	BCM			Continuity	
	Connector Terminal		Ground	Continuity	
	M118	2	Ground	Not existed	
	10	3		NUL EXISIEU	

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Refer to GI-43. "Intermittent Incident"

>> INSPECTION END FRONT POWER WINDOW SWITCH (PASSENGER SIDE) FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006603381

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[FRONT WINDOW ANTI-PINCH]

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.

	(+)			
	power window switch (passenger side)		()	Voltage (V) (Approx.)
Connector	Termin	al		
D38	10		Ground	12
he inspection resul	t normal?			
TES >> GO TO 2. IO >> GO TO 3.				
CHECK GROUND	CIRCUIT			
eck continuity betw	een front power windo	ow switch (passe	enger side) harness	connector and ground.
		1		
	power window switch (passenger side)			Continuity
Connector	· · · · ·		Ground	Continuity
D38 11				Eviete d
the inspection resul ES >> GO TO 4.	t normal?			Existed
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM	t normal? replace harness. UPPLY CIRCUIT 2 connector.	s connector and	I front power windov	existed
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity ness connector.	t normal? replace harness. UPPLY CIRCUIT 2 connector.	Front	power window switch	v switch (passenger side)
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector.	t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness	Front (power window switch passenger side)	w switch (passenger side)
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity ness connector.	t normal? replace harness. UPPLY CIRCUIT 2 connector. petween BCM harness	Front	power window switch passenger side)	w switch (passenger side)
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector.	t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harnes: BCM	Front (Connector D38	power window switch passenger side) Terminal 10	v switch (passenger side)
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector. Connector M118	t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness BCM Terminal 2	Front (Connector D38	power window switch passenger side) Terminal 10	v switch (passenger side)
the inspection resul (ES >> GO TO 4. IO >> Repair or CHECK POWER S Disconnect BCM Check continuity I ness connector.	t normal? replace harness. UPPLY CIRCUIT 2 connector. between BCM harness BCM Terminal 2 between BCM harness	Front (Connector D38 s connector and	power window switch passenger side) Terminal 10	v switch (passenger side)

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000006603382

1.CHECK POWER SUPPLY CIRCUIT 1

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	1	()	Voltage (V) (Approx.)	
Con	Connector Terminal			(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
LH	D54	1	Ground	10	
RH	D74	Ι	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 switc	h		Continuity
Conr	nector	Terminal		Continuity
LH	D54	7	Ground	Existed
RH	D74	1		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 rear power window switch harness connector.

B	СМ	Rear power window switch			Continuity
Connector	Terminal	Conr	nector	Terminal	Continuity
M118	3	LH	D54	1	Existed
WITO	5	RH	D74	I	Existed

4. Check continuity between BCM harness connector and ground.

BC	CM		Continuity
Connector	Terminal	Ground	Continuity
M118	3		Not existed

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

NO >> Repair or replace harness.

4.CHECK INTERMITTENT INCIDENT

Refer to GI-43, "Intermittent Incident"

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

>> INSPECTION END

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< DTC/CIRCUIT DIAGNOSIS >

REAR POWER WINDOW SWITCH

Description

- 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.
- NO >> Refer to <u>PWC-134, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000006603385

1.CHECK REAR POWER WINDOW MOTOR INPUT SIGNAL

1. Turn ignition switch ON.

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

Rear	(+) power window	/ switch	()	Condition		Voltage (V) (Approx.)		
Conn	ector	Terminal						
		2			NEUTRAL	0		
LH	D54	2				Power window main switch	UP	12
LU	D04	3				(rear LH)	NEUTRAL	0
		3	Cround			12		
		2 Power window main switch	-			NEUTRAL	0	
RH	D74			Power window main switch	UP	12		
КП	D74	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-135, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window switch.

3.CHECK HARNESS CONTINUITY

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

INFOID:000000006603383

INFOID:000000006603384

REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

Power window m	ain switch	F	Rear power window swite	ch	Continuitu	
Connector	Terminal	Cor	nector	Terminal	Continuity	
	1	LH	D54	2		
D8	3	LN	D34	3	Existed	
D8	5	RH	D74	3	Existed	
	7		014	2		
Check continuity b	etween power	window main sw	itch connector and	ground.		
Power	window main swit					
Connector		Terminal	_		Continuity	
		1	_			
Do		3	– Ground			
D8		5	-		Not existed	
		7	1			
efer to <u>GI-43, "Interm</u> >> INSPECTI	ON END				INFOID:00000000660338	
component Inspe						
OMPONENT INSPI		ou//=o/-				
OMPONENT INSPI	VER WINDOW	SWITCH				
OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po	VER WINDOW n OFF. ower window sv	vitch connector.	the following condit	tions.		
OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power	VER WINDOW n OFF. ower window sv	vitch connector. terminals under		tions.	Continuity	
OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power	VER WINDOW OFF. wer window sw window switch	vitch connector. terminals under	the following condit	tions.	Continuity	
OMPONENT INSP CHECK REAR POV Turn ignition switch Disconnect rear po Check rear power	VER WINDOW OFF. wer window sw window switch	vitch connector. terminals under		tions.	Continuity	

NEUTRAL

DOWN

5 Is the inspection result normal?

3

5

1

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch.

4

2

4

2

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Existed

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW MOTOR DRIVER SIDE

DRIVER SIDE : Description

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

DRIVER SIDE : Component Function Check

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 <u>PWC-136. "DRIVER SIDE : Diagnosis Procedure"</u>.

DRIVER SIDE : Diagnosis Procedure

INFOID:000000006603389

INFOID-000000006603387

INFOID:000000006603388

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				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
D10	4	Orecord	Power window main switch	NEUTRAL	0
	I			DOWN	12
	2	Ground		NEUTRAL	0
	2			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

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	ow main switch	Front power window	ont power window motor (driver side)		
Connector	Terminal	Connector	Terminal	Continuity	
D8	8	D10	2	Existed	
Do	11		1	Existed	

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

Power windo	w main switch		Continuity	
Connector	Terminal	Ground	Continuity	
D8	8	Ground	Not existed	
D8	11		NUL EXISTED	

Is the inspection result normal?

YES >> Replace power window main switch.

NO >> Repair or replace harness.

Revision: 2011 November

Is the inspection result normal?

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

POWER WINDOW MOTOR [FRONT WINDOW ANTI-PINCH] < DTC/CIRCUIT DIAGNOSIS > PASSENGER SIDE PASSENGER SIDE : Description INEOID:00000000660339 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:000000006603392 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. >> Refer to PWC-137, "PASSENGER SIDE : Diagnosis Procedure". NO PASSENGER SIDE : Diagnosis Procedure INFOID:000000006603393 1.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) INPUT SIGNAL 1. Turn ignition switch OFF. Disconnect front power window motor (passenger side) connector. 2. 3. Turn ignition switch ON. 4. Check voltage between front power window motor (passenger side) harness connector and ground. (+) Voltage (V) Front power window motor (passenger side) (-) Condition (Approx.) Connector Terminal NEUTRAL 0 1 UP 12 Front power window switch D40 Ground (passenger side) 0 NEUTRAL 2 DOWN 12 Is the inspection result normal? PWC YES >> Replace front power window motor (passenger side). NO >> GO TO 2. ${f 2.}$ CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE) CIRCUIT 1. Turn ignition switch OFF. 2. Disconnect front power window switch (passenger side) connector. 3. Check continuity between front power window switch (passenger side) harness connector and front power window motor (passenger side) harness connector. Front power window switch (passenger side) Front power window motor (passenger side) Continuity Connector Terminal Connector Terminal 8 2 D38 D40 Existed 9 1 Check continuity between front power window switch (passenger side) connector and ground. 4 Front power window switch (passenger side) Continuity Connector Terminal Ground 8 D38 Not existed 9

PWC-137

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< DTC/CIRCUIT DIAGNOSIS >

NO >> Repair or replace harness. REAR LH

REAR LH : Description

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

REAR LH : Component Function Check

1.CHECK REAR POWER WINDOW MOTOR LH 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 <u>PWC-138, "REAR LH : Diagnosis Procedure"</u>

REAR LH : Diagnosis Procedure

1.CHECK REAR POWER WINDOW MOTOR LH INPUT SIGNAL

- 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.

(+)				Voltage (V) (Approx.)	
Rear power wi	Rear power window motor LH		Condition		
Connector	Terminal				
	1	Ground	Rear power window switch LH	NEUTRAL	0
D52	I			UP	12
D52	2			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

- 1. 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 w	indow switch LH	Rear power wi	ndow motor LH	Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
D54	5		1	Existed	
D34	4	D52	3	EXISIEU	

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

Rear power wi	ndow switch LH		Continuity
Connector	Terminal	Ground	Continuity
D54	5	Ground	Not existed
	4		

Is the inspection result normal?

[FRONT WINDOW ANTI-PINCH]

INFOID-000000006603397

INFOID:00000006603395

^{1.} Turn ignition switch OFF.

< DTC/CIRCUIT	DIAGNOS	SIS >	•••••			[FR		NDOW ANTI-PINC	H]				
	ice rear po r or replac			tch LH.									
REAR RH : De	escriptio	n						INFOID:0000000066	503 399				
Door glass moves switch RH.	s UP/DOW	'N by rec	eiving t	he signal	from powe	r window ma	in switch	or rear power wind	ow				
REAR RH : Co	ompone	nt Fund	ction C	Check				INFOID:0000000066	603400				
1. CHECK REAF		WINDOV		OR RH CI	RCUIT								
Check rear power						w main swit	ch or rear	power window swi	tch				
RH. Is the inspection r	esult norm	al?											
YES >> Rear	power win	dow moto											
				Diagnosis	s Procedure	<u>ə"</u> .							
REAR RH : Di	-							INFOID:0000000066	03401				
1. CHECK REAR			/ МОТС	or RH INF	PUT SIGNA	AL.			(
 Turn ignition s Disconnect re Turn ignition s Check voltage 	ar power v switch ON.	vindow m				s connector	and grour	nd.					
	(+)								—				
Rear power w	indow motor	RH	(-))	Condition		Voltage (V) (Approx.)						
Connector	Term	inal					NEUTRAL	0					
	1		_				UP	12					
D72	3		Grou	ind Re	ar power wind	low switch RH	NEUTRAL	. 0	_ [
							DOWN	12	F				
NO >> GOT 2.CHECK REAR 1. Turn ignition s 2. Disconnect re	Ce rear po O 2. POWER \ switch OFF ar power \ uity betwee	wer wind WINDOW	/ MOTC	DR RH CIF	tor.	ess connect	or and rea	ır power window mo	otor				
Rear po	wer window s	switch RH		F	Rear power wi	ndow motor RH		Continuity	-				
Connector		Termina	al Connector Te								nal	- Sintinuty	_
D74		5		Γ	072	1		Existed					
4. Check continu	uity betwee	en rear po	ower wi	ndow swit	ch RH harr	ness connect	or and gro	ound.	-				
R	ear power wi	ndow switc	h RH Termina		_			Continuity	-				
D74			5	aı	-	Ground		Not existed	-				
			4						_				

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

- YES >> Replace rear power window switch RH.
- NO >> Repair or replace harness.

[FRONT WINDOW ANTI-PINCH]

< DTC/(CIRCUIT DIAGN	IOSIS >			[FRON	IT WINDOW ANTI-PINCH]
	ODER					
DRIVE	ER SIDE					
DRIVE	ER SIDE : De	scription				INFOID:00000006603407
	s condition of the f as the pulse signa		motor (driv	/er side) op	peration and trar	nsmits to power window main
DRIVE	ER SIDE : Co	mponent Functi	ion Cheo	ck		INFOID:00000006603408
.CHE	CK ENCODER					
heck t witch.	that driver side o	loor glass performs	s AUTO o	pen/close	operation norm	ally by power window main
	nspection result no					
YES NO	>> Encoder is C >> Refer to PW	0K. C-141, "DRIVER SI	DE : Diagr	nosis Proce	edure".	
DRIVE		gnosis Procedu				INFOID:00000006603409
_	CK ENCODER S	-	-			
-		-				
	n ignition switch (eck signal betwee		ain switch	harness co	onnector and gro	ound with oscilloscope.
		(+)		-		Signal
	Power w Connector	indow main switch Termina	al		()	(Reference value)
		9	ai			
	D8	13			Ground	Refer to following signal
s the in	(V) 6 Encoder signal 1 4 0 (V) 6 Encoder signal 2 4 0 (Enco	window UP oder signal 2 starts 1/4 puls		Encoder signa		
YES	>> Replace pow	ver window main sw	ritch.			
NO NO	>> GO TO 2.					
. Tur	rn ignition switch (sconnect power wi	ndow main switch o ween power windo				otor (driver side) connector. Id front power window motor
3. Che		Power window main switch		Front power window motor		
3. Che	,	main switch			window motor er side)	Continuity
. Che	,	main switch Terminal				Continuity
3. Che	Power window		Conr	(drive	er side)	Continuity Existed

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

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

Power windo	w main switch		Continuity	
Connector	Terminal	Ground	Continuity	
D8	9	Ground	Not existed	
	13		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 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	+) v motor (driver side)	()	Voltage (V) (Approx.)	
Connector	Terminal			
D10	4	Ground	12	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 4.

4. CHECK ENCORDER POWER SUPPLY CIRCUIT 2

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

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

Power window main switch			Continuity	
Connector	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

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		
D8	2	D10	6	Existed

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

O.CHECK GROUND CIRCUIT 2

< DTC/CIRCUIT DIAGNOSIS >

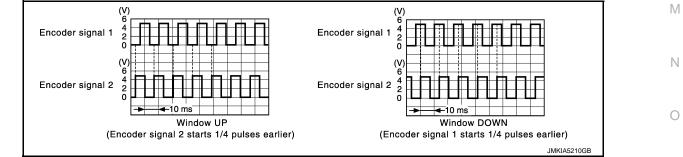
1. Turn ignition switch OFF.

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

	<i>i</i> motor (driver side)		Continuity
Connector	Terminal	Ground	Continuity
D10	6	_	Existed
the inspection result norma	<u>al?</u>		
YES >> Replace front po NO >> Replace power w ASSENGER SIDE	wer window motor (driver vindow main switch.	r side).	
ASSENGER SIDE : D	Description		INFOID:00000006603410
etects condition of the fron ndow switch (passenger sid		passenger side) operatior	and transmits to front power
ASSENGER SIDE : C	Component Functior	n Check	INFOID:00000006603411
CHECK ENCODER			
vitch or front power window	switch (passenger side).		ormally by power window main
the inspection result norma	<u>al?</u>		
<pre>/ES >> Encoder is OK. NO >> Refer to <u>PWC-14</u></pre>	13, "PASSENGER SIDE :	: Diagnosis Procedure".	
ASSENGER SIDE : D	Diagnosis Procedure	е	INFOID:00000006603412
.CHECK ENCODER SIGN	ΔΙ		

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

(+)			Signal (Reference value)	PWC
Front power window switch (passenger side)		(-)		1 11 0
Connector	Terminal			
D38	12	Ground Refer to following signal	L	
036	15	Ground	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
- 1. Turn ignition switch OFF.
- Disconnect front power window switch (passenger side) connector and front power window motor (passenger side) connector.

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< DTC/CIRCUIT DIAGNOSIS >

- [FRONT 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 switch (passenger side)		Front power window motor (passenger side)		Continuity
Connector	Terminal	Connector	Terminal	Continuity
D38	12	D40 5 3	Existed	
	15		3	LAISIEU

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

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

- 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	witch (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	witch (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

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

PWC-144

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

Front power window swit				
	ch (passenger side)	Front power window n	notor (passenger side)	
Connector	Terminal	Connector	Terminal	Continuity
D38	3	D40	6	Existed
e inspection result no S >> GO TO 6. >> Repair or rep HECK GROUND CIR Turn ignition switch C Check continuity betw	lace harness. CUIT 2 PFF.	indow motor (passen	ger side) harness cor	onector and ground
-	ow motor (passenger sid			-
Connector	Termina	al	Ground	Continuity
D40	6			Existed

< DTC/CIRCUIT DIAGNOSIS >

DOOR KEY CYLINDER SWITCH

Description

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

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 SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

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

Is the inspection result normal?

- YES >> Door key cylinder switch is OK.
- NO >> Refer to <u>PWC-146, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000006603415

INFOID:000000006603413

INEOID:000000006603414

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.
- 4. 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
015	6	Ground	5

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR KEY CYLINDER SWITCH 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 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	
D8	4	D15	6	Existed
20	6	013	5	LXISIEU

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

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

	ow main switch		Continuit
Connector	Terminal	Ground	Continuity
	4	Ground	Net suists d
D8	6		Not existed
s the inspection result norma	<u>al?</u>		
	vindow main switch.		
NO >> Repair or replace			
$B. CHECK DOOR KEY CYL$	INDER SWITCH GROUN	D CIRCUIT	
Check continuity between fro pround.	ont door lock assembly (d	river side) (key cylinder sw	itch) harness connector an
	sembly (driver side) der switch)		Continuity
Connector	Terminal	Ground	
D15	4		Existed
Check front door lock assem Refer to <u>PWC-147, "Compor</u> <u>s the inspection result norma</u> YES >> GO TO 5. NO >> Replace front do	nent Inspection". al? or lock assembly (driver s		
Refer to <u>GI-43, "Intermittent</u>			
Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI	Incident". ND		INFOID-0000000000
Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection	Incident". ND		INF01D:000000006603-
Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection	Incident". ND NN		INFOID:000000066034
Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI	Incident". ND NN		INF01D:0000000066034
Refer to <u>GI-43, "Intermittent</u> >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF 2. Disconnect front door loo	Incident". ND ON INDER SWITCH ck assembly (driver side) ((key cylinder switch) connec cylinder switch) terminals un	ctor.
Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind	Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side)		ctor.
Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind	Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c	Key position	ctor. Ider the following condition: Continuity
Refer to <u>GI-43</u> , "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO .CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind	Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side)	Key position	ctor. Inder the following condition Continuity Existed
Refer to GI-43, "Intermittent >> INSPECTION EI Component Inspection COMPONENT INSPECTIO . CHECK DOOR KEY CYL . Turn ignition switch OFF Disconnect front door lock as Check front door lock as (key cylind Terr	Incident". ND ON INDER SWITCH ck assembly (driver side) (sembly (driver side) (key c sembly (driver side)	Key position	ctor. Inder the following condition Continuity

Is the inspection result normal?

6

>> INSPECTION END YES

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

Neutral / Unlock

Not existed

< DTC/CIRCUIT DIAGNOSIS >

POWER WINDOW SERIAL LINK

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH : 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 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:000000006603418

INFOID:000000006603417

1.CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

With CONSULT-III

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

Monitor item	Condition		
CDL LOCK SW	LOCK	: ON	
CDE LOOK 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 <u>PWC-148</u>, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:000000006603419

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	()	Signal (Reference value)
Connector	Terminal		
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 >

1. Turn ignition switch OFF.

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

-	(+)				В
_	Power windo	w main switch	()	Voltage (V) (Approx.)	
_	Connector	Terminal			С
_	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		F
Connector	Terminal	Connector	Terminal	- Continuity	
M123	132	D8	14	Existed	G

3. Check continuity between BCM harness connector and ground.

BC	Μ		Continuity	
Connector	Terminal	Ground	Continuity	
M123	132		Not existed	I

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Exploded View"</u>.

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

With CONSULT-III

PWC-149

А

D

PWC

Μ

Ν

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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 SYS-TEM" with CONSULT-III. Refer to <u>DLK-51, "DOOR LOCK : CONSULT-III Function (BCM - DOOR LOCK)"</u>.

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

Is the inspection result normal?

- YES >> Power window serial link is OK.
- NO >> Refer to <u>PWC-150</u>, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:000000006603422

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 swi Connector	itch (passenger side) Terminal	()	Signal (Reference value)
D38	16	Ground	(V) 15 10 5 0 10 ms JPMIA0013GB

Is the inspection result normal?

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

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 window main switch		Front power window s	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
D8	14	D38	16	Existed

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

Power windo	w main switch		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.

ECU DIAGNOSIS INFORMATION BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

CONSULT-III MONITOR ITEM

Monitor Item	Condition	Value/Status	
FR WIPER HI	Other than front wiper switch HI	Off	
	Front wiper switch HI	On	D
	Other than front wiper switch LO	Off	
FR WIPER LOW	Front wiper switch LO	On	Е
FR WASHER SW	Front washer switch OFF	Off	
FR WASHER SW	Front washer switch ON	On	
FR WIPER INT	Other than front wiper switch INT/AUTO	Off	F
	Front wiper switch INT/AUTO	On	
FR WIPER STOP	Front wiper is not in STOP position	Off	G
FR WIPER STOP	Front wiper is in STOP position	On	G
INT VOLUME	Wiper volume dial is in a dial position 1 - 7	Wiper volume dial posi- tion	Н
TURN SIGNAL R	Other than turn signal switch RH	Off	
TORN 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	.1
	Lighting switch 1ST or 2ND	On	0
HI BEAM SW	Other than lighting switch HI	Off	
	Lighting switch HI	On	P٧
HI BEAM SW	Other than lighting switch 2ND	Off	
HEAD LAWF SW T	Lighting switch 2ND	On	1
HEAD LAMP SW 2	Other than lighting switch 2ND	Off	
HEAD LAWF SW 2	Lighting switch 2ND	On	
PASSING SW	Other than lighting switch PASS	Off	M
FASSING SW	Lighting switch PASS	On	
	Other than lighting switch AUTO	Off	
AUTO LIGHT SW	Lighting switch AUTO	On	Ν
	Front fog lamp switch OFF	Off	
FR FOG SW	Front fog lamp switch ON	On	0
RR FOG SW	NOTE: The item is indicated, but not monitored.	Off	
	Driver door closed	Off	Ρ
DOOR SW-DR	Driver door opened	On	
	Passenger door closed	Off	
DOOR SW-AS	Passenger door opened	On	
	Rear RH door closed	Off	
DOOR SW-RR	Rear LH door opened	On	

А

В

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DOOR SW-RL	Rear LH door closed	Off
DOOR SW-RE	Rear LH door opened	On
DOOR SW-BK	NOTE: The item is indicated, but not monitored.	Off
CDL LOCK SW	Other than power door lock switch LOCK	Off
	Power door lock switch LOCK	On
CDL UNLOCK SW	Other than power door lock switch UNLOCK	Off
SDE UNLOCK SW	Power door lock switch UNLOCK	On
KEY CYL LK-SW	Other than driver door key cylinder LOCK	Off
KET CTE EK-SW	Driver door key cylinder LOCK	On
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK	Off
CEFCTE UN-SW	Driver door key cylinder LOCK	On
KEY CYL SW-TR	NOTE: The item is indicated, but not monitored.	Off
	Hazard switch is OFF	Off
HAZARD SW	Hazard switch is ON	On
REAR DEF SW	NOTE: The item is indicated, but not monitored.	Off
H/L WASH SW	NOTE: The item is indicated, but not monitored.	Off
R CANCEL SW	Trunk lid opener cancel switch OFF	Off
IN CANCEL SW	Trunk lid opener cancel switch ON	On
	Trunk lid opener switch OFF	Off
TR/BD OPEN SW	While the trunk lid opener switch is turned ON	On
	Trunk lid closed	Off
	/HAT MNTR Trunk lid opened Trunk lid opened	
RKE-LOCK	LOCK button of the Intelligent Key is not pressed	Off
	LOCK button of the Intelligent Key is pressed	On
RKE-UNLOCK	UNLOCK button of the Intelligent Key is not pressed	Off
	UNLOCK button of the Intelligent Key is pressed	On
RKE-TR/BD	TRUNK OPEN button of the Intelligent Key is not pressed	Off
KE-IK/DU	TRUNK OPEN button of the Intelligent Key is pressed	On
	PANIC button of the Intelligent Key is not pressed	Off
RKE-PANIC	PANIC button of the Intelligent Key is pressed	On
	UNLOCK button of the Intelligent Key is not pressed	Off
RKE-P/W OPEN	UNLOCK button of the Intelligent Key is pressed and held	On
RKE-MODE CHG	LOCK/UNLOCK button of the Intelligent Key is not pressed and held simulta- neously	Off
	LOCK/UNLOCK button of the Intelligent Key is pressed and held simultaneously	On
	Bright outside of the vehicle	Close to 5 V
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0 V
	Driver door request switch is not pressed	Off
REQ SW -DR	Driver door request switch is pressed	On
	Passenger door request switch is not pressed	Off
REQ SW -AS	Passenger door request switch is pressed	On

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

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	-
EQ SW -BD/TR	Trunk lid opener request switch is not pressed	Off	-
EQ SW -BD/TR	Trunk lid opener request switch is pressed	On	-
USH SW	Push-button ignition switch (push switch) is not pressed	Off	-
030 300	Push-button ignition switch (push switch) is pressed	On	-
GN RLY2 -F/B	Ignition switch in OFF or ACC position	Off	-
	Ignition switch in ON position	On	-
CC RLY -F/B	NOTE: The item is indicated, but not monitored.	Off	-
LUCH SW	The clutch pedal is not depressed	Off	-
	The clutch pedal is depressed	On	-
	The brake pedal is depressed when No. 7 fuse is blown	Off	-
RAKE SW 1	The brake pedal is not depressed when No. 7 fuse is blown, or No. 7 fuse is nor- mal	On	-
	The brake pedal is not depressed	Off	-
RAKE SW 2	The brake pedal is depressed	On	-
DETE/CANCL SW	 Selector lever in P position (Except M/T models) The clutch pedal is depressed (M/T models) 	Off	-
	 Selector lever in any position other than P (Except M/T models) The clutch pedal is not depressed (M/T models) 	On	-
SFT PN/N SW	Selector lever in any position other than P and N	Off	-
	Selector lever in P or N position	On	-
// LOOK	Steering is unlocked	Off	-
/L -LOCK	Steering is locked	On	-
	Steering is locked	Off	-
/L -UNLOCK	Steering is unlocked	On	
/L RELAY-F/B	Ignition switch in OFF or ACC position	Off	-
/L RELAT-F/D	Ignition switch in ON position	On	-
INLK SEN -DR	Driver door is unlocked	Off	-
	Driver door is locked	On	
USH SW -IPDM	Push-button ignition switch (push-switch) is not pressed	Off	
	Push-button ignition switch (push-switch) is pressed	On	
GN RLY1 -F/B	Ignition switch in OFF or ACC position	Off	_
	Ignition switch in ON position	On	_
DETE SW -IPDM	Selector lever in any position other than P	Off	_
	Selector lever in P position	On	_
FT 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	
יי י רוא יו ר טואו	 Selector lever in P or N position (Except M/T models) The clutch pedal is depressed (M/T models) 	On	-
	Selector lever in any position other than P	Off	-
FT P -MET	Selector lever in P position	On	-
	Selector lever in any position other than N	Off	-
FT N -MET	Selector lever in N position	On	-

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< 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	Steering is unlocked	Off
3/L LOCK-IPDIVI	Steering is locked	On
S/L UNLK-IPDM	Steering is locked	Off
3/L UNER-IF DIVI	Steering is unlocked	On
S/L RELAY-REQ	Steering lock system is not the LOCK condition and the changing condition from LOCK to UNLOCK	Off
S/L RELAT-REQ	Steering lock system is the LOCK condition or the changing condition from LOCK to UNLOCK	On
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
ID OK FLAG	Steering is locked	Reset
	Steering is unlocked	Set
PRMT ENG STRT	The engine start is prohibited	Reset
	The engine start is permitted	Set
PRMT RKE STRT	NOTE: The item is indicated, but not monitored.	Reset
KEY SW -SLOT	The Intelligent Key is not inserted into key slot	Off
RET 5W-5E01	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
	The key ID that the key slot receives is recognized by any key ID registered to BCM.	Done
CONFIRM ID4	The key ID that the key slot receives is not recognized by the fourth key ID registered to BCM.	Yet
	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

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

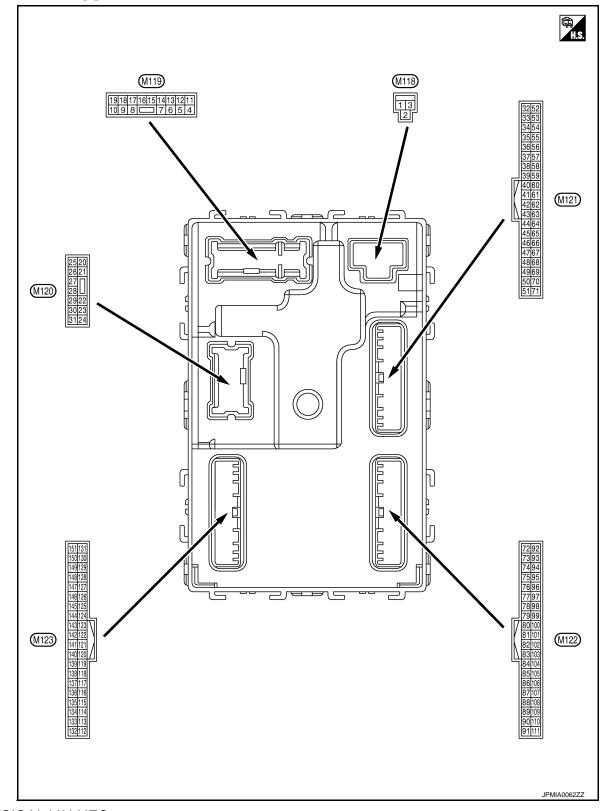
Monitor Item	Condition	Value/Status
CONFIRM ID2	The key ID that the key slot receives is not recognized by the second key ID reg- istered to BCM.	Yet
	The key ID that the key slot receives is recognized by the second key ID registered to BCM.	Done
	The key ID that the key slot receives is not recognized by the first key ID regis- tered 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
1P 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
1 - 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
1 P 2	The ID of second Intelligent Key is registered to BCM	Done
TP 1	The ID of first Intelligent Key is not registered to BCM	Yet
IP 1	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 of front LH tire transmitter is registered	Done
ID REGST FL1	ID of front LH tire transmitter is not registered	Yet
	ID of front RH tire transmitter is registered	Done
ID REGST FR1	ID of front RH tire transmitter is not registered	Yet
	ID of rear RH tire transmitter is registered	Done
ID REGST RR1	ID of rear RH tire transmitter is not registered	Yet
	ID of rear LH tire transmitter is registered	Done
ID REGST RL1	ID of rear LH tire transmitter is not registered	Yet
	Tire pressure indicator OFF	Off
WARNING LAMP	Tire pressure indicator ON	On
	Tire pressure warning alarm is not sounding	Off
BUZZER	Tire pressure warning alarm is sounding	On

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[FRONT WINDOW ANTI-PINCH]

TERMINAL LAYOUT



PHYSICAL VALUES

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description	1			Value														
(wire +	_	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 (ИС	12 V														
					mp battery saver is activated. or room lamp power supply)	0 V														
4 (LG)	Ground	Interior room lamp power supply	Output	vated.	mp battery saver is not acti-	12 V														
5	Ground	Passenger door UN-	Output	Passenger	UNLOCK (Actuator is activated)	12 V														
(P)	Ground	LOCK	Output	door	Other than UNLOCK) Ac- tuator is not activated	0 V														
7	Ground	Stop Jamp	Output	Stop Jamp	ON	0 V														
(SB)	Ground	Step lamp	Output	Step lamp	OFF	12 V														
8	Ground	All doors, fuel lid	Output	All doors, fuel	LOCK (Actuator is activated)	12 V														
(V) Glound LOCK	LOCK	Output	lid	Other than LOCK (Actuator is not activated)	0 V															
9	9 Driver door, fuel lid	Driver door, fuel lid	Output	Driver door,	UNLOCK (Actuator is activated)	12 V														
(G)	Ground	UNLOCK	Output	fuel lid	Other than	Other than UNLOCK (Actuator is not activated)	0 V													
10	Ground	Rear RH door and rear LH door UN-	Output ar	Output	Rear RH door and rear LH	UNLOCK (Actuator is activated)	12 V													
(P)	Ground	LOCK			Output	Output	Output	Output	Output	Output	Output	Output	Output	Juiput	Output	Output	Output		door	
11 (R)	Ground	Battery power supply	Input	Ignition switch (OFF	Battery voltage														
13 (B)	Ground	Ground		Ignition switch (NC	0 V														
					OFF	0 V														
14 (W)	Ground	Push-button ignition switch illumination ground	Output	Tail lamp	ON	NOTE: When the illumination brighten- ing/dimming level is in the neutral position														
15 (BG)	Ground	ACC indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	JSNIA0010GB Battery voltage														
					ACC	0 V														

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
					Turn signal switch OFF	0 V	
17 (W)	Ground	Turn signal RH (Front)	Output	lgnition switch ON	Turn signal switch RH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
					Turn signal switch OFF	0 V	
18 (BG)	Ground	Turn signal LH (Front)	Output	lgnition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19	Ground	Room lamp timer	Output	Interior room	OFF	12 V	
(V)	Ciouna	control	Output	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 0 5 0 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 5 1 1 1 1	
						6.5 V	
23	Ground	Trunk lid open	Output	Trunk lid	OPEN (Trunk lid opener actuator is activated)	12 V	
(LG)	Ground		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	lgnition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s 1 s 1 s 1 s 1 s 1 s 1 s 1 s	
30	Ground	Trunk room lamp	Output	Trunk room	ON	0 V	
(P)	e.sund		- sup at	lamp	OFF	12 V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	
(Wire	color)	Signal name	Input/ Output		Condition	value (Approx.)	A
34	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	B C D
(SB)	(SB) Ground	(-)	Output	ŎFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0063GB	F
35	Ground	Trunk room antenna	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 0 5 0 1 s JMKIA0062GB	G H I
(V)	Giouna	(+)			When Intelligent Key is not in the passenger compart- ment	(V) 15 0 10 10 10 10 10 10 10 10 10	J PWC
38		Rear bumper anten- na (-) Output lid opener re- quest switch is operated with		When the trunk lid opener re-	When Intelligent Key is in the antenna detection area	(V) 15 0 1 1 1 1 1 1 1 1 1 1 1 1 1	M
(B)	Ground		operated with ignition switch	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	P	

< ECU DIAGNOSIS INFORMATION >

Termin		Description				Value	
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)	
39	Crowned	Rear bumper anten-	Output	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 1 s JMKIA0063GB	
47		Ignition relay (IPDM			OFF or ACC	12 V	
(Y)	Ground	E/R) control	Output	Ignition switch	ON	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 11.8 V	
					ON (Trunk lid is opened)	0 V	
				Ignition switch ON (A/T mod-	When selector lever is in P or N position	12 V	
52	Ground	Starter relay control	Output	els)	When selector lever is not in P or N position	0 V	
(R)	Croana	Carlor roldy control	ouput	Ignition switch ON (M/T mod-	When the clutch pedal is depressed	Battery voltage	
				els)	When the clutch pedal is not depressed	0 V	
					ON (Pressed)	0 V	
61 (SB)	Ground	Trunk lid opener re- quest switch	Input	Trunk lid open- er request switch	OFF (Not pressed)	(V) 15 10 10 ms JPMIA0016GB 1.0 V	
64		Intelligent Key warn-		Intelligent Key	Sounding	0 V	
64 (G)	Ground	ing buzzer (Engine room)	Output	warning buzzer (Engine room)	Not sounding	12 V	

< ECU DIAGNOSIS INFORMATION >

Termir					Value	Δ	
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	A
					Pressed	0 V	В
67 (GR)	Ground	Trunk lid opener switch	Input	Trunk lid open- er switch	Not pressed	(V) 15 10 50 10 ms JPMIA0011GB 11.8 V	C
68 (BG)	Ground	Rear RH door switch	Input	Rear RH door switch	OFF (When rear RH door closes)	(V) 15 10 10 10 ms JPMIA0011GB 11.8 V	E F G
					ON (When rear RH door opens)	0 V	Н
69 (L)	Ground	Rear LH door switch	Input	Rear LH door switch	OFF (When rear LH door closes)	(V) 15 0 10 10 ms JPMIA0011GB 11.8 V	I J
					ON (When rear LH door opens)	0 V	PWC
					When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s	L
72 (R)	Ground	Room antenna 2 (–) (Center console)	Output	Ignition switch OFF		JMKIA0062GB	Ν
、 /					When Intelligent Key is not in the passenger compart- ment	(V) 15 10 5 0 1 s	O
						JMKIA0063GB	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)
73	Ground	Room antenna 2 (+)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(G)		(Center console)		OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 10 10 10 10 10 10 10 10 10 10 10 10
74	Ground	nd Passenger door an- tenna (–)	Output	When the pas- senger door re- quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 10 5 0 15 15 10 5 0 15 15 10 15 15 10 15 15 10 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15
(SB)					When Intelligent Key is not in the antenna detection area	(V) 15 0 0 1 s JMKIA0063GB
75	Ground	H Passenger door an- tenna (+) Οι		When the pas- senger door re- quest switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)	Cround		Output		When Intelligent Key is not in the antenna detection area	(V) 15 0 5 0 1 s JMKIA0063GB

< ECU DIAGNOSIS INFORMATION >

	Terminal No. Description (Wire color)				Value		
(Wire +	color)	Signal name	Input/ Output		Condition	(Approx.)	A
76		Driver door antenna		When the driv- er door request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	B C D
(V)	Ground	(-)	Output	switch is oper- ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 10 1 1 1 1 1 1 JMKIA0063GB	E
77	Ground	Driver door antenna	Output	When the driv- er door request switch is oper-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	G H I
(LG)		(+)		ated with igni- tion switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 0 10 10 10 10 10 10 10 10 10	J PWC
78	Ground	Room antenna 1 (-)	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB	M
(Y)		(Instrument panel)	Guiput	OFF	When Intelligent Key is not in the passenger compart- ment	(V) 15 0 0 15 0 15 0 15 0 15 15 0 15 15 15 10 15 15 10 15 10 15 10 15 10 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	P

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value
(Wire	color)	Signal name	Input/ Output		Condition	(Approx.)
79	Ground	Room antenna 1 (+)		Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 1 s JMKIA0062GB
(BR)	Glouina	(Instrument panel)	Output	OFF	When Intelligent Key is not in the passenger compart- ment	(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 Intelli- gent 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 Intelli- gent 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 ON	0 V 12 V
83	Ground	Remote keyless entry receiver communica-	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
(Y)	Ground	tion	Output	When operating either button on the Intelli- gent Key		(V) 15 10 5 0 <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i> <i>1</i>

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

	nal No.	Description				Value	А
+	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	B C D
87 (Y)	Ground	Combination switch INPUT 5	Input	Combination switch	Front fog lamp switch ON (Wiper volume dial 4)	(V) 15 0 2 ms 10 2 ms JPMIA0037GB 1.3 V	E
					Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 6 • Wiper volume dial 7	(V) 15 0 2 ms JPMIA0040GB 1.3 V	G H

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< ECU DIAGNOSIS INFORMATION >

Termir		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
88	Ground	Combination switch	Input	Combination	Lighting switch HI (Wiper volume dial 4)	(V) 15 10 0 2 ms JPMIA0036GB 1.3 V
(BG)		INPUT 3			Lighting switch 2ND (Wiper volume dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3 V
					Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 2 • Wiper volume dial 3	(V) 15 10 2 ms JPMIA0040GB 1.3 V
89 (BR)	Ground	Push-button ignition switch (Push switch)	Input	Push-button ig- nition switch	Pressed	0 V
90	Ground	CAN-L	Input/	(push switch)	Not pressed	Battery voltage
(P) 91			Output Input/			
(L)	Ground	CAN-H	Output			-
92 (LG)	Ground	Key slot illumination	Output	Key slot illumi- nation	OFF	0 V
					ON	12 V

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description			O and it is a	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
93	Ground	ON indicator lamp	Output	Ignition switch	OFF (LOCK indicator is not illuminated)	Battery voltage
(GR)				-	ON	0 V
95	Cround	ACC relay control	Quitout	Ignition owitch	OFF	0 V
(BG)	Ground	ACC relay control	Output	Ignition switch	ACC or ON	12 V
96 (GR)	Ground	A/T shift selector (De- tention switch) power supply	Output		_	12 V
97	Ground	Steering lock condi-	Input	Steering lock	LOCK status	0 V
(L)	Cround	tion No. 1	mpar	oleening look	UNLOCK status	12 V
98	Ground	Steering lock condi-	Input	Steering lock	LOCK status	12 V
(P)	Croana	tion No. 2	mput	electing leck	UNLOCK status	0 V
		Selector lever P posi- tion switch (A/T mod-		Selector lever	P position	0 V
		els)		Selector lever	Any position other than P	12 V
99	ASCD clutch switch (M/T models without		ASCD clutch	OFF (Clutch pedal is de- pressed)	0 V	
(R)* ¹ (BR)* ²	Ground	ICC)	Input	switch	ON (Clutch pedal is not depressed)	12 V
		ICC clutch switch (M/		ICC clutch	OFF (Clutch pedal is de- pressed)	0 V
	T models with ICC)		switch	ON (Clutch pedal is not depressed)	12 V	
					ON (Pressed)	0 V
100 (Y)	Ground	Passenger door re- quest switch	Input	Passenger door request switch	OFF (Not pressed)	(V) 15 10 10 ms JPMIA016GB
					ON (Pressed)	1.0 V 0 V
101 (P)	Ground	Driver door request switch	Input	Driver door re- quest switch	OFF (Not pressed)	(V) 15 0 10 ms 10 ms JPMIA0016GB 1.0 V
102	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0 V
(BG)	Ground	lay control	Juiput	Ignition Switch	ON	12 V
103 (P)	Ground	Remote keyless entry receiver power sup- ply	Output	Ignition switch C	DFF	12 V
106	Ground	Steering lock unit	Output	Ignition owitch	OFF or ACC	12 V
(SB)	Ground	power supply	Output	Ignition switch	ON	0 V

BCM (BODY CONTROL MODULE) < ECU DIAGNOSIS INFORMATION > [FRON]

[FRONT WINDOW ANTI-PINCH]

	nal No.	Description				Value	
(Wire +	color) –	Signal name	Input/ Output	Condition		(Approx.)	
					All switches OFF	(V) 15 10 2 ms JPMIA0041GB 1.4 V	
					Turn signal switch LH	(V) 15 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 1.3 V	
					Front wiper switch LO	(V) 15 0 2 ms JPMIA0038GB 1.3 V	
					Front washer switch ON	(V) 15 10 5 0 2 ms JPMIA0039GB	

1.3 V

< ECU DIAGNOSIS INFORMATION >

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[FRONT WINDOW ANTI-PINCH]

	nal No.	Description				Value	^
(Wire	color) -	Signal name	Input/ Output		Condition	(Approx.)	A
					All switches OFF (Wiper volume dial 4)	(V) 15 0 2 ms JPMIA0041GB	B C
						1.4 V	D
					Lighting switch AUTO (Wiper volume dial 4)	0 +> 2 ms JPMIA0038GB	F
108 (R)	Ground	Combination switch INPUT 4	Input	Combination switch		1.3 V	G
					Lighting switch 1ST (Wiper volume dial 4)		Н
						2 ms	
					Any of the conditions be- low with all switches OFF	(V) 15 10 5	J
					 Wiper volume dial 1 Wiper volume dial 5 Wiper volume dial 6 	0 +> -2 ms JPMIA0039GB	PWC
						1.3 V	L

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ECU DIAGNOSIS INFORMATION > [FRON]

[FRONT WINDOW ANTI-PINCH]

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

< ECU DIAGNOSIS INFORMATION >

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	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	А
					LOCK status	12 V	В
111 (Y)		Steering lock unit communication	Input/ Output		LOCK or UNLOCK	(V) 15 0 50 ms JMKIA0066GB	C
					For 15 seconds after UN- LOCK	12 V	Е
					15 seconds or later after UNLOCK	0 V	F
112 (R)	Ground	Light and rain sensor serial link	Input/ Output	Ignition switch ON		(V) 10 0 0 0 0 0 0 0 0 0 0 0 0 0	G H
113	Ground	Optical sensor		Ignition switch	When bright outside of the vehicle	Close to 5 V	I
(BG)		Optical sensor	input	ON	When dark outside of the vehicle	Close to 0 V	1
114	Ground	Clutch interlock	Input	Clutchinterlock	OFF (Clutch pedal is not depressed)	0 V	J
(R)		switch		switch	ON (Clutch pedal is de- pressed)	Battery voltage	PWC
116 (SB)	Ground	Stop lamp switch 1	Input		_	Battery voltage	
		Stop lamp switch 2 (Without ICC)		Stop lamp switch	OFF (Brake pedal is not depressed) ON (Brake pedal is de-	0 V Battery voltage	L
118 (BR)	Ground	Stop lamp switch 2	Input		pressed) h OFF (Brake pedal is not ICC brake hold relay OFF	0 V	IVI
		(With ICC)		Stop lamp switc	h ON (Brake pedal is de- brake hold relay ON	Battery voltage	Ν
119 (SB)	Ground	Front door lock as- sembly driver side (Unlock sensor)	Input	Driver door	LOCK status (Unlock sensor switch OFF)	(V) 15 0 10 ms JPMIA0012GB 1.1 V	O
					UNLOCK status (Unlock switch sensor ON)	0 V	

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Velue
(Wire +	color) –	Signal name	Input/ Output		Condition	Value (Approx.)
121	Ground	Key slot switch	Input	When the Intellig	gent Key is inserted into key	12 V
(SB)	Ground	Ney Slot Switch	mput	When the Intellig key slot	gent Key is not inserted into	0 V
123	Ground	IGN feedback	Input	Ignition switch	OFF or ACC	0 V
(V)				5	ON	Battery voltage
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 open- er cancel switch	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 0 5 0 10 ms JPMIA0013GB 10.2 V
				Ignition switch C	OFF or ACC	12 V
				-	ON (Tail lamps OFF)	9.5 V
133 (L)	Ground	Push-button ignition switch illumination	Output	Push-button ig- nition switch il- lumination	ON (Tail lamps ON) OFF	NOTE: The pulse width of this wave is varied by the illumination bright- ening/dimming level. (V) 15 10 5 0 JPMIA0159GB 0 V
134			Q ()	LOCK indicator	OFF	Battery voltage
(LG)	Ground	LOCK indicator lamp	Output	lamp	ON	0 V
137 (BG)	Ground	Receiver and sensor ground	Input	Ignition switch C	 DN	0 V

< ECU DIAGNOSIS INFORMATION >

	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output		Condition	Value (Approx.)	A
138		Receiver and sensor			OFF	0 V	
(V)	Ground	power supply	Output	Ignition switch	ACC or ON	5.0 V	В
139	Ground	Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 4 2 0 • • 0.2s OCC3881D	C
(L)	Cround	er communication	Output	ON	When receiving the signal from the transmitter		E
		Selector lever P/N		t Selector lever	P or N position	+ + 0.2s	G
(B)	Ground	position	Input	Selector lever	Except P and N positions	0 V	
					ON	0 V	Н
141 (W)	Ground	Security indicator	Output	Security indica- tor	Blinking	(V) 15 0 5 0 1 s JPMIA0014GB 11.3 V	l
					OFF	11.5 V	PWC
					All switches OFF	0 V	
142 (BR)	Ground	Combination switch OUTPUT 5	Output	Combination switch (Wiper volume	Lighting switch 1ST Lighting switch HI Lighting switch 2ND	(V) 15 10 5	L
				dial 4)	Turn signal switch RH	2 ms JPMIA0031GB 10.7 V	Ν
					All switches OFF (Wiper volume dial 4)	0 V	0
143 (P)	Ground	Combination switch OUTPUT 1	Output	Combination switch	Front wiper switch HI (Wiper volume dial 4) Any of the conditions be- low 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 0 2 ms 10 2 ms 10 10 10 10 10 10 10 10 10 10 10 10 10	Ρ

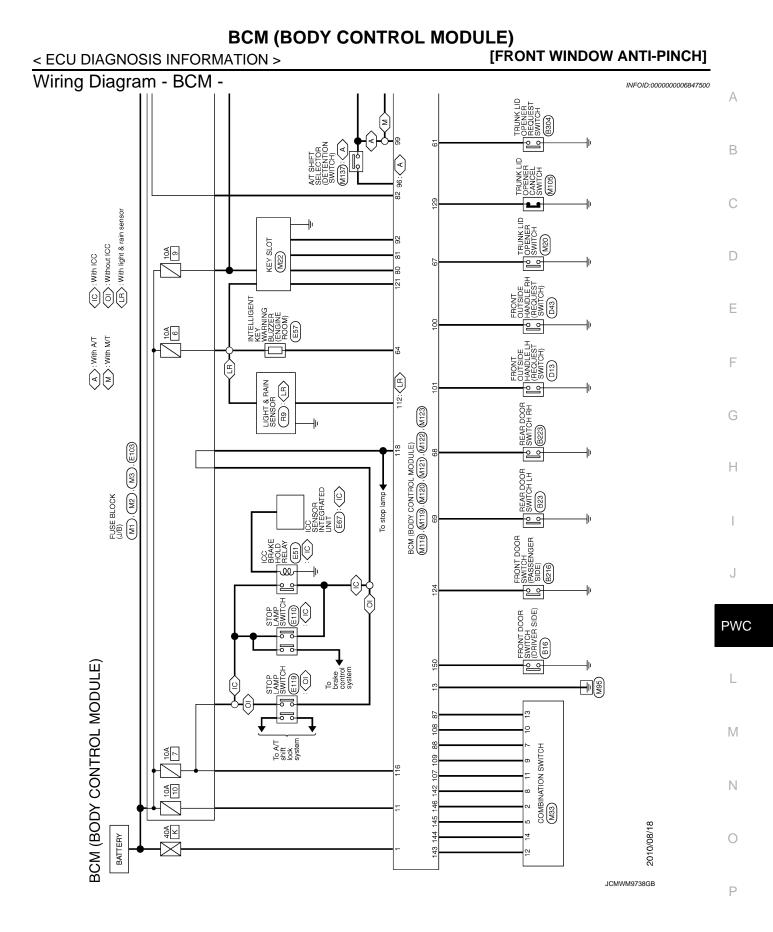
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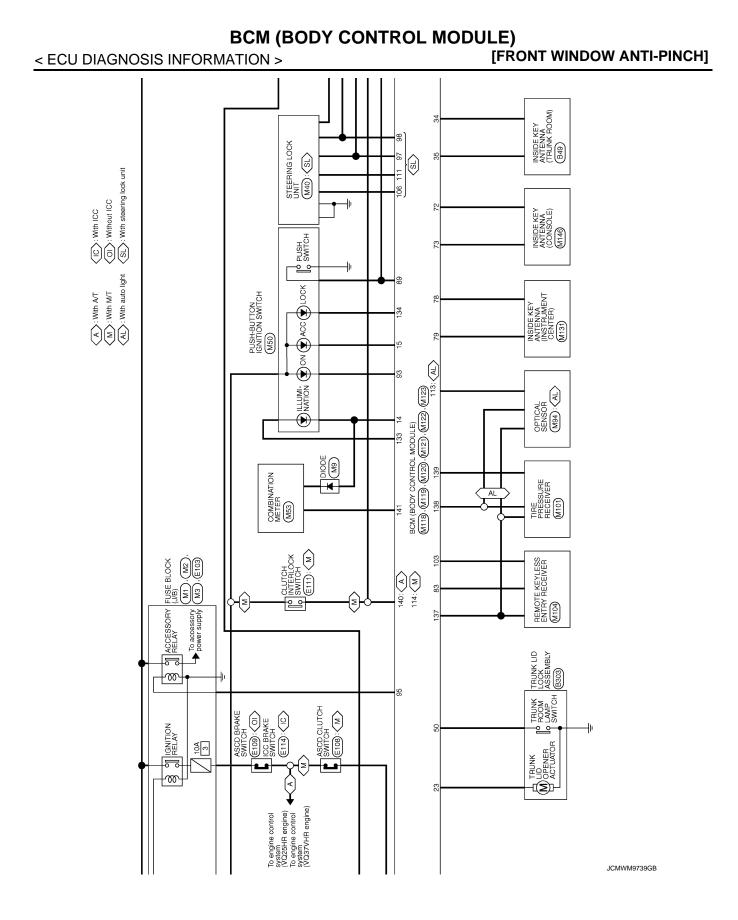
[FRONT WINDOW ANTI-PINCH]

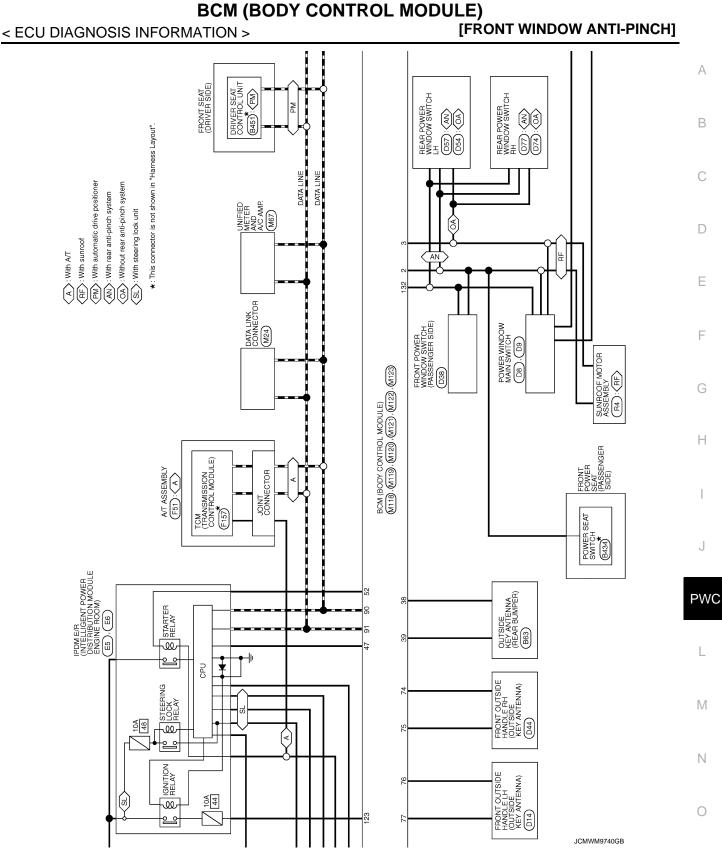
	nal No.	Description				Value	
(Wire +	color) –	Signal name	Input/ Output		Condition	(Approx.)	
					All switches OFF (Wiper volume dial 4)	0 V	
					Front washer switch ON (Wiper volume dial 4)	(V) 15	
144 (G)	Ground	Combination switch OUTPUT 2		Any of the conditions be- low with all switches OFF • Wiper volume dial 1 • Wiper volume dial 5 • Wiper volume dial 6	JPMIA0033GB 10.7 V		
					All switches OFF	0 V	
					Front wiper switch INT/ AUTO	(V)	
145		Combination switch		Combination switch	Front wiper switch LO		
(L)	Ground	OUTPUT 3	Output	(Wiper volume dial 4)	Lighting switch AUTO	50 2 ms 10.7 V	
					All switches OFF	0 V	
		Combination switch	Output	Combination switch (Wiper volume dial 4)	Front fog lamp switch ON		
					Lighting switch 2ND	(V) 15	
146	Ground				Lighting switch PASS		
(SB)	Ground	OUTPUT 4	Output		Turn signal switch LH	0 2.ms JPMIA0035GB 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)		ger relay control	-	defogger	Not activated	Battery voltage	

• *1: A/T models

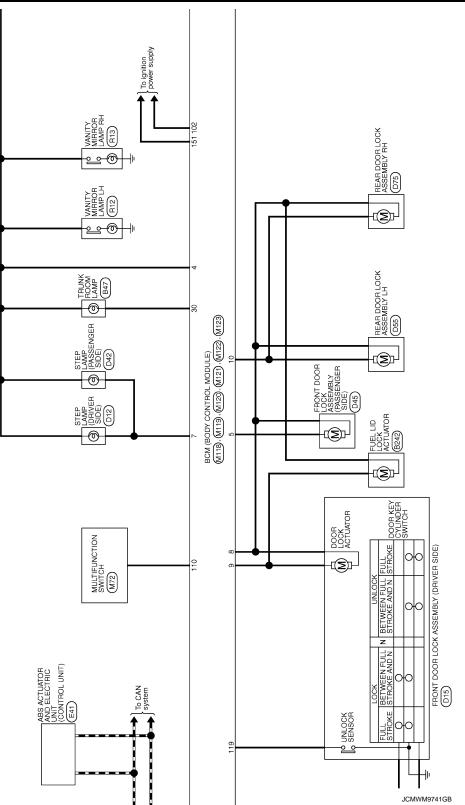
• *2: M/T models

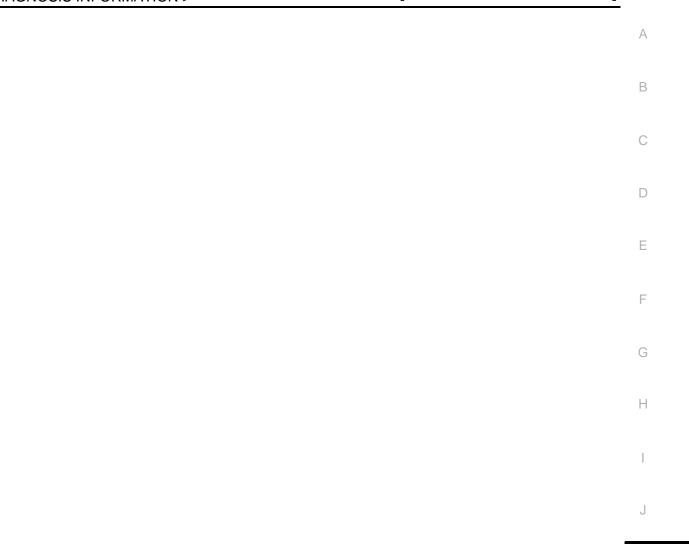


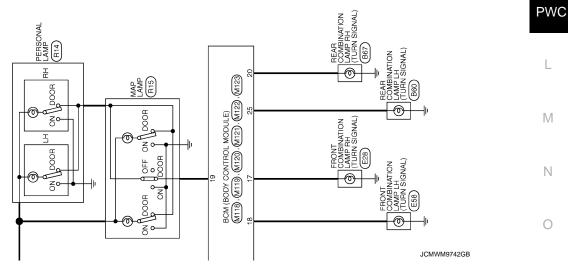




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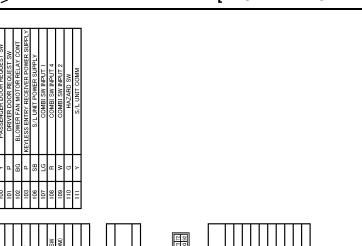


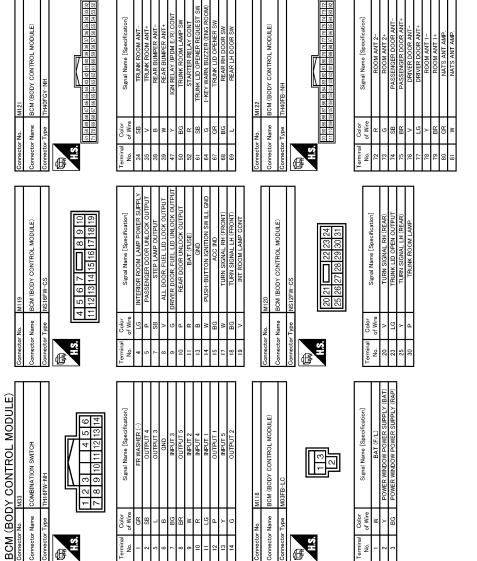


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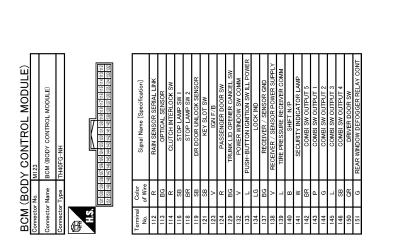
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JCMWM9743GB

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Fail-safe

FAIL-SAFE CONTROL BY DTC

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

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< ECU DIAGNOSIS INFORMATION >

Display contents of CONSULT	Fail-safe	Cancellation
B2013: ID DISCORD BCM-S/L	Inhibit engine cranking	Erase DTC
B2014: CHAIN OF S/L-BCM	Inhibit engine cranking	Erase DTC
B2190: NATS 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 $ON \rightarrow OFF$
B2557: VEHICLE SPEED	Inhibit steering lock	When normal vehicle speed signals are received from ABS actuator and electric unit (control unit) for 500 ms
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status be- comes consistentStarter control relay signalStarter relay status signal
B2601: SHIFT POSITION	Inhibit steering lock	 500 ms after the following signal reception status becomes consistent Selector lever P position switch signal P range signal (CAN)
B2602: SHIFT POSITION	Inhibit steering lock	 5 seconds after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Vehicle speed: 4 km/h (2.5 MPH) or more
B2603: SHIFT POSI STATUS	Inhibit steering lock	 500 ms after the following BCM recognition conditions are fulfilled Ignition switch is in the ON position Selector lever P position switch signal: Except P position (12 V) Selector lever P/N position signal: Except P and N positions (0 V)
B2604: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: P and N position (12 V) P range signal or N range signal (CAN): ON Status 2 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) P range signal and N range signal (CAN): OFF
B2605: PNP/CLUTCH SW	Inhibit steering lock	 500 ms after any of the following BCM recognition conditions are fulfilled Status 1 Ignition switch is in the ON position Selector lever P/N position signal: Except P and N positions (0 V) Interlock/PNP switch signal (CAN): OFF Status 2 Ignition switch is in the ON position Selector lever P/N position signal: P or N position (12 V) PNP switch signal (CAN): ON
B2606: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)
B2607: S/L RELAY	Inhibit engine cranking	 500 ms after the following CAN signal communication status has becomes consistent Steering lock relay signal (Request signal) Steering lock relay signal (Condition signal)

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

Display contents of CONSULT	Fail-safe	Cancellation
B2608: STARTER RELAY	Inhibit engine cranking	 500 ms after the following signal communication status becomes consistent Starter motor relay control signal Starter relay status signal (CAN)
B2609: S/L STATUS	Inhibit engine crankingInhibit steering lock	 When the following steering lock conditions agree BCM steering lock control status Steering lock condition No. 1 signal status Steering lock condition No. 2 signal status
B260A: IGNITION RELAY	Inhibit engine cranking	 500 ms after the following conditions are fulfilled IGN relay (IPDM E/R) control signal: OFF (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 fulfilledPower position changes to ACCReceives engine status signal (CAN)
B2612: S/L STATUS	 Inhibit engine cranking Inhibit steering lock 	 When any of the following conditions are fulfilled Steering lock unit status signal (CAN) is received normally The BCM steering lock control status matches the steering lock status recognized by the steering lock unit status signal (CAN from IPDM E/R)
B2617: 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 be- comes normal
B2619: BCM	Inhibit engine cranking	1 second after the steering lock unit power supply output control in- side BCM becomes normal
B261E: VEHICLE TYPE	Inhibit engine cranking	BCM initialization
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)
B26E9: S/L STATUS	 Inhibit engine cranking Inhibit steering lock 	 When BCM transmits the LOCK request signal to steering lock unit, and receives LOCK response signal from steering lock unit, the following conditions are fulfilled Steering condition No. 1 signal: LOCK (0 V) Steering condition No. 2 signal: LOCK (12 V)

DTC Inspection Priority Chart

INFOID:00000006847502

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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 	

< ECU DIAGNOSIS INFORMATION >

< ECU DIAGN	IOSIS INFORMATION >		[FRONT WINDOW ANTI-PINCH]
Priority		DTC	
4	 B2013: ID DISCORD BCM-S/L B2014: CHAIN OF S/L-BCM B2553: IGNITION RELAY B2555: STOP LAMP B2556: PUSH-BTN IGN SW B2557: VEHICLE SPEED B2560: STARTER CONT RELAY B2601: SHIFT POSITION B2602: SHIFT POSI STATUS B2603: SHIFT POSI STATUS B2604: PNP/CLUTCH SW B2605: PNP/CLUTCH SW B2606: S/L RELAY B2607: S/L RELAY B2608: STARTER RELAY B2609: S/L STATUS B2609: S/L STATUS B2608: STARTER RELAY B2609: S/L STATUS B2608: STEERING LOCK UNIT B2609: STEERING LOCK UNIT B2600: STEERING LOCK UNIT B2601: STEERING LOCK UNIT B2601: STEERING LOCK UNIT B2601: SL STATUS B2614: BCM B2615: BCM B2616: BCM B2617: BCM B2618: BCM B2618: BCM B2618: BCM B2618: CLUTCH SW B2618: VEHICLE TYPE B26E8: CLUTCH SW B26E9: S/L STATUS B26E4: 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] 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-15, "COM-MON ITEM : CONSULT-III Function (BCM - COMMON ITEM)"</u>.

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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

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-34
U1010: CONTROL UNIT(CAN)	_	_	_	_	BCS-35
U0415: VEHICLE SPEED	_	_	_	—	BCS-36
B2013: ID DISCORD BCM-S/L	×	×	_	—	<u>SEC-55</u>
B2014: CHAIN OF S/L-BCM	×	×	_	_	<u>SEC-56</u>
B2190: NATS ANTENNA AMP	×	_	_	_	<u>SEC-47</u>
B2191: DIFFERENCE OF KEY	×	_	_	_	<u>SEC-50</u>
B2192: ID DISCORD BCM-ECM	×	_	_	_	<u>SEC-51</u>
B2193: CHAIN OF BCM-ECM	×			_	<u>SEC-53</u>
B2195: ANTI-SCANNING	×	_	_	_	<u>SEC-54</u>
B2553: IGNITION RELAY	_	×	_	_	PCS-49
B2555: STOP LAMP	_	×	_	_	<u>SEC-59</u>
B2556: PUSH-BTN IGN SW	_	×	×	_	<u>SEC-61</u>
B2557: VEHICLE SPEED	×	×	×	_	<u>SEC-63</u>
B2560: STARTER CONT RELAY	×	×	×		<u>SEC-64</u>
B2562: LOW VOLTAGE		×			BCS-37
B2601: SHIFT POSITION	×	×	×		<u>SEC-65</u>
B2602: SHIFT POSITION	×	×	×		SEC-68
B2603: SHIFT POSI STATUS	×	×	×	_	<u>SEC-70</u>
B2604: PNP/CLUTCH SW	×	×	×		<u>SEC-73</u>
B2605: PNP/CLUTCH SW	×	×	×		<u>SEC-75</u>
B2606: S/L RELAY	×	×	×		<u>SEC-77</u>
B2607: S/L RELAY	×	×	×		<u>SEC-78</u>
B2608: STARTER RELAY	×	×	×		<u>SEC-80</u>
B2609: S/L STATUS	×	×	×		<u>SEC-82</u>
B260A: IGNITION RELAY	×	×	×		PCS-51
B260B: STEERING LOCK UNIT		×	×	_	<u>SEC-86</u>
B260C: STEERING LOCK UNIT		×	×	_	<u>SEC-87</u>
B260D: STEERING LOCK UNIT		×	×	_	<u>SEC-88</u>
B260F: ENG STATE SIG LOST	×	×	×	_	<u>SEC-89</u>
B2612: S/L STATUS	×	×	×		<u>SEC-94</u>
B2614: BCM		×	×	_	PCS-53
B2615: BCM	_	×	×		PCS-55
B2616: BCM	_	×	×		PCS-57
B2617: BCM	×	×	×		<u>SEC-98</u>
B2618: BCM	×	×	×		PCS-59
B2619: BCM	×	×	×		<u>SEC-100</u>
B261A: PUSH-BTN IGN SW	_	×	×		<u>PCS-60</u>
B261E: VEHICLE TYPE	×	× ×	<pre>^</pre>		<u>SEC-101</u>

Revision: 2011 November

< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

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
B2621: INSIDE ANTENNA	—	×	—	—	DLK-59
B2622: INSIDE ANTENNA	—	×	_	—	DLK-61
B2623: INSIDE ANTENNA	—	×	_	_	DLK-63
B26E8: CLUTCH SW	×	×	×	_	<u>SEC-90</u>
B26E9: S/L STATUS	×	×	imes (Turn ON for 15 seconds)	_	<u>SEC-92</u>
B26EA: KEY REGISTRATION	_	×	imes (Turn ON for 15 seconds)	_	<u>SEC-93</u>
C1704: LOW PRESSURE FL	—	—	_	×	
C1705: LOW PRESSURE FR	—	—	_	×	
C1706: LOW PRESSURE RR	—	—	_	×	<u>WT-24</u>
C1707: LOW PRESSURE RL	—	—	_	×	
C1708: [NO DATA] FL	—	—	_	×	
C1709: [NO DATA] FR	—	—	_	×	
C1710: [NO DATA] RR	—	—	_	×	<u>WT-26</u>
C1711: [NO DATA] RL	—	—	_	×	
C1716: [PRESSDATA ERR] FL	—	—	_	×	
C1717: [PRESSDATA ERR] FR	—	—	_	×	WT-29
C1718: [PRESSDATA ERR] RR	—	-	—	×	<u>vv 1-29</u>
C1719: [PRESSDATA ERR] RL	—	—	—	×	
C1729: VHCL SPEED SIG ERR	—	—	—	×	<u>WT-30</u>
C1734: CONTROL UNIT	—	—		×	<u>WT-31</u>

< ECU DIAGNOSIS INFORMATION >

POWER WINDOW MAIN SWITCH

Reference Value

INFOID:000000006603428

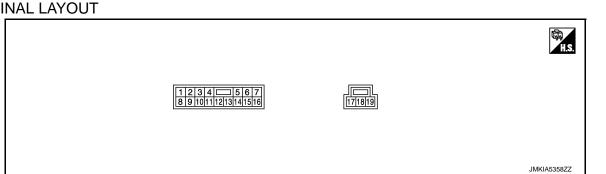
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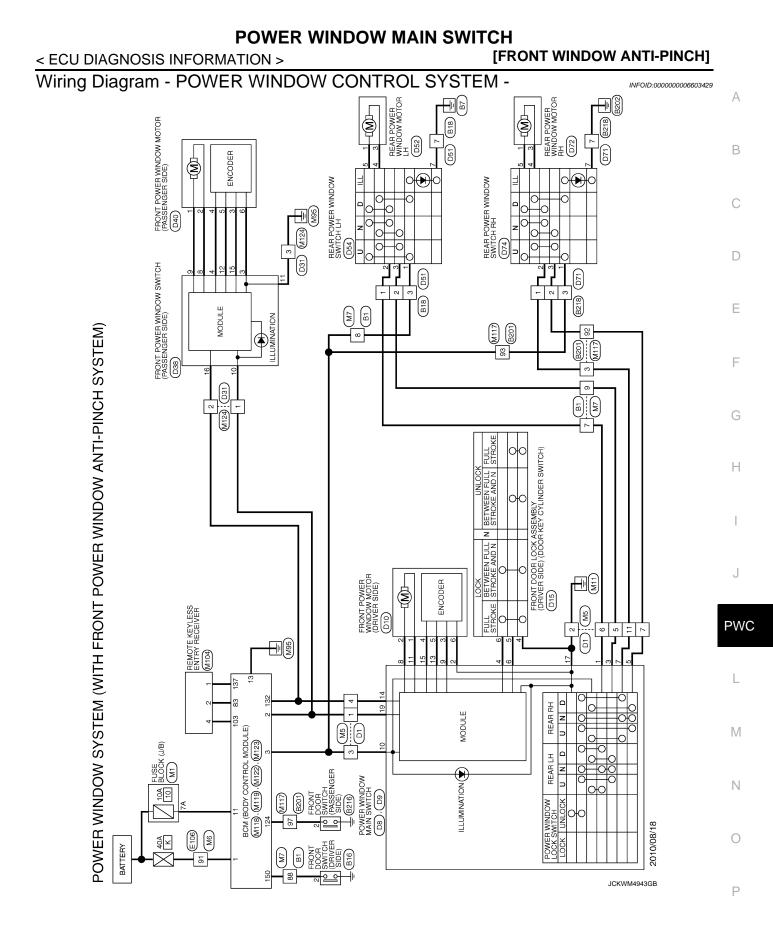
PHYSICAL VALUES

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 pow- er 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 pow- er window main switch is DOWN at operated.	12
4 (V)	Ground	Door key cylinder switch LOCK signal	Input	Key position (Neutral \rightarrow Locked)	$5 \rightarrow 0$
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 \rightarrow Unlocked)	$5 \rightarrow 0$
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 JMKIA0070GB

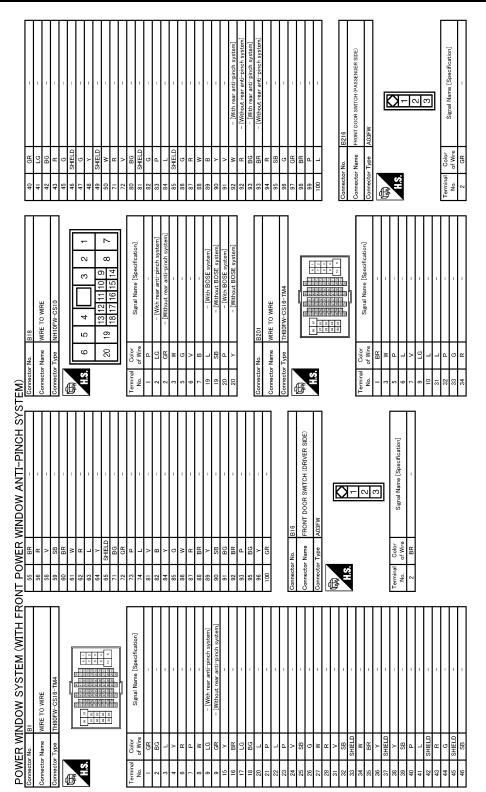
< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]

	iinal No. e color)	Description		Condition	Voltage [V]	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
				IGN SW ON	12	
10				Within 45 second after igni- tion switch is turned to OFF	12	
(SB)	Ground	Rap signal	Input	When driver side or passen- ger side door is opened dur- ing 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 2 0 10 10 ms JMKIA0070GB	
14 (V)	Ground	Power window serial link	Input/ Output	IGN SW ON or power win- dow timer operating.	(V) 15 0 0 10 ms JPMIA0013GB	
15 (B)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer oper- ates.	12	
17 (B)	Ground	Ground		_	0	
19 (Y)	Ground	Battery power supply	Input	_	12	



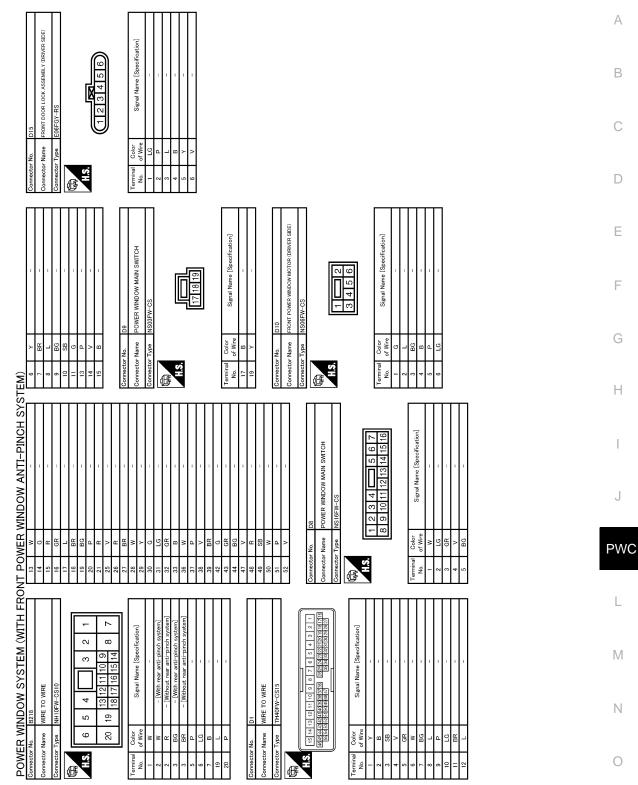
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JCKWM4944GB

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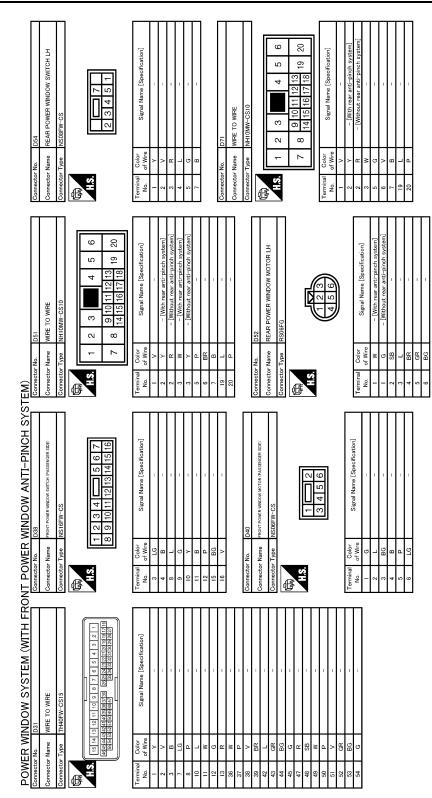
[FRONT WINDOW ANTI-PINCH]



JCKWM4945GB

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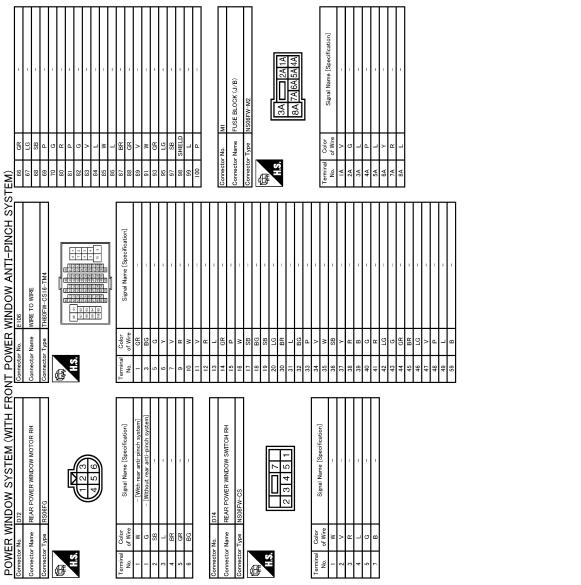
[FRONT WINDOW ANTI-PINCH]



JCKWM4946GB



< ECU DIAGNOSIS INFORMATION > [FRONT WINDOW ANTI-PINCH]



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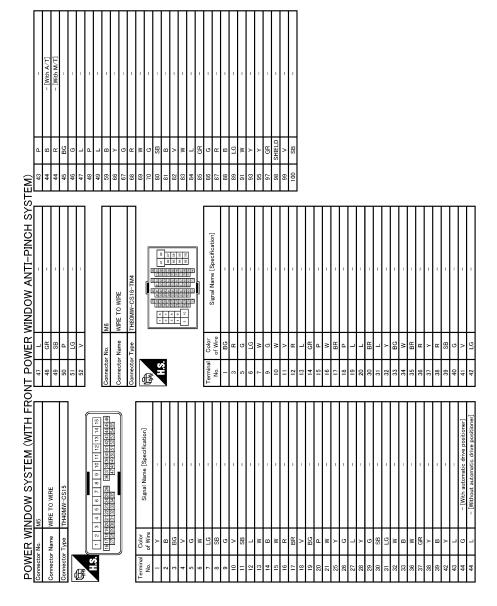
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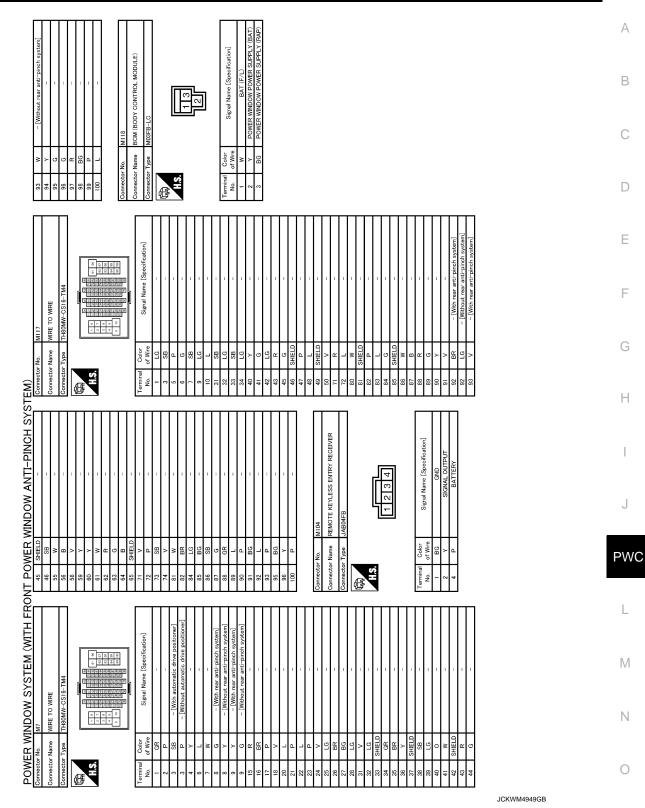
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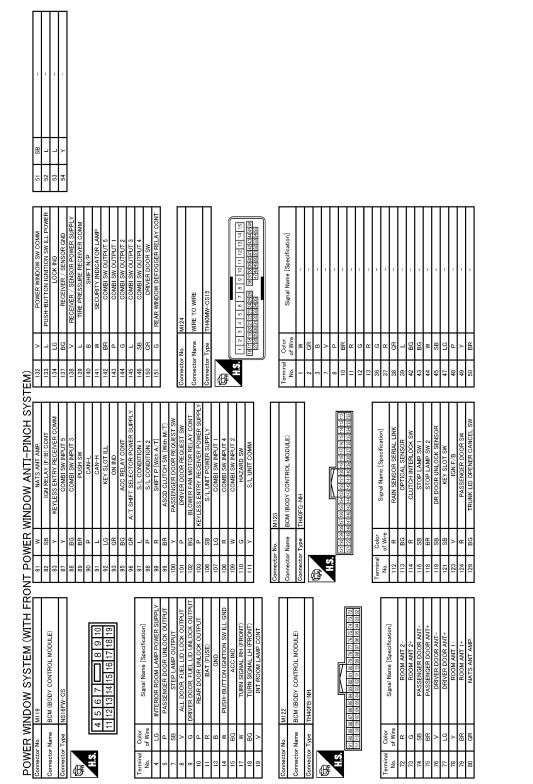


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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]





JCKWM4950GB

INFOID:000000006603430

FAIL-SAFE CONTROL

Fail-safe

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

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

< ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow 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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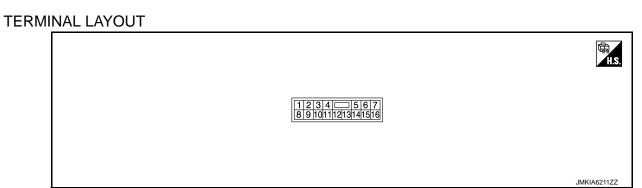
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Reference Value

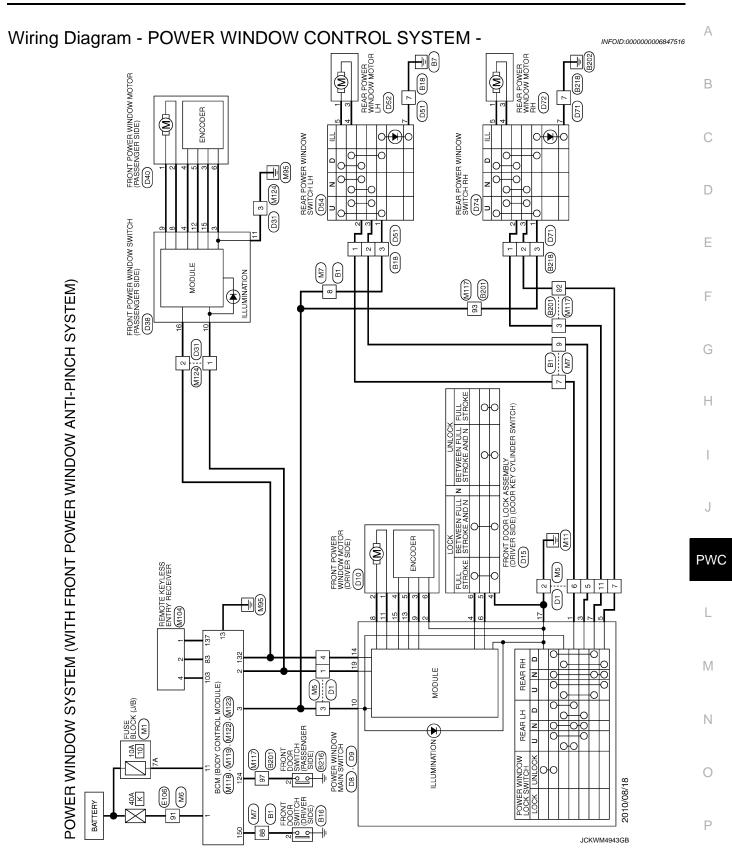
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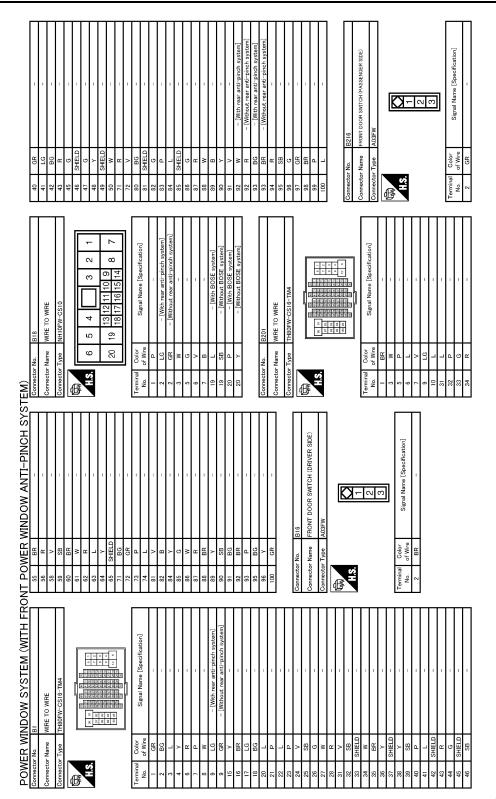
PHYSICAL VALUES

	nal No. 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) 6 2 0 10 ms JMKIA0070GB	
15 (BG)	Ground	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 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	

Revision: 2011 November



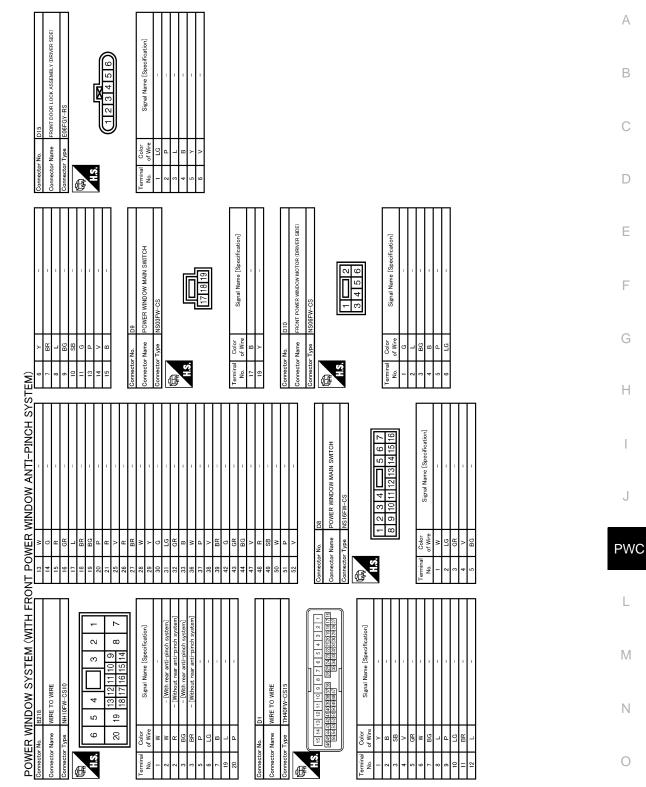
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[FRONT WINDOW ANTI-PINCH]

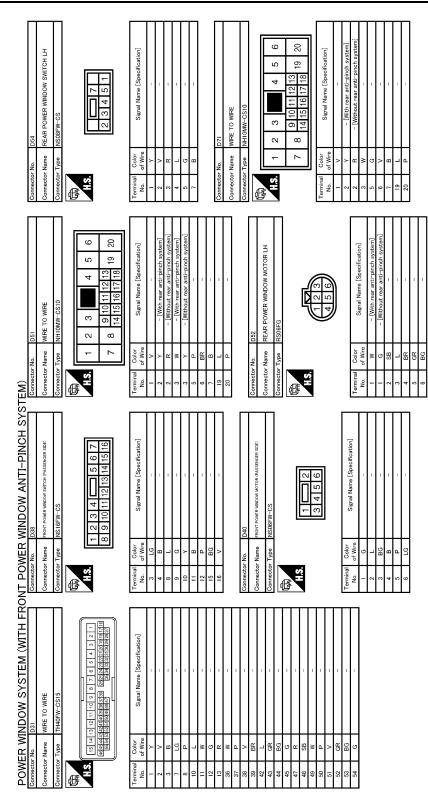


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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]



JCKWM4946GB

FRONT POWER WINDOW SWITCH [FRONT WINDOW ANTI-PINCH] < ECU DIAGNOSIS INFORMATION >

Signal Name [Specification] FUSE BLOCK (J/B) 3A 8 8A 7A 6A NS06FW-M i≥ E LG SB SHIELD ٩ Color of Wire ≤ SR ⊢ ≤ Connector Name nnector Type 100 H.S. 47 8A 88 88 ₹ 83 è POWER WINDOW SYSTEM (WITH FRONT POWER WINDOW ANTI-PINCH SYSTEM) ſ Signal Name [Specification] 0 1 0 0 0 0 1 0 0 0 WIRE TO WIRE 90 01 91 02 92 92 93 92 94 93 l≥[8]; Color of Wire nector Name r Br SB BG BB a R R a > 2 90, ۵ B PWC 服 HS. Signal Name [Specification] REAR POWER WINDOW MOTOR RH REAR POWER WINDOW SWITCH RH Signal Name [Specification] 5 6 4 Color of Wire Color of Wire - # # # 8 ctor Name Connector Name nector No. H.S. rminal No. H.S. rminal No.

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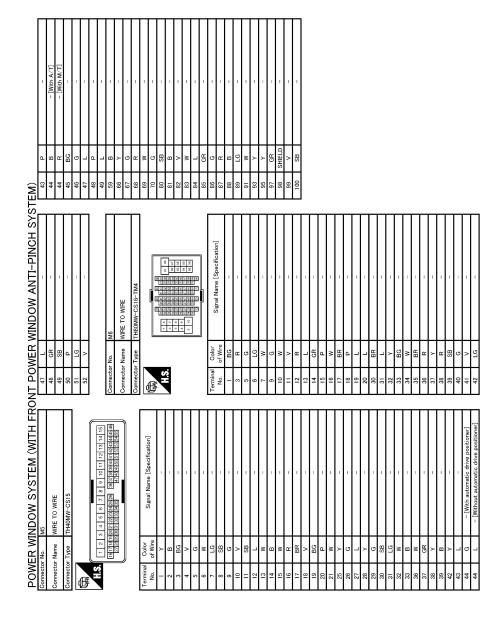
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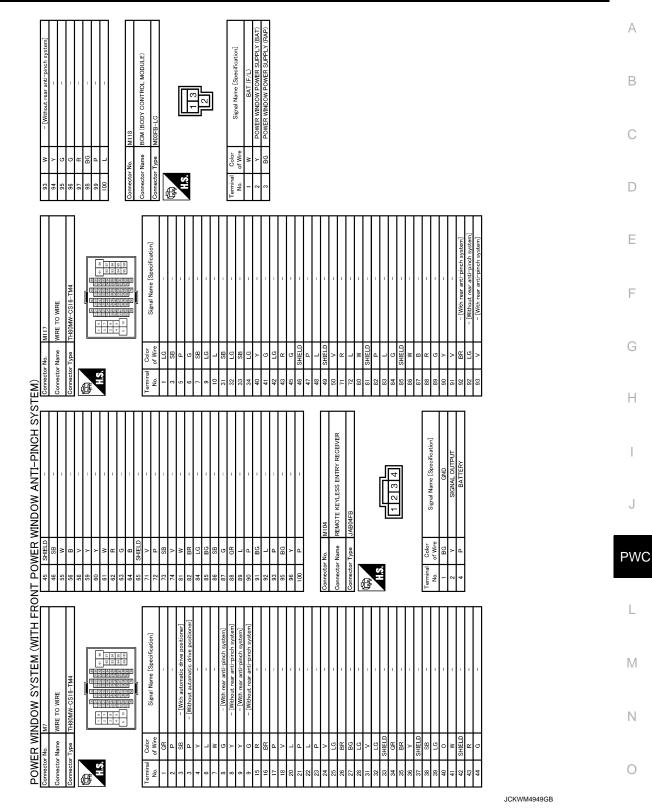
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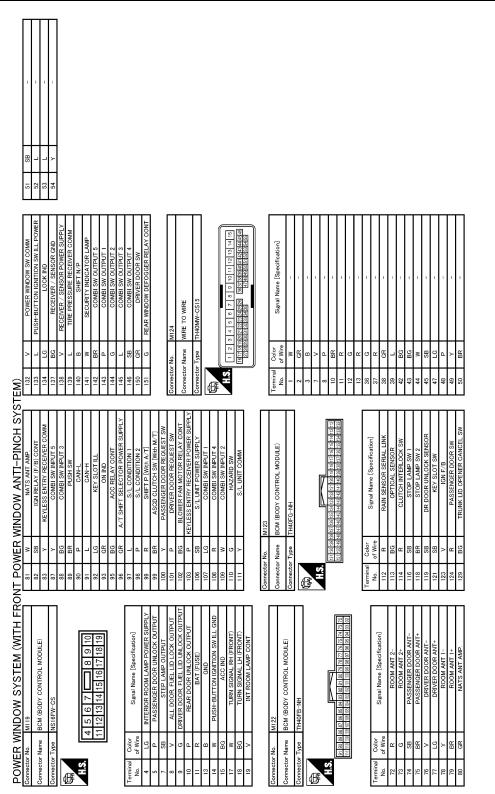
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< ECU DIAGNOSIS INFORMATION >

[FRONT WINDOW ANTI-PINCH]







JCKWM4950GB

INFOID:000000006626874

FAIL-SAFE CONTROL

Fail-safe

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

PWC-206

< ECU DIAGNOSIS INFORMATION >

Malfunction	Malfunction condition
Pulse sensor malfunction	When one pulse signal that is the specified value or more is detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Both pulse sensors mal- function	When both pulse signals are not detected continuously for the specified time or more, while door glass is being operated UP or DOWN.
Pulse direction malfunc- tion	When a pulse signal indicating that window is moving in the opposite direction against the power win- dow 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 SWITCH-

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< SYMPTOM DIAGNOSIS >

[FRONT WINDOW ANTI-PINCH]

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:000000006603434

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit. Refer to <u>BCS-38, "Diagnosis Procedure"</u>.

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]	
DRIVER SIDE POWER WINDOW DOES NOT OPERATE	^
Diagnosis Procedure	A
1. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT	В
Check power window switch power supply and ground circuit. Refer to <u>PWC-130, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"</u> .	
Is the inspection result normal?	С
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	_
2. CHECK DRIVER SIDE POWER WINDOW MOTOR	D
Check driver side power window motor. Refer to <u>PWC-136, "DRIVER SIDE : Component Function Check"</u> .	E
Is the measurement value within the specification?	
YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts.	F
3.CONFIRM THE OPERATION	
Confirm the operation again.	G
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u> .	0
NO $>>$ GO TO 1.	
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FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE [FRONT WINDOW ANTI-PINCH] < SYMPTOM DIAGNOSIS >

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure

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

Check front power window switch (passenger side) serial link circuit. Refer to PWC-149, "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

INFOID:000000006603437

1.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Replace front power window switch (passenger side). Refer to PWC-222, "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 INFOID:000000006603438

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. Refer to PWC-131, "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-137, "PASSENGER SIDE : Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${f 3.}$ CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

NO >> GO TO 1.

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REAR LH SIDE POWER WINDOW DOES NOT OPERATE DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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:000000006603439

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch . Refer to <u>PWC-134, "Component Function Check"</u>.

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:000000006603440

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

Check rear power window switch power supply and ground circuit. Refer to <u>PWC-132, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u>.

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 <u>PWC-222, "Removal and Installation"</u>.

>> 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 <u>PWC-138, "REAR LH : Component Function Check"</u>.

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 <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

REAR RH SIDE POWER WINDOW DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]	
REAR RH SIDE POWER WINDOW DOES NOT OPERATE	^
WHEN POWER WINDOW MAIN SWITCH IS OPERATED	A
WHEN POWER WINDOW MAIN SWITCH IS OPERATED : Diagnosis Procedure	В
1.CHECK REAR POWER WINDOW SWITCH	
Check rear power window switch . Refer to PWC-134, "Component Function Check".	0
Is the inspection result normal?	
YES >> GO TO 2.	D
NO >> Repair or replace the malfunctioning parts.	
	E
Confirm the operation again.	
<u>Is the result normal?</u> YES >> Check intermittent incident. Refer to GI-43, "Intermittent Incident".	F
NO >> GO TO 1.	
WHEN REAR POWER WINDOW SWITCH RH IS OPERATED	
WHEN REAR POWER WINDOW SWITCH RH IS OPERATED : Diagnosis Procedure	G
1. CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT	Η
Check rear power window switch power supply and ground circuit. Refer to <u>PWC-132, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> .	1
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.REPLACE REAR POWER WINDOW SWITCH RH	J
Replace rear power window switch RH. Refer to PWC-222, "Removal and Installation".	W
>> INSPECTION END WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW	L
WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH ARE OPERATED : Diagnosis Procedure	M
1.CHECK REAR POWER WINDOW MOTOR RH	Ν
Check rear power window motor RH. Refer to <u>PWC-139, "REAR RH : Component Function Check"</u> .	0
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.CONFIRM THE OPERATION	Ρ
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 WINDOW ANTI-PINCH]

ANTI-PINCH FUNCTION DOES NOT OPERATE

Diagnosis Procedure

INFOID:000000006603445

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 <u>PWC-215, "Diagnosis Procedure"</u>.

2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

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	А	
Diagnosis Procedure	В	
1.PERFORM INITIALIZATION PROCEDURE		
Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-122</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".	С	
Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2.	D	
2. CHECK ENCODER CIRCUIT	Е	
 Check encoder circuit. Refer to the following. Driver side: Refer to <u>PWC-141, "DRIVER SIDE : Component Function Check"</u>. Passenger side: Refer to <u>PWC-143, "PASSENGER SIDE : Component Function Check"</u>. 	F	
<u>Is the inspection result normal?</u> YES >> GO TO 3.		
NO	G	
3. CONFIRM THE OPERATION		
Confirm the operation again.	Н	
Is the result normal?		
 YES >> Check intermittent incident. Refer to <u>GI-43, "Intermittent Incident"</u>. 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 OPER-ATE PROPERLY

Diagnosis Procedure

INFOID:000000006603449

1. CHECK DOOR SWITCH

Check door switch. Refer to <u>DLK-66, "Component Function Check"</u>.

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

<pre>< SYMPTOM DIAGNOSIS > [FRONT WINDOWS</pre>	
DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN- DOWS	A
Diagnosis Procedure	В
1.PERFORM INITIALIZATION PROCEDURE	D
Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-122, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special</u> <u>Repair Requirement"</u> .	С
Is the inspection result normal? YES >> INSPECTION END NO >> GO TO 2.	D
2. CHECK DRIVER SIDE DOOR LOCK ASSEMBLY (KEY CYLINDER SWITCH)	Е
Check driver side door lock assembly (key cylinder switch). Refer to <u>PWC-146, "Component Function Check"</u> .	
Is the inspection result normal? YES >> GO TO 3.	F
NO >> Repair or replace the malfunctioning parts.	
3.CONFIRM THE OPERATION	G
Confirm the operation again. <u>Is the result normal?</u> YES >> Check intermittent incident. Refer to <u>GI-43. "Intermittent Incident"</u> . NO >> GO TO 1.	Н

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

[FRONT WINDOW ANTI-PINCH]

INFOID:000000006603451

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< SYMPTOM DIAGNOSIS >

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Description

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

Diagnosis Procedure

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 <u>DLK-187, "Description"</u>.

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 <u>PWC-209</u>, "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-III 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 <u>GI-43, "Intermittent Incident"</u>.

NO >> GO TO 1.

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION < SYMPTOM DIAGNOSIS > [FRONT WINDOW ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

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Diagnosis Procedure	INFOID:000000006603453	~
1.REPLACE POWER WINDOW MAIN SWITCH		В
Replace power window main switch. Refer to PWC-222, "Removal and Installation".		
>> INSPECTION END		С

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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:000000006603454

1.REPLACE POWER WINDOW SWITCH

Replace power window switch. Refer to <u>PWC-222</u>, "Removal and Installation".

>> INSPECTION END

< PRECAUTION > 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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REMOVAL AND INSTALLATION POWER WINDOW MAIN SWITCH

Removal and Installation

REMOVAL

- 1. Remove the power window main switch finisher (2). Refer to <u>INT-12</u>, "Removal and Installation".
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



CAUTION:

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

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



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 <u>PWC-123</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".

