# SECTION POWER WINDOW CONTROL SYSTEM

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< BASIC INSPECTION >	•
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BASIC INSPECTION	
DIAGNOSIS AND REPAIR WORKFLOW	

WorkFlow INFOID:000000001515862	В
DETAILED FLOW	
1.OBTAIN INFORMATION ABOUT SYMPTOM	С
Interview the customer to obtain the malfunction information (conditions and environment when the malfunc- tion occurred) as much as possible when the customer brings the vehicle in.	D
>> GO TO 2.	
2. REPRODUCE THE MALFUNCTION INFORMATION	Е
Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur.	F
>> GO TO 3.	Γ
${f 3.}$ IDENTIFY THE MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"	0
Use "Symptom diagnosis" from the symptom inspection result in step 2 and then identify where to start per- forming the diagnosis based on possible causes and symptoms.	G
>> GO TO 4.	Н
4. IDENTIFY THE MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"	
Perform the diagnosis with "Component diagnosis" of the applicable system.	I
>> GO TO 5.	
5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS	J
Repair or replace the specified malfunctioning parts.	DUIG
	PWC
>> GO TO 6. <b>6.</b> 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.	L
Are the malfunctions corrected? YES >> INSPECTION END	Μ
NO >> GO TO 3.	Ν
	1.4
	0
	0

### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >

### INSPECTION AND ADJUSTMENT ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

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

If any of the following work has been done Initial setting is necessary.

- Power supply to the power window main switch or power window motor is cut off by the removal of battery terminal or 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.

#### NOTE:

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

- Auto-up operation
- Anti-pinch function

Refer to <u>PWC-4</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement".

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

#### INITIALIZATION PROCEDURE

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

#### CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.

• Check that glass does not rise when operating the power window main switch while lowering.

**CAUTION:** 

- 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.
- Do not check with hands and other body parts because they may be pinched. Do not get pinched.
- It may switch to fail-safe mode if open/close operation is performed continuously without full close. Perform initial setting in that situation. Refer to <u>PWC-71, "Fail Safe"</u>.
- 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:000000001515865

Refer to <u>PWC-4</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description".

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-

### PWC-4

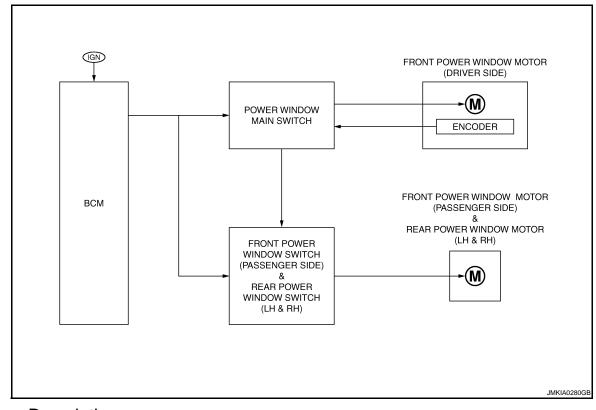
### **INSPECTION AND ADJUSTMENT**

< BASIC INSPECTION >	
quirement	Λ
Refer to <u>PWC-4. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special</u> <u>Repair Requirement</u> for initialization procedure and check anti-pinch function.	А
Repair Requirement" for initialization procedure and check anti-pinch function.	В
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# FUNCTION DIAGNOSIS POWER WINDOW SYSTEM

### System Diagram

INFOID:000000001505594



### System Description

INFOID:000000001505595

# POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to power window main switch	Power window main switch function	Actuator	
Encoder	Encoder pulse signal		Front power window motor (driver side)	
Power window main switch	Front power window motor (driver side) UP/DOWN signal			
Front power window switch (passenger side)	Front power window motor (passenger side) UP/DOWN signal	Power window control	Front power window motor (passenger side)	
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor (LH & RH)	

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE) & REAR POWER WINDOW SWITCH (LH & RH)

INPUT/OUTPUT SIGNAL CHART

### POWER WINDOW SYSTEM

#### < FUNCTION DIAGNOSIS >

Item	Input signal to front power window switch (passenger side) & rear power window switch (LH & RH)	Front power window switch (passenger side) & rear power window switch (LH & RH) func- tion	Actuator
Front power window switch (passenger side)	Front power window motor (passen- ger side) UP/DOWN signal	Power window control	Front power window motor (passenger side)
Rear power window switch (LH & RH)	Rear power window motor (LH & RH) UP/DOWN signal		Rear power window motor (LH & RH)

#### POWER WINDOW OPERATION

- Power window main switch (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.

#### POWER WINDOW AUTO-OPERATION (FRONT DRIVER SIDE)

• AUTO UP/DOWN operation can be performed when power window main 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.

#### POWER WINDOW LOCK

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

#### ANTI-PINCH OPERATION (FRONT DRIVER SIDE)

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

OPERATION CONDITION

• When front door glass (driver side) 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.

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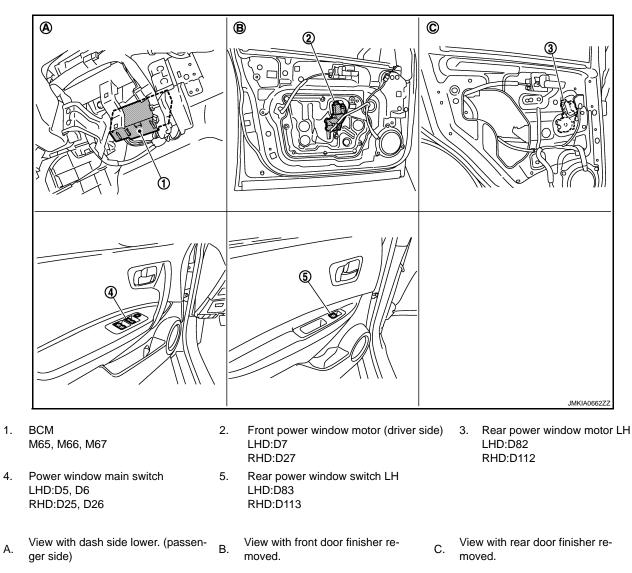
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### POWER WINDOW SYSTEM

#### < FUNCTION DIAGNOSIS >

### Component Parts Location

INFOID:000000001505596



### **Component Description**

INFOID:000000001505597

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

### PWC-8

< COMPONENT DIAGN		PLY AN	D GRO	UND CIRCU	IT	
		SIS				
POWER SUPPLY			СШТ			A
BCM			0011			
BCM : Diagnosis Pr	rocedure					В
						INFOID:000000001505599
1.CHECK FUSE AND F						С
Check that the following	ruse and fusible link	are not blo	own.			
Terminal No.		Signal		F		fusible link No.
3		Ignition po	wer supply			I (10A)
		Battery por	wer supply			0 (10A) J (50A)
Is the fuse fusing?						
YES >> Replace the blown. NO >> GO TO 2.		e link after	r repairing	the affected cir	cuit if a	a fuse or fusible link is $F$
2.CHECK POWER SUP						G
<ol> <li>Turn ignition switch 0</li> <li>Disconnect BCM cor</li> <li>Check voltage between</li> </ol>	nectors.	nnector ar	nd ground	l.		Н
	Terminals					
(+)		(-	—)	Condition		Voltage
BC Connector	M Terminal					(Approx.)
M65	3	Gro	ound	Ignition switch	ON	0
M66	41	-		Ignition switch (	OFF	Battery voltage
M67 Is the inspection result no	57 ormal?					PW
YES >> GO TO 3. NO >> Repair harne <b>3.</b> CHECK GROUND CII	ess or connector. RCUIT					L
Check continuity betweer	n BCM harness conr	nector and	ground.			Μ
	BCM					Continuity
Connector	Termina			Ground		N
M67	55					Existed
Is the inspection result no YES >> INSPECTION NO >> Repair harne POWER WINDOW	N END. ess or connector.	4				0
POWER WINDOW	MAIN SWITCH	: Diagn	osis Pro	ocedure		INFOID:000000001505600
1.CHECK POWER SUF	PLY CIRCUIT	_				

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

### PWC-9

#### < COMPONENT DIAGNOSIS >

(•	+)		Voltage (V)	
Power window main switch connector	Terminal	()	(Approx.)	
D5 (D25)	10	Ground	Pottory voltago	
D6 (D26)	19	Ground	Battery voltage	

():RHD models

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect power window main switch connector.

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

Power window main switch connector	Terminal	Ground	Continuity
D6 (D26)	17	Ground	Existed

():RHD models

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Repair or replace harness.

3. CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.

2. Disconnect BCM connector and power window main switch connector.

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

BCM connector	Terminal	Power window main switch connector	Terminal	Continuity
M67	53	D5 (D25)	10	Existed
IVIO7	58	D6 (D26)	19	LAISIEU

4. Check continuity between BCM harness connector and ground.

BCM connector	Terminal		Continuity
M67	53	Ground	Not ovisted
	58	-	Not existed

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

#### **4.**CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM connector.
- 2. Turn ignition switch ON.

3. Check voltage between BCM harness connector and ground.

	Terminals		
(+	+)	Voltage (V (Approx.)	
BCM connector	Terminal	()	(
M67	53	Ground	Pottony voltage
ΙΫΙΟΥ	58	Ground	Battery voltage

COMPONENT DIAGNOSIS					
the inspection result normal YES >> GO TO 5.	<u>(</u>				
NO >> Replace BCM. Re	fer to <u>BCS-68</u>	<u>8, "Explode</u>	<u>d View"</u> .		
CHECK INTERMITTENT IN	ICIDENT				
efer to <u>GI-39, "Intermittent In</u>	<u>cident"</u> .				
>> INSPECTION ENI					
RONT POWER WINE	DOW SWI	ICH (PA	ASSENGER S	SIDE)	
RONT POWER WIND	OW SWIT	CH (PAS	SENGER SID	): Diagnosi	s Procedure
CHECK POWER SUPPLY	CIRCUIT				
check voltage between front p	ower window	/ switch (pa	issenger side) harr	ness connector a	nd ground.
	Terminal				
(+)				Condition	Voltage (V)
Front power window switch (passenger side) connec	tor	rminal	()	Condition	(Approx.)
D45 (D65)		1	Ground	Ignition switch ON	Battery voltage
:RHD models					
NO >> GO TO 3. CHECK GROUND CIRCUI	Г				
. Disconnect front power wi				de) harness conn	ector and ground.
<ul> <li>Disconnect front power wi</li> <li>Check continuity between</li> </ul>	front power v	window swi			ector and ground.
<ul> <li>Disconnect front power wi</li> <li>Check continuity between</li> <li>Front power window switch (p</li> <li>D45</li> </ul>	front power v	window swi	tch (passenger sid	de) harness conn Ground	
<ol> <li>Disconnect front power wi</li> <li>Check continuity between</li> <li>Front power window switch (p</li> </ol>	front power v assenger side) of ? D. harness. NUITY or and front p	window swi	tch (passenger sid	Ground	Continuity Existed
<ul> <li>Disconnect front power wi</li> <li>Check continuity between</li> <li>Front power window switch (p D45</li> <li>the inspection result normal</li> <li>YES &gt;&gt; INSPECTION ENI</li> <li>NO &gt;&gt; Repair or replace</li> <li>CHECK HARNESS CONTI</li> <li>Turn ignition switch OFF.</li> <li>Disconnect BCM connector</li> <li>Check continuity between</li> </ul>	front power v assenger side) of ? D. harness. NUITY or and front p	window swi	tch (passenger sid	Ground ger side) connecte window switch (p	Continuity Existed
<ul> <li>Disconnect front power wi</li> <li>Check continuity between</li> <li>Front power window switch (p</li> <li>D45</li> <li>the inspection result normal</li> <li>YES &gt;&gt; INSPECTION ENI</li> <li>NO &gt;&gt; Repair or replace</li> <li>CHECK HARNESS CONTI</li> <li>Turn ignition switch OFF.</li> <li>Disconnect BCM connector</li> <li>Check continuity between ness connector.</li> </ul>	front power v assenger side) of 2 2 2 3 3 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	window swi	tch (passenger sid	Ground ger side) connecto window switch (p	Continuity Existed
Disconnect front power wi     Check continuity between     Front power window switch (p         D45     s the inspection result normal     YES >> INSPECTION ENI     NO >> Repair or replace     CHECK HARNESS CONTI     Turn ignition switch OFF.     Disconnect BCM connector     Check continuity between     ness connector.     BCM connector	front power v assenger side) o 2 2 2 3 3 4 5 3 5 3	window swi	tch (passenger sid Terminal 7 7 ow switch (passengor and front power er window switch (pas- er side) connector D45 (D65)	Ground ger side) connecto window switch (p	Continuity Existed
<ul> <li>2. Disconnect front power wi</li> <li>3. Check continuity between</li> <li>Front power window switch (p D45</li> <li>s the inspection result normal</li> <li>YES &gt;&gt; INSPECTION ENI</li> <li>NO &gt;&gt; Repair or replace</li> <li>B.CHECK HARNESS CONTI</li> <li>1. Turn ignition switch OFF.</li> <li>2. Disconnect BCM connector</li> <li>BCM connector</li> <li>M67</li> </ul>	front power v assenger side) o 2 2 2 3 3 4 5 3 5 3	window swi	tch (passenger sid Terminal 7 7 ow switch (passengor and front power er window switch (pas- er side) connector D45 (D65)	Ground ger side) connecto window switch (p	Continuity Existed

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

< COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

## 

REAR POWER WINDOW SWITCH

### **REAR POWER WINDOW SWITCH : Diagnosis Procedure**

INFOID:000000001505602

### **1.**CHECK POWER SUPPLY CIRCUIT

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

	Term	inal	Condition Voltage (V			
	(+)				Voltage (V)	
	oower window ch connector	Terminal	()		(Approx.)	
LH	D83 (D113)	1	Ground Ignition switch ON		Battery voltage	
RH	D103 (D93)	Ι	Ground	ignation switch ON	Dattery Voltage	

#### ():RHD models

Is the inspection result normal?

YES >> GO TO 2. (LHD models)

YES >> INSPECTION END. (RHD models)

NO >> GO TO 3.

- 2. CHECK GROUND CIRCUIT
- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch connector.
- 3. Check continuity between rear power window switch harness connector and ground.

Rear power w	Rear power window switch connector			Continuity
LH	D83	- 7	Ground	Existed
RH	D103			EXISIEU

Is the inspection result normal?

YES >> INSPECTION END.

NO >> Repair or replace harness.

3. CHECK HARNESS CONTINUITY

1. Disconnect BCM connector and rear power window switch connector.

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

BCM connector	Terminal	Rear power wind	dow switch connector	Terminal	Continuity
M67	53	LH	D83 (D113)	1	Existed
WO7	55	RH	D103 (D93)	I	LAISteu

3. Check continuity between BCM harness connector and ground.

BCM connector	Terminal	Ground	Continuity
M67	53	Gibana	Not existed

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

<pre>&lt; COMPONENT DIAGNOSIS &gt;</pre>	// 1
4.CHECK INTERMITTENT INCIDENT	A
Refer to GI-39, "Intermittent Incident".	
>> INSPECTION END.	В
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### FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

#### < COMPONENT DIAGNOSIS >

### FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

### Description

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

### **Component Function Check**

### 1. CHECK POWER WINDOW MOTOR FUNCTION

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

#### Is the inspection result normal?

- YFS >> Front power window switch (passenger side) is OK.
- >> Refer to PWC-14, "Diagnosis Procedure". NO

#### **Diagnosis** Procedure

INFOID:000000001505605

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

1. Turn ignition switch ON.

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

Те					
(+)			Power window main		Voltage (V)
Front power window switch (passenger side)	Terminal	(–) switch condition		(Approx.)	
D45 (D65)	2	_		UP	Battery voltage
			Passenger	DOWN	0
			Ground	side	UP
	3			DOWN	Battery voltage

():RHD models

Is the inspection result normal?

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

# **2.**CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

Check front power window switch (passenger side). Refer to PWC-15, "Component Inspection".

#### Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace front power window switch (passenger side). Refer to PWC-83, "Removal and Installation".

### ${f 3.}$ CHECK FRONT WINDOW SWITCH (PASSENGER SIDE) CIRCUIT

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

Power window main switch connector	Terminal	Front power window switch (passenger side) connector	Terminal	Continuity
D5 (D25)	8	D45 (D65)	2	Existed
D3 (D23)	11	D43 (D83)	3	Existed

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

INFOID:000000001505603

### FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

#### < COMPONENT DIAGNOSIS >

				Continuity
D5 (D25)		8	Ground	Not existed
		11		
ID models				
e inspection result norr	nal?			
S >> GO TO 4. >> Repair or repla	co harnoss			
HECK POWER WIND				
			SIGNAL	
Turn ignition switch ON Check voltage betweer		ow main switch	harness connector and grou	nd.
	Terminal			
(+)			Power window switch	Voltage (V)
Power window main switch connector	Terminal	(-)	condition	(Approx.)
	2		UP	Battery voltage
	8	Cround	DOWN	0
D5 (D25)	44	Ground	UP	0
	11 DOWN	2014	<b>D</b> <i>u</i> <b>u</b>	
e inspection result norr S >> GO TO 5. >> Replace power	· window mair	n switch. Refer t	o <u>PWC-83, "Removal and Ir</u>	Battery voltage
>> Replace power HECK INTERMITTEN to <u>GI-39, "Intermitten</u> >> INSPECTION I NPONENT INSPECTION HECK FRONT POWE	<sup>•</sup> window mair T INCIDENT <u>t Incident"</u> . END. n R WINDOW S	SWITCH (PASS	o <u>PWC-83. "Removal and Ir</u>	
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN r to <u>GI-39, "Intermitten</u> >> INSPECTION I nponent Inspection HECK FRONT POWE ck front power window	<sup>•</sup> window mair T INCIDENT <u>t Incident"</u> . END. n R WINDOW S	SWITCH (PASS	o <u>PWC-83. "Removal and Ir</u>	nstallation".
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN r to <u>GI-39, "Intermitten</u> >> INSPECTION I nponent Inspectio	window mair T INCIDENT <u>t Incident"</u> . END. N R WINDOW S switch (passe	SWITCH (PASS enger side).	o <u>PWC-83. "Removal and Ir</u>	nstallation".
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN r to GI-39, "Intermitten >> INSPECTION I nponent Inspection HECK FRONT POWE ck front power window switch	window mair T INCIDENT t Incident". END. N R WINDOW S switch (passe Terr	SWITCH (PASS enger side). minal	o <u>PWC-83. "Removal and Ir</u> ENGER SIDE)	nstallation".
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN r to <u>GI-39, "Intermitten</u> >> INSPECTION I nponent Inspection HECK FRONT POWE ck front power window Front power window switch	window mair T INCIDENT <u>t Incident"</u> . END. N R WINDOW S switch (passe	SWITCH (PASS enger side). minal I 5 4	o <u>PWC-83. "Removal and Ir</u> ENGER SIDE)	nstallation".
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN or to GI-39, "Intermitten >> INSPECTION I nponent Inspection HECK FRONT POWE ck front power window switch	window main T INCIDENT t Incident". END. N R WINDOW S switch (passe Terr 1 3 3	SWITCH (PASS enger side). minal F 5 4 4 4	o <u>PWC-83. "Removal and Ir</u> ENGER SIDE)	nstallation".
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN r to GI-39, "Intermitten >> INSPECTION I mponent Inspection HECK FRONT POWE ck front power window switch (passenger side)	window mair T INCIDENT t Incident". END. N R WINDOW S switch (passe Terr 1 3 3 2	SWITCH (PASS enger side). minal I 5 4 4 5	o <u>PWC-83, "Removal and Ir</u> ENGER SIDE) Front power window switch condition	on Continuity
e inspection result norr S >> GO TO 5. >> Replace power HECK INTERMITTEN or to GI-39, "Intermitten >> INSPECTION I nponent Inspection HECK FRONT POWE ck front power window switch (passenger side)	window main T INCIDENT t Incident". END. N R WINDOW S switch (passe Terr 1 3 3	SWITCH (PASS enger side). minal F 5 4 4 4	o <u>PWC-83, "Removal and Ir</u> ENGER SIDE) Front power window switch condition	on Continuity

():RHD models

Is the inspection result normal?

YES

>> Front power window switch (passenger side) is OK. >> Replace front power window switch (passenger side). Refer to <u>PWC-83. "Removal and Installa-</u> NO tion".

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#### < COMPONENT DIAGNOSIS >

### REAR POWER WINDOW SWITCH

### Description

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

#### Component Function Check

1. CHECK REAR POWER WINDOW MOTOR 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-16</u>, "Diagnosis Procedure".

### **Diagnosis Procedure**

## 1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

1. Turn ignition switch ON.

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

Terminal							
(+)	(+)		Power win	dow main switch condition	Voltage (V)		
Rear power window switch connector	Terminal	()			(Approx.)		
	2			UP	Battery voltage		
	2	-			LH	DOWN	0
LH: D83 (D113)	0		LU	UP	0		
	3	Crowned		DOWN	Battery voltage		
	2	Ground -	2		UP	Battery voltage	
	2			DU	DOWN	0	
RH: D103 (D93)			RH	UP	0		
	3			DOWN	Battery voltage		

():RHD models

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 <u>PWC-17</u>, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace rear power window switch. Refer to <u>PWC-83, "Removal and Installation"</u>.

### ${\it 3.}$ CHECK REAR POWER WINDOW SWITCH CIRCUIT

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:000000001505608

### **REAR POWER WINDOW SWITCH**

#### < COMPONENT DIAGNOSIS >

Power window main switch connector	Terminal	Rear power win	dow switch connector	Terminal	Continuity		
	1	LH					
	3		LH D83 (D113)	3	Existed		
D5 (D25)	5	5.1	RH D103(D93) -	3			
	7	КН		2			

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

Power window	main switch	Cround	Continuity	
Connector	Terminal	– Ground	Continuity	
	1			
	3	Ground	Net evicted	
D5 (D25)	5	– Ground	Not existed	
	7	_		

#### ():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

**4.**CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

1. Turn ignition switch ON.

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

Terminal						
(+)			Power wind	ow main switch condition	Voltage (V)	
Power window main switch connector	Terminal	(-)			(Approx.)	
	4			UP	Battery voltage	
	I			DOWN	0	
	3		REAR LH	UP	0	
				DOWN	Battery voltage	
D5 (D25)		Ground		UP	Battery voltage	
	5			DOWN	0	
	7		REAR RH	UP	0	
	/		1	DOWN	Battery voltage	

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INFOID:000000001505610

():RHD models

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power window main switch. Refer to <u>PWC-83</u>, "Removal and Installation".

5. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

**Component Inspection** 

1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

### **REAR POWER WINDOW SWITCH**

#### < COMPONENT DIAGNOSIS >

Rear power window switch	Terminal		Rear power window switch condition	Continuity
	1	5	UP	
-	3	4	0F	
LH:D83 (D113)	3	4	NEUTRAL	Existed
RH:D103 (D93)	2	5	NEOTRAL	Existed
-	1	4	DOWN	
	2	5	DOWN	

():RHD models

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to <u>PWC-83</u>, "Removal and Installation".

		POWE	R WINDO	W MOTOR		
POWER WINDOW		OR				
RIVER SIDE						
RIVER SIDE : Desc	ription					INFOID:000000001505611
oor glass moves UP/DOV	/N by rec	ceiving the	e signal from	power window	main switc	h.
RIVER SIDE : Com	ponent	Functio	on Check			INFOID:000000001505612
. CHECK POWER WIND	OW MO	TOR CIRC	CUIT			
heck power window moto the inspection result norr (ES >> Power window NO >> Refer to <u>PWC-</u>	n <u>al?</u> motor (di	river side)	is OK.			
RIVER SIDE : Diag	nosis P	rocedu	re			INFOID:000000001505613
CHECK POWER WIND	OW MOT	OR (DRI\	/ER SIDE) II	NPUT SIGNAL		
Disconnect front power Turn ignition switch ON Check voltage betweer	l.	·			nnector an	d ground.
(+)	Terrinidi			Power window main switch —) Condition		Voltage (V)
Power window motor (driver side) connector	Termi	inal	()			(Approx.)
	2		UP			Battery voltage
D7 (D27)		Ground	Ground		DOWN	0
	1			DOW		Battery voltage
	OW MOT F. low main een powe	switch co er window	nnector and			r (driver side) connector. ront power window motor
Power window main switch connector	Ter	rminal	Front power window motor (driver side) connector		al Continuity	
D5 (D25)	-	16 12	D7	(D27)	2	Existed
Check continuity betwee	en powe	r window	main switch	harness conne	ctor and gro	ound.
Power window main switch co	onnector	Ter	minal			Continuity
D5 (D25)			16 12	Grour	nd	Not existed
	1			l		l

Is the inspection result normal?

YES >> GO TO 3.

< COMPONENT DIAGNOSIS >

NO >> Repair or replace harness.

# **3.**CHECK POWER WINDOW MAIN SWITCH OUTPUT SIGNAL

#### 1. Turn ignition switch ON.

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

Terminal							
(+)			Power windov	v main switch condition	Voltage (V)		
Power window main switch connector	Terminal	()			(Approx.)		
	16			UP	Battery voltage		
	10	Onessed	Ground	Ground Driver side	Driver eide	DOWN	0
D5 (D25)					Driver side	UP	0
	12			DOWN	Battery voltage		

#### ():RHD models

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace power window main switch. Refer to PWC-83, "Removal and Installation".

#### **4.**CHECK POWER WINDOW MOTOR

Check front power window motor (driver side). Refer to <u>PWC-20, "DRIVER SIDE : Component Inspection"</u>.

#### Is the inspection result normal?

YES >> GO TO 5.

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

**5.**CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### >> INSPECTION END.

### **DRIVER SIDE : Component Inspection**

INFOID:000000001505614

#### 1.CHECK POWER WINDOW MOTOR

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

Front power window motor (driver	Terr	minal	Motor condition	
side) connector	(+)	(-)		
D7 (D27)	1	2	DOWN	
$D_{I}(D_{ZI})$	2	1	UP	

():RHD models

Is the inspection result normal?

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

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

#### **PASSENGER SIDE : Description**

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

### PASSENGER SIDE : Component Function Check

**1.** CHECK POWER WINDOW MOTOR CIRCIUT

INFOID:000000001505616

#### < COMPONENT DIAGNOSIS >

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

Is the inspection result normal?

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

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

PASSENGER SIDE : Diagnosis Procedure

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

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

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

Tern	ninal				
(+)			Front power window switch (passenger	Voltage (V)	
Front power window motor (passen- ger side) connector	Terminal	()	side) condition	(Approx.)	
	2		UP	Battery voltage	-
		2	Ground	DOWN	0
D46 (D66)	4	Ground	UP	0	-
	I		DOWN	Battery voltage	-

():RHD models

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK POWER WINDOW MOTOR CIRCUIT

1. Turn ignition switch OFF.

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

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

Front power window switch (passen- ger side) connector	Terminal	Front power window motor (passen- ger side) connector	Terminal	Continuity	
D45 (D65)	4	D46 (D66)	1	Existed	
D45 (D65)	5	D40 (D00)	2		

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

Front power window switch (passen- ger side) connector	Terminal		Continuity
D45 (D65)	4	Ground	Not existed
D43 (D03)	5		NOT EXISTED

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

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

Check front power window motor (passenger side). Refer to <u>PWC-22, "PASSENGER SIDE : Component Inspection"</u>.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front power window motor (passenger side). Refer to <u>GW-25, "Removal and Installation"</u>.

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< COMPONENT DIAGNOSIS >

#### 4. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

#### >> INSPECTION END.

PASSENGER SIDE : Component Inspection

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

Check motor operation by connecting the battery voltage directly to front power window motor (passenger side) connector.

Front power window motor (passen-	Terr	minal	Motor condition
ger side) connector	(+)	(-)	
D46 (D66)	1	2	DOWN
D40 (D00)	2	1	UP

():RHD models

Is the inspection result normal?

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

NO >> Replace front power window motor (passenger side). Refer to <u>GW-25, "Removal and Installation"</u>. REAR LH

### REAR LH : Description

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

**REAR LH : Component Function Check** 

#### **1.**CHECK POWER WINDOW MOTOR 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 >> Power window motor LH is OK.

NO >> Refer to PWC-22, "REAR LH : Diagnosis Procedure"

### **REAR LH : Diagnosis Procedure**

INFOID:000000001505621

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

1. Disconnect rear power window motor LH connector.

2. Turn ignition switch ON.

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

Terminal				
(+)			Power window switch	Voltage (V)
Rear power window mo- tor LH connector	Terminal	()	condition	(Approx.)
			UP	Battery voltage
D02 (D112)	I	Ground	DOWN	0
D82 (D112)	_	Ground	UP	0
	3		DOWN	Battery voltage

():RHD models

Is the inspection result normal?

INFOID:000000001505618

INFOID:000000001505619

< COMPONENT DIAGNOSIS >

<ul> <li>Turn ignition switch OFF.</li> <li>Disconnect rear power w</li> <li>Check continuity betwee LH harness connector.</li> </ul>	vindow switch LH				
Rear power window switch LH connector	Terminal	Rear power window r connector	notor LH	Terminal	Continuity
D83 (D113)	4 5	D82 (D112)		3 1	Existed
Check continuity betwee	n rear power win	dow switch LH con	nector and	d ground.	
Rear power window switch LH nector	con-	Terminal			Continuity
D83 (D113)		4	G	Ground	Not existed
efer to <u>PWC-23, "REAR LH</u>					
s the inspection result normal         YES       >> GO TO 4.         NO       >> Replace rear powers         .CHECK INTERMITTENT         Refer to GI-39. "Intermittent I	wer window moto	or LH. Refer to <u>GW-</u>	25, "Rem	oval and Instal	lation".
YES >> GO TO 4. NO >> Replace rear po	wer window moto INCIDENT Incident". ND. ht Inspection	or LH. Refer to <u>GW-</u>	<u>25, "Rem</u>	oval and Instal	lation".
YES >> GO TO 4. NO >> Replace rear por CHECK INTERMITTENT Refer to GI-39, "Intermittent I >> INSPECTION Ef REAR LH : Componen	wer window moto INCIDENT Incident". ND. ht Inspection ON W MOTOR				INFOID:000000001505622
YES >> GO TO 4. NO >> Replace rear power CHECK INTERMITTENT Sefer to GI-39, "Intermittent I >> INSPECTION EN REAR LH : Component COMPONENT INSPECTION CHECK POWER WINDO	wer window moto INCIDENT Incident". ND. It Inspection ON W MOTOR ecting the battery	v voltage directly to		er window moto	INFOID:000000001505622

NO >> Replace rear power window motor LH. Refer to <u>GW-25, "Removal and Installation"</u>. REAR RH

< COMPONENT DIAGNOSIS >

#### REAR RH : Description

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

### **REAR RH : Component Function Check**

#### 1. CHECK POWER WINDOW MOTOR CIRCUIT

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

#### Is the inspection result normal?

YES >> Power window motor RH is OK.

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

#### **REAR RH** : Diagnosis Procedure

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

1. Disconnect rear power window motor RH connector.

2. Turn ignition switch ON.

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

Terminal				
(+)			Rear power window	Voltage (V)
Rear power window mo- tor RH connector	Terminal	()	switch RH condition	(Approx.)
	1		UP	Battery voltage
D102 (D92)		Ground	DOWN	0
D102 (D92)	2	Giodila	UP	0
	3		DOWN	Battery voltage

():RHD models

Is the inspection result normal?

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

 $\mathbf{2}$ 

### 2. CHECK HARNESS CONTINUITY

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

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D103 (D93)	4	D102 (D92)	3	Existed
D 105 (D95)	5	0102 (032)	1	LAISIEU

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

Rear power window switch RH con- nector	Terminal		Continuity
D103 (D93)	4	Ground	Not existed
	5		NOT EXISTED

():RHD models

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

INFOID:000000001505623

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INFOID:000000001505624

< COMPONENT DIAGNOSIS >				-
<b>3.</b> CHECK REAR POWER WINDOW	MOTOR RH			
Check rear power window motor RH.				_ /
Refer to <u>PWC-25</u> , "REAR RH : Comp	onent Inspection	<u>.</u>		
<u>Is the inspection result normal?</u> YES >> GO TO 4.				ŀ
NO >> Replace rear power wind	ow motor RH. Re	efer to <u>GW-25, "Remo</u>	val and Installation".	
<b>4.</b> CHECK INTERMITTENT INCIDEN	лт			(
Refer to GI-39. "Intermittent Incident"				-
				[
>> INSPECTION END.				
REAR RH : Component Inspe	ection		INFOID:0000000015056	
COMPONENT INSPECTION				1
1.CHECK REAR POWER WINDOW				
Check motor operation by connecting		an directly to rear poy	ver window motor PH connector	-
check motor operation by connecting	the battery volta	ge directly to real por		
Rear power window motor RH con-	Ter	minal	Motor condition	(
nector	(+)	(-)		
D102 (D92)	3	1	DOWN	
	1	3	UP	ſ
():RHD models Is the inspection result normal?				
YES >> Power window motor RH	is OK.			
NO >> Replace rear power wind		efer to <u>GW-25, "Remo</u>	val and Installation".	
				Ρ
				I

**PWC-25** 

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### < COMPONENT DIAGNOSIS >

### **ENCODER CIRCUIT**

### Description

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

### **Component Function Check**

### **1**.CHECK ENCODER OPERATION

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

Is the inspection result normal?

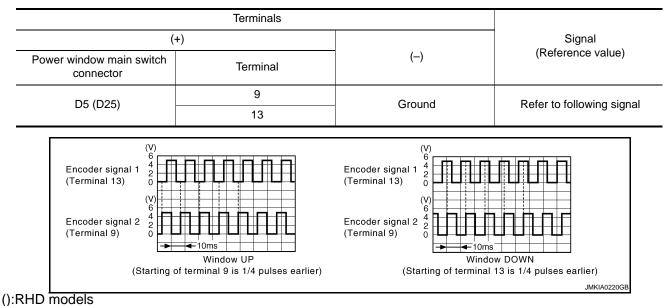
- YES >> Encoder operation is OK.
- NO >> Refer to <u>PWC-26</u>, "Diagnosis Procedure"

### **Diagnosis Procedure**

### Encoder Circuit Check

#### **1.**CHECK ENCODER OPERATION

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



Is the inspection result normal?

### 2. CHECK ENCORDER SIGNAL CIRCUIT

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	9	D7 (D27)	3	Existed
D3 (D23)	13	D7 (027)	5	LAISIEU

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

INFOID:000000001530001

### **ENCODER CIRCUIT**

#### < COMPONENT DIAGNOSIS >

Power window main switch conne tor	,C-	Terminal			Continuity	
D5 (D25)		9	-	Ground	Not existed	
RHD models		15				
the inspection result normal?	?					
ES >> GO TO 3.	-					
O >> Repair or replace I	narness.					
CHECK ENCORDER POW	ER SUPPLY C	IRCUIT				
Connect power window ma	ain switch conn	nector.				
Turn ignition switch ON.						
Check voltage between fro	ont power windo	ow motor (driver sid	de) harne:	ss connector a	and ground.	
	Termina	al				
(+)					Voltage (V)	
Front power window motor			(-)		(Approx.)	
(driver side) connector	Termina	al				
D7 (D27)	4		Ground		Battery voltage	
RHD models						
he inspection result normal?	?					
	-					
ES >> GO TO 4. 0 >> GO TO 5						
O >> GO TO 5.	F					
O >> GO TO 5. CHECK GROUND CIRCUI	Г					
O >> GO TO 5. CHECK GROUND CIRCUI <sup>T</sup> Turn ignition switch OFF.			-:			
O >> GO TO 5. CHECK GROUND CIRCUI		ndow motor (driver	side) harı	ness connecto	or and ground.	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between	front power wir		side) harı	ness connecto		
O >> GO TO 5. CHECK GROUND CIRCUI <sup>T</sup> Turn ignition switch OFF.	front power wir	ndow motor (driver Terminal		ness connecto	or and ground. Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driv	front power wir					
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driv side) connector D7 (D27)	front power wir	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driv side) connector D7 (D27) RHD models	front power wir /er	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driv side) connector D7 (D27) RHD models the inspection result normal?	front power wir /er	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driv side) connector D7 (D27) RHD models	front power wir /er	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6.	front power wir /er	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL	front power wir /er	Terminal			Continuity	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal ES >> GO TO 7. O >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIN Turn ignition switch OFF.	front power wir /er 2 NUITY 1	Terminal 6	G	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between	front power wir /er ? NUITY 1 power window	Terminal 6	G	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal ES >> GO TO 7. O >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIN Turn ignition switch OFF.	front power wir /er ? NUITY 1 power window	Terminal 6	G	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driver side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connection	front power wir /er ? NUITY 1 power window ector.	Terminal 6 v main switch harne	G ess conne	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driving side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between	front power wir /er ? NUITY 1 power window	Terminal 6	G ess conne w motor	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driver side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connector Power window main switch con- nector	front power wir /er ? NUITY 1 power window ector.	Terminal 6 7 main switch harne Front power windor (driver side) conr	G ess conne w motor	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driven side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connector Power window main switch con- nector D5 (D25)	front power wir /er ? NUITY 1 power window ector. Terminal 15	Terminal 6 7 main switch harne Front power windor (driver side) conr D7 (D27)	ess conne	round	Continuity Existed t power window mo Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driver side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connector Power window main switch con- nector	front power wir /er ? NUITY 1 power window ector. Terminal 15	Terminal 6 7 main switch harne Front power windor (driver side) conr D7 (D27)	ess conne	round	Continuity Existed t power window mo Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driven side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connector Power window main switch con- nector D5 (D25)	front power wir /er ? NUITY 1 power window ector. Terminal 15 power window	Terminal 6 7 main switch harne Front power windor (driver side) conr D7 (D27) main switch harnes	ess conne	round	Continuity Existed	
O >> GO TO 5. CHECK GROUND CIRCUIT Turn ignition switch OFF. Check continuity between Front power window motor (driver side) connector D7 (D27) RHD models the inspection result normal? ES >> GO TO 7. O >> GO TO 6. CHECK HARNESS CONTIL Turn ignition switch OFF. Check continuity between (driver side) harness connector D5 (D25) Check continuity between	front power wir /er ? NUITY 1 power window ector. Terminal 15 power window	Terminal 6 7 main switch harne Front power windor (driver side) conr D7 (D27)	ess conne w motor hector ss connec	round	Continuity Existed t power window mo Continuity Existed	

():RHD models

Is the inspection result normal?

YES >> Replace power window main switch. Refer to <u>PWC-83. "Removal and Installation"</u>.

NO >> Repair or replace harness.

### **ENCODER CIRCUIT**

#### < COMPONENT DIAGNOSIS >

# 6. CHECK HARNESS CONTINUITY 2

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

Power window main switch connector	Terminal	Front power window motor (driver side) connector	Terminal	Continuity
D5 (D25)	2	D7 (D27)	6	Existed

():RHD models

Is the inspection result normal?

YES >> Replace power window main switch. Refer to <u>PWC-83, "Removal and Installation"</u>.

NO >> Repair or replace harness.

7. CHECK INTERMITTENT INCIDENT

Refer to GI-39, "Intermittent Incident".

>> INSPECTION END.

< ECU DIAGNOSIS >

# ECU DIAGNOSIS BCM (BODY CONTROL MODULE)

### **Reference Value**

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
VEHICLE SPEED	While driving	Equivalent to speedometer reading
	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
KEY ON SW	Mechanical key is removed from key cylinder	Off
KET ON SW	Mechanical key is inserted to key cylinder	On
	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the lock side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK SW	Press door lock/unlock switch to the unlock side	On
	Driver's door closed	Off
DOOR SW-DR	Driver's door opened	On
	Passenger door closed	Off
DOOR SW-AS	Passenger door opened	On
	Rear RH door closed	Off
DOOR SW-RR	Rear RH door opened	On
	Rear LH door closed	Off
DOOR SW-RL	Rear LH door opened	On
	Back door closed	Off
BACK DOOR SW	Back door opened	On
I-KEY LOCK	"LOCK" button of Intelligent Key or door request switch are not pressed	Off
	"LOCK" button of Intelligent Key or door request switch are pressed	On
	"UNLOCK" button of Intelligent Key or door request switch are not pressed	Off
I-KEY UNLOCK	"UNLOCK" button of Intelligent Key or door request switch are pressed	On
	Return to ignition switch to "LOCK" position	Off
PUSH SW	Press ignition switch	On
	"LOCK" button of key fob is not pressed	Off
KEYLESS LOCK	"LOCK" button of key fob is pressed	On
	"UNLOCK" button of key fob is not pressed	Off
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	On
	Ignition switch ON	NOMAL
SHOCK SENSOR	After the reception of air bag deployment signal from air bag diag- nosis sensor unit	Off
	During the reception of air bag deployment signal from air bag diag- nosis sensor unit	On
	Other than the following	Off
UNLOCK SHOCK	During the unlock operation interlocked with air bag	On

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#### < ECU DIAGNOSIS >

UNLOCK WITH DR         NOTE: The item is indicated, but not monitored         On           LOCK WITH SPEED         Vehicle speed sensing auto door lock function does not operate Vehicle speed sensing auto door lock function is operating         On           ACC ON SW         Ignition switch OFF         Off           Ignition switch ACC or ON         On           REAR DEF SW         Rear window defogger switch OFF         Off           Rear window defogger switch OFF         Off         On           Tall LAMP SW         Lighting switch OFF         Off           Turn signal switch OFF         Off         On           TURN SIGNAL R         Turn signal switch OFF         Off           Turn signal switch OFF         Off         On           Turn signal switch OFF         Off         On           Turn signal switch OFF         Off         On           HI BEAM SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           Lighting switch OFF         Off <t< th=""><th>Monitor Item</th><th>Condition</th><th>Value/Status</th></t<>	Monitor Item	Condition	Value/Status
Intention         Intention         Orff           LOCK WITH SPED         Vehicle speed sensing auto door lock function is operating         Ori           ACC ON SW         Ignition switch OFF         Off           REAR DEF SW         Ignition switch OFF         Off           REAR DEF SW         Ignition switch OFF         Off           TAIL LAMP SW         Lighting switch OFF         Off           LIQNN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           Turn signal switch OFF         Off         Ori           TURN SIGNAL L         Turn signal switch OFF         Off           Turn signal switch OFF         Off         Ori           Turn signal switch OFF         Off         Ori           Lighting switch OFF         Ori         Ori           Lighting switch OFF </td <td></td> <td>NOTE:</td> <td>On</td>		NOTE:	On
LOCK WITH SPEED         Vehicle speed sensing auto door lock function is operating         On           ACC ON SW         Ignition switch OFF         Off           REAR DEF SW         Ignition switch ACC or ON         On           REAR DEF SW         Rear window defogger switch OFF         Off           TAIL LAMP SW         Lighting switch OFF         Off           TAIL LAMP SW         Lighting switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           Turn signal switch OFF         Off         On           HI BEAM SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           HEAD LAMP SW 1         Lighting switch OFF         Off           Lighting switch OFF         Off         On           HEAD LAMP SW 2         Lighting switch OFF         Off           Lighting switch OFF         Off         On           HEAD LAMP SW 2         Lighting switch OFF         Off           Lighting switch OFF         Off         On           Fore to supsystem ADS         On         On <td>UNLOCK WITH DR</td> <td>The item is indicated, but not monitored</td> <td>Off</td>	UNLOCK WITH DR	The item is indicated, but not monitored	Off
Vehicle speed sensing auto door lock function is operating         Ori           ACC ON SW         Ignition switch ACF         Off           REAR DEF SW         Rear window defoger switch OFF         Off           REAR DEF SW         Rear window defoger switch OFF         Off           TURL SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Lighting switch OFF         Off           HEAD LAMP SW1         Lighting switch OFF         Off           Lighting switch OFF         Off         Off           HEAD LAMP SW2         Lighting switch OFF         Off           Lighting switch OFF         Off         Off		Vehicle speed sensing auto door lock function does not operate	Off
ACC ON SW         Ignition switch ACC or ON         On           REAR DEF SW         Rear window defogger switch OFF         Off           TAIL LAMP SW         Lighting switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           Turn signal switch OFF         Off         Off           HIB BAM SW         Lighting switch OFF         Off           Lighting switch OFF         Off	LOCK WITH SPEED	Vehicle speed sensing auto door lock function is operating	On
Ignition switch ACC or ON         On           Rear window defogger switch OFF         Off           Rear window defogger switch ON         On           TAIL LAMP SW         Lighting switch OFF         Off           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           Turn signal switch OFF         Off         On           Turn signal switch OFF         Off         On           HI BEAM SW         Lighting switch HI         On         On           Highting switch OFF         Off         Off         On           HEAD LAMP SW1         Lighting switch OFF         Off         On           Highting switch OFF         Off         On         On           HEAD LAMP SW2         Lighting switch OFF         Off         On           Lighting switch OFF         Off         On         On           HEAD LAMP SW2         Lighting switch OFF         Off         On           Lighting switch OFF         Off         On         On           Rear fog lamp switch OFF         Off         On         On           Rur D Elaph Switch OFF		Ignition switch OFF	Off
Rear window defogger switch ON         On           TAIL LAMP SW         Lighting switch OFF         Off           TURN SIGNAL R         Lighting switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           Turn signal switch OFF         Off         Off           Turn signal switch OFF         Off         Off           HBEAM SW         Lighting switch OFF         Off           Lighting switch OFF         Off         Off           HEAD LAMP SW         Lighting switch OFF         Off           Lighting switch OFF         Off         Off           Lighting switch ADS         Off         Off           AUTO LIGHT SW         Lighting switch OFF         Off           Lighting switch OFF         Off         Off           Fort fog lamp switch OFF         Off         On           Rar fog SW         Rear fog lamp switch OFF         Off	ACC ON SW	Ignition switch ACC or ON	On
Rear window defogger switch ON         On           TAIL LAMP SW         Lighting switch OFF         Orf           TURN SIGNAL R         Turn signal switch OFF         Off           TURN SIGNAL L         Turn signal switch OFF         Off           HI BEAM SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           HEAD LAMP SW 1         Lighting switch OFF         Off           Lighting switch OFF         Off         On           HEAD LAMP SW 2         Lighting switch OFF         Off           Lighting switch OFF         Off         On           Lighting switch OFF         Off         On           AUTO LIGHT SW         Uighting switch OFF         Off           Lighting switch OFF         Off         On           Rar fog SW         Front fog lamp switch OFF         Off           Rear fog lamp switch OFF         Off         On           Lighting switch OFF         Off         On           Light Ka rain sensor is in normal condition		Rear window defogger switch OFF	Off
TAIL LAMP SWLighting switch 1STOnTURN SIGNAL RTurn signal switch OFFOffTurn signal switch OFFOnTURN SIGNAL LTurn signal switch OFFOffTurn signal switch OFFOffHi BEAM SWLighting switch OFFOffLighting switch OFFOffLighting switch OFFOffHEAD LAMP SW 1Lighting switch OFFOffLighting switch OFFOffHEAD LAMP SW 2Lighting switch OFFOffLighting switch OFFOffRear fog lamp switch OFFOffRear fog lamp switch OFFOffLight & rain sensor is in normal conditionONLIT-SEN FAILLight & rain sensor is with errorNOTOKLIT-SEN FAILLight & rain sensor is with errorNOTOKLIT-SEN FAILLight & rain sensor is with errorNOTOKLIGHT TIMELight is not birghtOffLIGH SW CANIgnition switch OFF or ACCOffLIGN SW CANIgnition switch	REAR DEF SW	Rear window defogger switch ON	On
Lighting switch 1STOnTURN SIGNAL RTurn signal switch OFFOffTURN SIGNAL LTurn signal switch CFFOffTURN SIGNAL LLighting switch OFFOffHI BEAM SWLighting switch OFFOffLighting switch OFFOffOffLighting switch OFFOffOffHEAD LAMP SW 2Lighting switch OFFOffLighting switch OFFOffOffLighting switch OFFOffOffLighting switch OFFOffOffLighting switch OFFOffOffLighting switch PASSOffOffAUTO LIGHT SWLighting switch PASSOffLighting switch OFFOffOffLighting switch OFFOffOffLighting switch OFFOffOffR FOG SWFront fog lamp switch OFFOffR FOG SWRear fog lamp switch OFFOffR FOG SWEngine suppedOffLIT-SEN FAILLighting switch OFFOffLIT-SEN FAILLight a rain sensor is in normal conditionOKLIT-SEN FAILGutside of the room is darkOnAUT LIGHT SYSOutside of the room is darkOnLIGN SW CANIgnition switch OFFOffLIGN SW CANIgnition switch OFFOffLIGN SW CANIgnition switch OFFOffHT LIGHT TIMECutside of the room is darkOnLIT-SEN FAILIgnition switch OFFOffLIGN SW CANIgnition switch OFFOff		Lighting switch OFF	Off
TURN SIGNAL RTurn signal switch RHOnTURN SIGNAL LTurn signal switch OFFOffTurn signal switch OFFOffLighting switch OFFOffHI BEAM SWLighting switch OFFOffHEAD LAMP SW 1Lighting switch OFFOffHEAD LAMP SW 2Lighting switch PASSOffHEAD LAMP SW 2Lighting switch PASSOffHEAD LAMP SW 2Lighting switch PASSOffHI ST CARL SW 2Lighting switch PASSOffHI ST CARL SW 2Lighting switch OFFOffLighting switch OFFOffOnAUTO LIGHT SWFront fog lamp switch OFFOffFront fog lamp switch OFFOffOnR FOG SWFront fog lamp switch OFFOffR FOG SWRear fog lamp switch OFFOffR FOG SWEngine stoppedOffLIT-SEN FAILLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is in normal conditionOKLIT-SEN FAILGutside of the room is darkOnAUT LIGHT SYSOutside of the room is darkOnHD LIGHT TIME	TAIL LAWF SW	Lighting switch 1ST	On
Turn signal switch RHOnTURN SIGNAL LTurn signal switch OFFOffTurn signal switch OFFOnHI BEAM SWLighting switch OFFOffLighting switch OFFOffLighting switch OFFOffLighting switch OFFOffLighting switch OFFOffLighting switch ZNDOnHEAD LAMP SW 2Lighting switch PASOffLighting switch ZNDOnPASSING SWOther than lighting switch PASSOffLighting switch PASOnOnAUTO LIGHT SWLighting switch OFFOffLighting switch OFFOffOnRF FOG SWFront fog lamp switch OFFOffFront fog lamp switch OFFOffOnRR FOG SWRear fog lamp switch OFFOffEngine stoppedOffOnEngine stoppedOffOnLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOnHD LIGHT TIME——Displays a setting time of the follow menome function set by the work supportRF WPER HIFront wiper switch OFFOffFront wiper switc		Turn signal switch OFF	Off
TURN SIGNAL LTurn signal switch LHOnHI BEAM SWLighting switch OFFOffHI BEAM SWLighting switch OFFOffHEAD LAMP SW 1Lighting switch OFFOffHEAD LAMP SW 2Lighting switch OFFOffLighting switch PASOnOnPASSING SWOther than lighting switch PASSOffAUTO LIGHT SWLighting switch OFFOffLighting switch OFFOffOffLighting switch OFFOffOffAUTO LIGHT SWLighting switch OFFOffFront tog lamp switch OFFOffOffFront tog lamp switch OFFOffOffR FOG SWFront tog lamp switch OFFOffRear fog lamp switch OFFOffOnRear fog lamp switch OFFOffOnENGINE RUNEngine stoppedOffLIT-SEN FAILLight & rain sensor is in normal conditionOnLUT-SEN FAILLight & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOnAUT LIGHT SYSIgnition switch OFF or ACCOffIGN SW CANIgnition switch OFF or ACCOffIgnition switch OFFOffOnFront wiper switch OFFOffFront wiper switch OFFOff <td>I URIN SIGINAL R</td> <td>Turn signal switch RH</td> <td>On</td>	I URIN SIGINAL R	Turn signal switch RH	On
Itm signal switch LHOnHI BEAM SWLighting switch OFFOffHEAD LAMP SW 10Lighting switch OFFOffHEAD LAMP SW 11Lighting switch OFFOffHEAD LAMP SW 22Lighting switch OFFOffHEAD LAMP SW 23Lighting switch OFFOffHEAD LAMP SW 24Lighting switch OFFOffHEAD LAMP SW 25OffOffHEAD LAMP SW 26Lighting switch OFFOffHEAD LAMP SW 27Lighting switch OFFOffPASSING SWLighting switch PASSOnAUTO LIGHT SWLighting switch OFFOffFR FOG SWFront fog lamp switch OFFOffFR FOG SWFront fog lamp switch OFFOffRear fog lamp switch OFFOffOnRR FOG SWRear fog lamp switch OFFOffRear fog lamp switch OFFOffOnRUT SIN FAILLight & rain sensor is in normal conditionOnLIT-SEN FAILLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is in normal conditionOffLUT LIGHT SYSOutside of the room is darkOnOutside of the room is darkOnOnLIGN SW CANIgnition switch OFF or ACCOffLIGN SW CANIgnition switch OFFOffRW WPER HIFront wiper switch OFFOffFront wiper switch OFFOffOnFront wiper switch OFFOffOnFront wiper switch OFFOffFront wiper switch OFFOff <td></td> <td>Turn signal switch OFF</td> <td>Off</td>		Turn signal switch OFF	Off
HI BEAM SW         Lighting switch HI         On           HEAD LAMP SW 1         Lighting switch OFF         Off           HEAD LAMP SW 2         Lighting switch OFF         Off           HEAD LAMP SW 2         Lighting switch OFF         Off           HEAD LAMP SW 2         Lighting switch OFF         Off           PASSING SW         Other than lighting switch PASS         Off           AUTO LIGHT SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           AUTO LIGHT SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           RF FOG SW         Front fog lamp switch OFF         Off           Front fog lamp switch OFF         Off         On           RF FOG SW         Rear fog lamp switch OFF         Off           Rear fog lamp switch OFF         Off         On           LIT-SEN FAIL         Light & rain sensor is in normal condition         OK           LIT-SEN FAIL         Light arian sensor is with error         NOTOK           AUT LIGHT SYS         Outside of the room is dark         On           AUT LIGHT TIME	TURN SIGNAL L	Turn signal switch LH	On
Lighting switch HIOnHEAD LAMP SW1Lighting switch OFFOffLighting switch QFFOffHEAD LAMP SW2Lighting switch QFFOffLighting switch QNDOnPASSING SWOther than lighting switch PASSOffPASSING SWLighting switch PASSOffLighting switch QFFOther domentipation of the transport		Lighting switch OFF	Off
HEAD LAMP SW 1Lighting switch 2NDOnHEAD LAMP SW 2Lighting switch OFFOffLighting switch 2NDOnOnPASSING SWOther than lighting switch PASSOffLighting switch PASSOnOnAUTO LIGHT SWLighting switch OFFOffFront og lamp switch OFFOffOnFront og lamp switch OFFOffFront og lamp switch OFFOffRer FOG SWFront og lamp switch OFFOffRear log lamp switch OFFOffRear log lamp switch ONOnEngine stoppedOffEngine stoppedOffLIT-SEN FAILLight å rain sensor is in normal conditionOKLUT LIGHT SYSOutside of the room is darkOnAUT LIGHT SYSOutside of the room is brightOffHD LIGHT TIMEIgnition switch OFFOffFront wiper switch OFFOffOnHT LIGHT TIMEIgnition switch OFF or ACCOffHT LIGHT SYSIgnition switch OFF or ACCOffIGN SW CANIgnition switch OFF or ACCOffFront wiper switch OFFOffOnFront wiper switch OFFOffOnFront wiper switch OFFOffFront wiper switch O	HI BEAM SW	Lighting switch HI	On
Lighting switch 2NDOnHEAD LAMP SW 2Lighting switch OFFOffHEAD LAMP SW 2Ughting switch 2NDOnPASSING SWOther than lighting switch PASSOrfAUTO LIGHT SWLighting switch PASSOnAUTO LIGHT SWLighting switch OFFOffLighting switch OFFOffOnFR FOG SWFront fog lamp switch OFFOffFront fog lamp switch OFFOffOnRR FOG SWRear fog lamp switch OFFOffEngine stoppedOffOnEngine stoppedOffOnLIT-SEN FAILLight a rain sensor is in normal conditionOfLIT-SEN FAILUside of the room is darkOnAUT LIGHT SYSOutside of the room is darkOnHD LIGHT TIME		Lighting switch OFF	Off
HEAD LAMP SW 2Lighting switch 2NDOnPASSING SWOther than lighting switch PASSOffAUTO LIGHT SWLighting switch PASSOffAUTO LIGHT SWLighting switch OFFOffFront fog lamp switch OFFOffFront fog lamp switch OFFOffRear fog lamp switch OFFOffLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is with errorLight & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOutside of the room is brightOffHD LIGHT TIME	HEAD LAMP SW 1	Lighting switch 2ND	On
Lighting switch 2NDOnPASSING SWOther than lighting switch PASSOffAUTO LIGHT SWLighting switch PASSOnAUTO LIGHT SWLighting switch OFFOffFront fog lamp switch OFFOffFront fog lamp switch OFFOffR FOG SWRear fog lamp switch OFFOffRear fog lamp switch OFFOffRear fog lamp switch OFFOffRear fog lamp switch OFFOffEngine stoppedOffEngine stoppedOffLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOnHD LIGHT TIME		Lighting switch OFF	Off
PASSING SW         Lighting switch PASS         On           AUTO LIGHT SW         Lighting switch OFF         Off           Lighting switch OFF         Off         On           FR FOG SW         Front fog lamp switch OFF         Off           RR FOG SW         Rear fog lamp switch OFF         Off           RR FOG SW         Rear fog lamp switch OFF         Off           Rear fog lamp switch ON         On         On           ENGINE RUN         Engine stopped         Off           LIT-SEN FAIL         Light & rain sensor is in normal condition         OK           LIT-SEN FAIL         Light & rain sensor is with error         NOTOK           AUT LIGHT SYS         Outside of the room is dark         On           AUT LIGHT TIME         Ignition switch OFF or ACC         Off           HD LIGHT TIME         Ignition switch OFF or ACC         Off           RWIPER HI         Front wiper switch OFF         Off           FR WIPER HI         Front wiper switch OFF         Off           FR WIPER LOW         Front wiper switch OFF         Off           FR WIPER NT         Front wiper switch OFF         Off           FR WIPER NT         Front wiper switch OFF         Off	HEAD LAMP SW 2	Lighting switch 2ND	On
Lighting switch PASSOnAUTO LIGHT SWLighting switch OFFOffFR FOG SWFront fog lamp switch OFFOffFront fog lamp switch ONOnRR FOG SWRear fog lamp switch OFFOffRear fog lamp switch ONOnCommon Strength Streng		Other than lighting switch PASS	Off
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Lighting switch AUTOOnFR FOG SWFront fog lamp switch OFFOffFront fog lamp switch ONOnRR FOG SWRear fog lamp switch OFFOffRear fog lamp switch OFFOffRear fog lamp switch OFFOffEngine stoppedOffEngine stoppedOffEngine runningOnLIT-SEN FAILLight & rain sensor is in normal conditionOKAUT LIGHT SYSOutside of the room is darkOnHD LIGHT TIMEOutside of the room is brightOffHD LIGHT TIMEIgnition switch OFF or ACCOffFront wiper switch OFFOffOnFR WIPER HIFront wiper switch OFFOffFront wiper switch OFFOffOnFR WIPER LOWFront wiper switch OFFOffFR WIPER INTFront wiper switch OFFOffFront wiper switch OFFOffOnFR WIPER INTFront wiper switch OFFOffFR WIPER INTFront wiper switch OFFOffFront wiper switch OFFOffOnFR WIPER INTFront wiper switch OFFOffFront wiper switch OFFOffOnFront wiper switch OFFOffOnFront wiper switch OFFOffFront wiper switch OFFOffFron		Lighting switch OFF	Off
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RR FOG SWRear fog lamp switch ONOnENGINE RUNEngine stoppedOffEngine runningOnLIT-SEN FAILLight & rain sensor is in normal conditionOKAUT LIGHT SYSOutside of the room is darkOnOutside of the room is brightOffHD LIGHT TIME	FR FUG SW	Front fog lamp switch ON	On
Rear fog lamp switch ONOnENGINE RUNEngine stoppedOffEngine runningOnLIT-SEN FAILLight & rain sensor is in normal conditionOKAUT LIGHT SYSOutside of the room is darkOnOutside of the room is brightOffHD LIGHT TIMEIgnition switch OFF or ACCDisplays a setting time of the follow me home function set by the work supportIGN SW CANFront wiper switch OFFOffFR WIPER HIFront wiper switch OFFOffFR WIPER LOWFront wiper switch OFFOffFR WIPER INTFront wiper switch OFFOff		Rear fog lamp switch OFF	Off
ENGINE RUNEngine runningOnLight & rain sensor is in normal conditionOKLIT-SEN FAILLight & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOnOutside of the room is brightOffHD LIGHT TIME	RR FUG SW	Rear fog lamp switch ON	On
Engine runningOnLift & rain sensor is in normal conditionOKLift & rain sensor is with errorNOTOKAUT LIGHT SYSOutside of the room is darkOnDutside of the room is brightOffHD LIGHT TIMEIntercent of the follow me home function set by the work supportIGN SW CANIgnition switch OFF or ACCOffFR WIPER HIFront wiper switch OFFOffFR WIPER LOWFront wiper switch OFFOffFR WIPER LOWFront wiper switch OFFOffFR WIPER INTFront wiper switch OFFOffFR WI		Engine stopped	Off
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Outside of the room is brightOffHD LIGHT TIMEDisplays a setting time of the follow me home function set by the work supportIGN SW CANIgnition switch OFF or ACCOffIgnition switch ONOnFR WIPER HIFront wiper switch OFFOffFront wiper switch OFFOnFR WIPER LOWFront wiper switch OFFOffFront wiper switch OFFOff		Outside of the room is dark	On
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IGN SW CAN     Ignition switch ON     On       FR WIPER HI     Front wiper switch OFF     Off       Front wiper switch HI     On       FR WIPER LOW     Front wiper switch OFF     Off       Front wiper switch OFF     On	HD LIGHT TIME	_	me home function set by the work
Ignition switch ON         On           FR WIPER HI         Front wiper switch OFF         Off           Front wiper switch HI         On           FR WIPER LOW         Front wiper switch OFF         Off           Front wiper switch LO         On         On           FR WIPER INT         Front wiper switch OFF         Off		Ignition switch OFF or ACC	Off
FR WIPER HI     Front wiper switch HI     On       FR WIPER LOW     Front wiper switch OFF     Off       Front wiper switch LO     On       FR WIPER INT     Front wiper switch OFF     Off	IGN SW CAN	Ignition switch ON	On
Front wiper switch HI     On       FR WIPER LOW     Front wiper switch OFF     Off       Front wiper switch LO     On       FR WIPER INT     Front wiper switch OFF     Off		Front wiper switch OFF	Off
FR WIPER LOW     Front wiper switch LO     On       FR WIPER INT     Front wiper switch OFF     Off		Front wiper switch HI	On
Front wiper switch LO     On       FR WIPER INT     Front wiper switch OFF     Off		Front wiper switch OFF	Off
FR WIPER INT	FR WIPER LOW	Front wiper switch LO	On
Front wiper switch INT On		Front wiper switch OFF	Off
		Front wiper switch INT	On

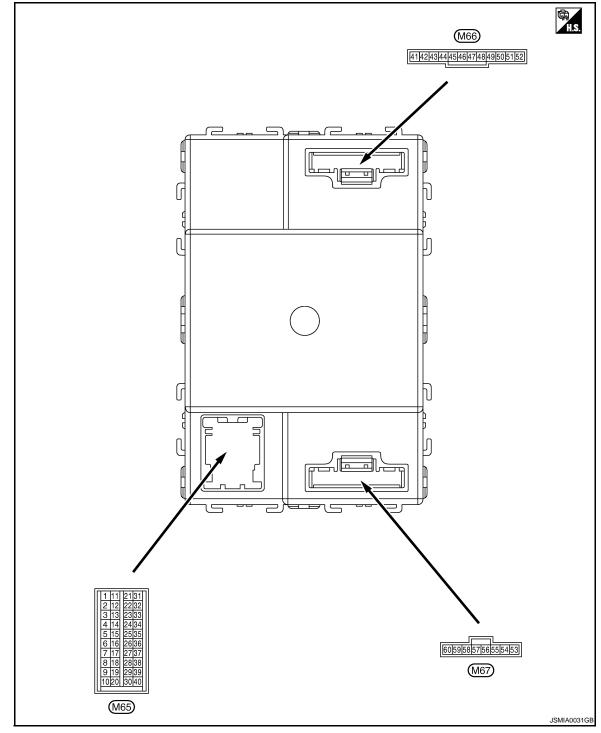
### **PWC-30**

#### < ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status		
FR WASHER SW	Front washer switch OFF	Off		
FR WASHER SW	Front washer switch ON	On		
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7		
FR WIPER STOP	Any position other than front wiper stop position	Off		
	Front wiper stop position	On		
	Rear wiper switch OFF	Off		
RR WIPER ON	Rear wiper switch ON	On		
	Rear wiper switch OFF	Off		
RR WIPER INT	Rear wiper switch INT	On		
	Rear wiper stop position	Off		
RR WIPER STOP	Other than rear wiper stop position	On		
	Rear washer switch OFF	Off		
RR WASHER SW	Rear washer switch ON	On		
	NOTE:	Off		
REVERSE SW CAN	The item is indicated, but not monitored	On		
	When headlamp washer switch is not pressed	Off		
H/L WASH SW	When headlamp washer switch is pressed	On		
	Blower fan motor switch OFF	Off		
FAN ON SIG	Blower fan motor switch ON (other than OFF)	On		
	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	Off		
AIR COND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	On		
	Hazard switch OFF	Off		
HAZARD SW	Hazard switch ON	On		
	Brake pedal is not depressed	Off		
BRAKE SW	Brake pedal is depressed	On		
	When back door opener switch is not pressed	Off		
TRNK OPNR SW	When back door opener switch is pressed	On		
HOOD SW	Close the hood <b>NOTE:</b> Vehicles without theft warning system are OFF-fixed	Off		
	Open the hood	On		
AUTO RELOCK	Auto lock function does not operate	Off		
	Auto lock function is operating	On		
	The vehicle without glass break sensor	Off		
GLS BREAK SEN	The vehicle with glass break sensor	On		
OIL PRESS SW	Ignition switch OFF or ACC     Engine running	Off		
0.2111200.000	Ignition switch ON	On		

< ECU DIAGNOSIS >

**TERMINAL LAYOUT** 



### PHYSICAL VALUES

#### CAUTION:

- Check combination switch system terminal waveform under the loaded condition with lighting switch, turn signal switch and wiper switch OFF is not to be fluctuated by being overloaded.
- Turn wiper intermittent dial position to 4 except when checking waveform or voltage of wiper intermittent dial position. Wiper intermittent dial position can be confirmed on CONSULT-III. Refer to <u>BCS-28, "COMB SW : CONSULT-III Function (BCM - COMB SW)"</u>.
- BCM reads the status of the combination switch at 10 ms internal normally. Refer to <u>BCS-9, "System</u> <u>Description"</u>.

< ECU DIAGNOSIS >

Terminal No.		Description			Value	
(Wire +	color)	Signal name	Input/ Condition Output		(Approx.)	
1 (W)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylin- der	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move	
2 (G)	Ground	NATS antenna amp.	Input/ Output	Insert mechanical key into ignition key cylin- der	Just after Insert mechanical key into ignition key cylinder. Pointer of tester should move	
3	Ground	Ignition power sup-	locut	Ignition switch OFF or ACC	0 V	
(W)	Giouna	ply	Input	Ignition switch ON or START	Battery voltage	
4	Cround	100 a	Input	Ignition switch OFF	0 V	
(SB) Ground	und ACC power supply	Input	Ignition switch ON or ACC	Battery voltage		
5 (LG) <sup>*1</sup>	Ground	Kovowitch	locut	Insert mechanical key into ignition key cylin- der	Battery voltage	
(LG) (R) <sup>*2</sup>		Ground Key switch Input	mput	Remove mechanical key from ignition key cylinder	0 V	

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#### < ECU DIAGNOSIS >

	nal No.	Description				Value
(VVire +	color)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10
					Lighting switch HI (Wiper intermittent dial 4)	(V) 15 0 0 0 1 ms 1 ms
6 (L)	Ground	Combination switch INPUT 3	Input	Combination switch	Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 0 0 0 1 ms 1 ms 1 JPMIA0167GB 1.3 V
				Any of with al • Wipo • Wipo	Rear washer switch ON	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 3	(V) 15 10 5 10 5 10 5 10 10 10 10 10 10 10 10 10 10

#### < ECU DIAGNOSIS >

Terminal No. (Wire color) + –		Description Signal name Input/ Output		Condition		Value (Approx.)	
	Lighting switch 1ST (Wiper intermittent dial 4)	(V) 15 10 5 0 					
7 (GR)	Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 11 11 11 11 11 11 11 11 11					
		Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 6	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0				
		Rear wiper INT (Wiper intermittent dial 4)	(V) 15 10 5 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓				

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#### < ECU DIAGNOSIS >

	nal No.	Description		<b>0</b>		Value
+	color)	Signal name	Input/ Output	Condition		(Approx.)
					All switch OFF	(V) 15 0 5 0 10 5 0 10 5 0 10 10 10 10 10 10 10 10 10
					Turn signal switch RH	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0
8 (V)	Ground	Combination switch INPUT 1	Input	Combination switch (Wiper intermit- tent dial 4)	Turn signal switch LH	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0
					Front wiper switch LO	(V) 15 10 5 10 5 10 10 10 10 10 10 10 10 10 10
				Front	Front washer switch ON	(V) 15 10 0 ••••1 # 10 0 •••••••••••••••••••••

#### < ECU DIAGNOSIS >

	nal No.	Description				Value	А
(VVire	color)	Signal name	Input/ Output		Condition	(Approx.)	A
					All switch OFF	(V) 15 0 0 0 0 0 0 0 0 0 0 0 0 0	B C D
					Lighting switch 2ND	(V) 15 0 5 0 	E
9 (G) <sup>*3</sup> (B) <sup>*4</sup>	Ground	Combination switch INPUT 2	Input	Combination switch (Wiper intermit- tent dial 4)	Lighting switch PASS	(V) 15 10 5 0 	G H I
					Front wiper switch INT	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10	J PWC
					Front wiper switch HI	(V) 15 10 5 0 ★ 1 ms 1 1.3 V	M
						1.3 V	0

	nal No.	Description				Value
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 1 ms JPMIA0165GB 1.3 V
					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 0 0 1 ms 1 ms
10 (BR)	Ground	Combination switch INPUT 5	Input	Combination switch	Rear fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
					Rear wiper switch ON (Wiper intermittent dial 4)	(V) 15 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1
					Any of the condition below with all switch OFF • Wiper intermittent dial 1 • Wiper intermittent dial 2 • Wiper intermittent dial 6 • Wiper intermittent dial 7	(V) 15 10 50 ••••1ms ••••1ms JPMIA0196GB 1.3 V
11 (B)	Ground	Audio link	Input/ Output	_	_	_

	nal No. e color)	Description		-	Oradition	Value
+	-	Signal name	Input/ Output		Condition	(Approx.)
12 (LG)	Ground	Rear door switch RH	Input	Rear door switch RH	OFF (When rear door RH closed)	(V) 15 0 10 10 ms PKID0924E 11.2 V
					ON (When rear door RH opened)	0 V
13 (V)	Ground	Back door switch	Input	Back door switch	OFF (When back door closed)	(V) 15 10 5 0 +++++++++++++++++++++++++++++
					ON (When back door opened)	PKiD0924E 11.2 V
14 (P) <sup>*3</sup> (BR) <sup>*4</sup>	Ground	Passenger door switch	Input	Passenger door switch	OFF (When passenger door closed)	(V) 15 10 5 0 10 ms PKID0924E
					ON (When passenger door opened)	11.2 V
15 (BR) <sup>*3</sup> (P) <sup>*4</sup>	Ground	Driver door switch	Input	Driver door switch	OFF (When driver door closed)	(V) 15 10 5 0 10 ms PKID0924E 11.2 V
					ON (When driver door opened)	0 V

	nal No.	Description				Value
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)
16 (GR)	Ground	Rear door switch LH	Input	Rear door switch LH	OFF (When rear door LH closed)	(V) 15 10 5 0 10 ms PKID0924E 11.2 V
					ON (When rear door LH opened)	0 V
17	Ground	Door lock status indi-	Output	Door lock status	ON	12 V
(L)	Cround	cator	Calput	indicator	OFF	0 V
20 (SB)	Ground	Rear window defog- ger switch	Input	Rear window defogger switch	Not pressed	(V) 15 10 5 0 
					While pressing	0 V
21 (P)		CAN-L	Input/ Output		_	_
22 (L)	—	CAN-H	Input/ Output		—	_
23 (V)	Ground	Security indicator	Output	Security indica- tor	ON Blinking	0 V (V) 15 10 5 0 15 10 5 0 JPMIA0014GB
				Ignition switch O	OFF FF or ACC	10.3 V 12 V 12 V
24 (GR)	Ground	Light & rain sensor serial link	Input/ Output	Ignition switch O	N	(V) 15 10 50 10 10 10 10 10 10 10 10 10 1
25 (G)	Ground	Alarm link	Output		_	8.7 V

	nal No.	Description				Value	А	
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	A	
26 (GR) <sup>*5</sup> (LG) <sup>*6</sup>	Ground	Blower fan motor switch	Input	Blower fan mo- tor switch	OFF	(V) 15 10 5 0 10 ms 10 ms PKID0924E 11.2 V	B C D	
					ON (other than OFF)	0 V		
27 (P) <sup>*5</sup> (Y) <sup>*6</sup>	Ground	A/C switch	Input	Ignition switch ON	Compressor ON is not re- quested from auto amp. (A/C indicator OFF, blow- er fan motor switch OFF or etc.)	(V) 15 10 5 0 10 ms PKID0924E 11.2 V	E F G	
					Compressor ON is re- quested from auto amp. (A/C indicator ON and blower fan motor switch ON).	0 V	Η	
				Ignition switch O	FF or ACC	0 V		
28 (LG) <sup>*7</sup> (R) <sup>*8</sup>	Ground	Shock detect sensor	Input	Ignition switch O	N	(V) 15 10 0 0 	J PW	
						6.0 V	L	
29 (LG) <sup>*3</sup>	Ground	Back door opener	Input	Back door		Not pressed	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10	M
(O) <sup>*4</sup>	Cround	switch	input	opener switch		JPMIA0154GB	Ν	
					Pressed	0 V	0	
32 (BR)	Ground	Door lock/unlock switch (Unlock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	P	
					Pressed to the unlock side	1.2 V		
						· · ·		

#### < ECU DIAGNOSIS >

	nal No.	Description				Value	
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)	
33 (W) <sup>*9</sup> (Y) <sup>*10</sup>	Ground	Hazard switch	Input	Hazard switch	OFF	(V) 15 10 5 0 	
					ON	0 V	
34 (SB) <sup>*3</sup> (P) <sup>*4</sup>	Ground	Door lock/unlock switch (Lock)	Input	Door lock/un- lock switch	Not pressed	(V) 15 10 5 0 	
					Pressed to the lock side	0 V	
35 (G)	Ground	Headlamp washer switch	Input	Headlamp washer switch	Not pressed	(V) 15 10 5 0 10 10 10 10 10 10 10 10 10	
					Pressed to the lock side	0 V	
					All switch OFF	0 V	
					Turn signal switch RH		
					Combination	Lighting switch 2ND	(V) 15
36	Ground	Combination switch	Output	switch	Lighting switch HI		
(G)		OUTPUT 5		(Wiper intermit- tent dial 4)	Lighting switch 1ST	JPMIA0164GB	
					All switch OFF (Wiper intermittent dial 4)	9.1 V 0 V	
					Front washer switch ON (Wiper intermittent dial 4)		
37	Ground	Combination switch	0	Combination	Rear washer switch ON (Wiper intermittent dial 4)	(V) 15 10 5	
(R)	Ground	OUTPUT 2	Output	switch	<ul> <li>Any of the condition below with all switch OFF</li> <li>Wiper intermittent dial 1</li> <li>Wiper intermittent dial 5</li> <li>Wiper intermittent dial 6</li> </ul>	0 → ←2ms JPMIA0161GB	
					Rear wiper switch ON (Wiper intermittent dial 4)	9.1 V	

#### **PWC-42**

	nal No.	Description				Value			
(vvire +	color)	Signal name	Input/ Output		Condition	(Approx.)			
					All switch OFF	0 V			
					Front wiper switch LO				
			Combination	Combination	Combination	Front wiper switch MIST	(V) 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
38	Ground	Combination switch	Output	switch	Front wiper switch INT				
(W)	Ciouna	OUTPUT 3	Output	(Wiper intermit- tent dial 4)	Lighting switch AUTO				
					Rear fog lamp switch ON	JPMIA0162GB 9.3 V			
					All switch OFF	0 V			
					Turn signal switch LH				
				Combination	Lighting switch PASS	(V) 15			
39	Ground	Combination switch	Output	switch	Lighting switch 2ND				
(Y)	Cround	OUTPUT 4	Output	(Wiper intermit- tent dial 4)					
					Front fog lamp switch ON	→ + 2ms			
						JPMIA0163GB 9.3 V			
					All switch OFF (Wiper intermittent dial 4)	0 V			
					Front wiper switch HI				
					(Wiper intermittent dial 4)				
40		Combination switch	Output Combination switch with all switch O • Wiper intermit	Any of the condition below with all switch OFF					
(P)	Ground	OUTPUT 1		• Wiper intermitten	Output switch			Wiper intermittent dial 1	
								<ul> <li>Wiper intermittent dial 2</li> <li>Wiper intermittent dial 3</li> </ul>	
								Wiper intermittent dial 6	-→ ←2ms i
					Wiper intermittent dial 7     Rear wiper switch INT     (Wiper intermittent dial 4)	JPMIA0160GB 9.1 V			
41	Crowned	Battery power sup-	lanut	Instition outlinh O		Battery voltage			
(LG)	Ground	ply	Input	Ignition switch O					
42 (V)	Ground	Interior room lamp power supply	Output		np battery saver activation	0 V			
		Power suppry			p battery saver no activation	12 V			
43 (SB)	Ground	Rear wiper motor	Output	Rear wiper switch OFF		0 V 12 V			
()				Rear wiper switc					
						(V) <sub>15</sub>			
					Rear wiper stop position				
44 (B)	Ground	Rear wiper auto stop	Input	Ignition switch ON		→ <del>↓</del> 10ms			
(-)						JPMIA0197GB			
					Any position other than	0 V			
					rear wiper stop position				

	nal No.	Description				Value
(VVire	color)	Signal name	Input/ Output		Condition	(Approx.)
45 (V)	Ground	Back door lock actu- ator	Output	Back door opener switch	Pressed	(V) 15 10 5 0 + + 0.1s SKIA9232E
					Not pressed	0 V
					Turn signal switch OFF	0 V
47 (BR)	Ground	Turn signal LH	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V
					Turn signal switch OFF	0 V
48 (GR)	Ground	Turn signal RH	Output	Ignition switch ON	Turn signal switch RH	(V) 15 0 15 0 15 0 15 0 15 0 FKID0926E 6.5 V
49 (Y)	Ground	Rear fog lamp	Output	Rear fog lamp	OFF ON	0 V 12 V
50 (G)	Ground	Unlock sensor	Input	Driver's door	Unlock lock	5 V 0 V
51	Ground	Stop lamp switch	Input	Depress the brak	ke pedal	Battery voltage
(R)	Cround		input	Release the brak		0 V
52	Ground	Room lamp timer	Output	Interior room	OFF	12 V
(R)		control	· ·	lamp	ON	0 V
53 (L)	Ground	Power window pow- er supply (IGN)	Output	Ignition switch	OFF or ACC ON	0 V 12 V
54 (O)	Ground	Door unlock (All other than driv- er's door)	Output	Door lock/un- lock switch	Pressed to the unlock side	(V) 15 10 5 0 ++0.1s SKIA9232E
					Not pressed	0 V
55 (B)	Ground	Ground	_	Ignition switch O	N	0 V

#### < ECU DIAGNOSIS >

	nal No.	Description				Value	
(Wire +	color)	Signal name	Input/ Output	Condition		(Approx.)	
					Not pressed	0 V	
56 (V)	Ground	Door lock (All) and fuel lid lock	Output	Door lock/un- lock switch	Pressed to the lock side	(V) 15 10 5 0 ★ ★ 0.1s 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
57 (Y)	Ground	Battery power sup- ply	Input	Ignition switch OFF		Battery voltage	
58 (P)	Ground	Power window pow- er supply (BAT)	Output	Ignition switch O	FF	12 V	
59	Ground	Superleek	Output	When lock buttor is not pressed	of key fob or Intelligent Key	0 V	
(R)	Ground	Super lock	Output	When lock buttor is pressed	n of key fob or Intelligent Key	12 V	
60 (G)	Ground	Driver's door unlock and fuel lid unlock	Output	Door lock/un- lock switch	Pressed to the unlock side	(V) 15 10 5 0 +++0.1s SKIA9232E	
					Not pressed	0 V	

\*1: With Intelligent Key

\*2: Without Intelligent Key

\*3: RHD models

\*4: LHD models

\*5: With gasoline engine

\*6: With diesel engine

\*7: RHD models with side air bag

\*8: LHD models with side air bag

\*9: With xenon headlamp and daytime light system

\*10: Except with xenon headlamp and daytime light system

PWC

L

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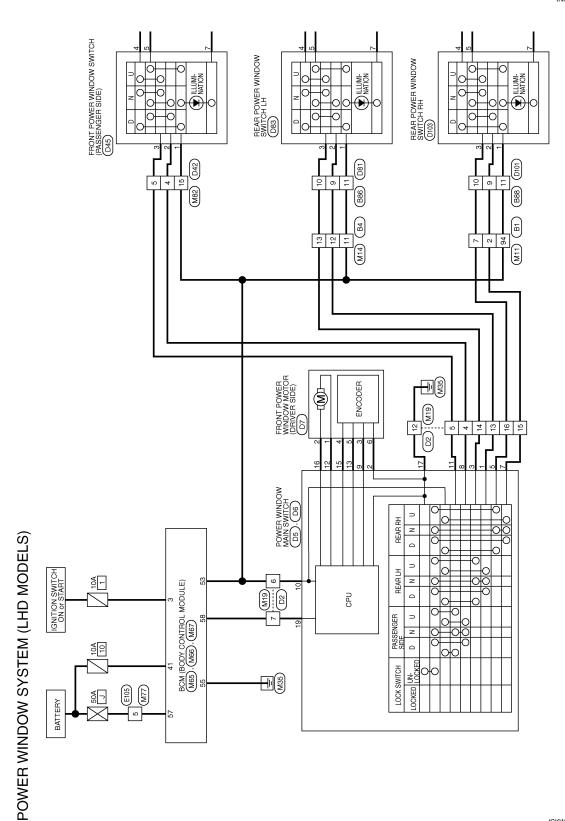
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< ECU DIAGNOSIS >

# Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) -

INFOID:000000001505631



2007/02/28

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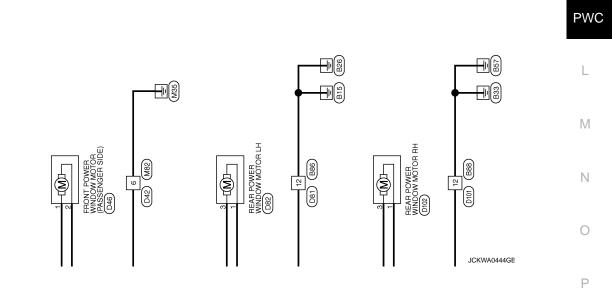
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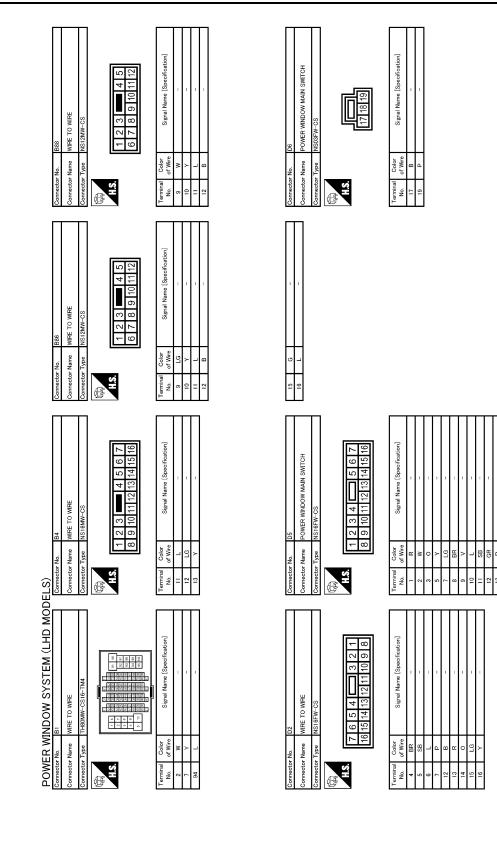
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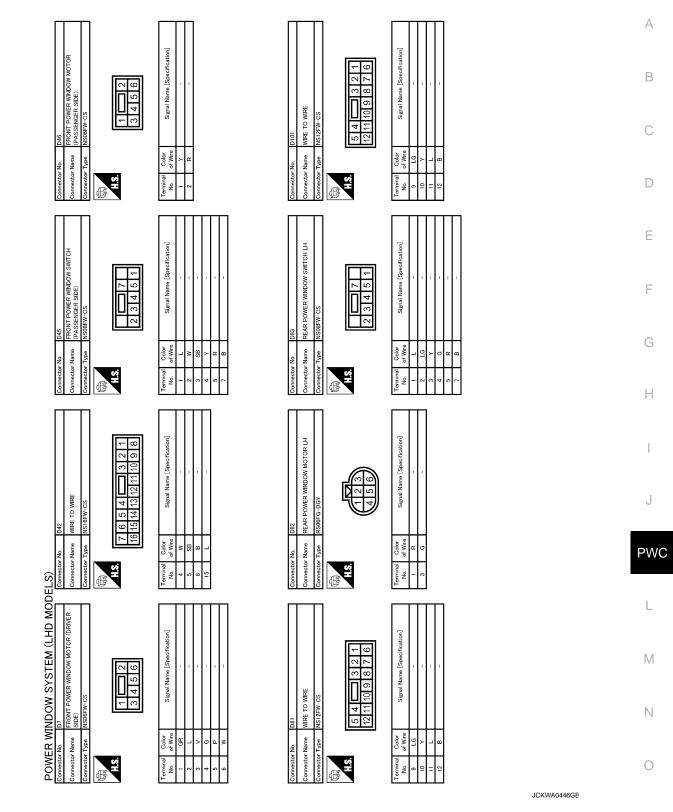


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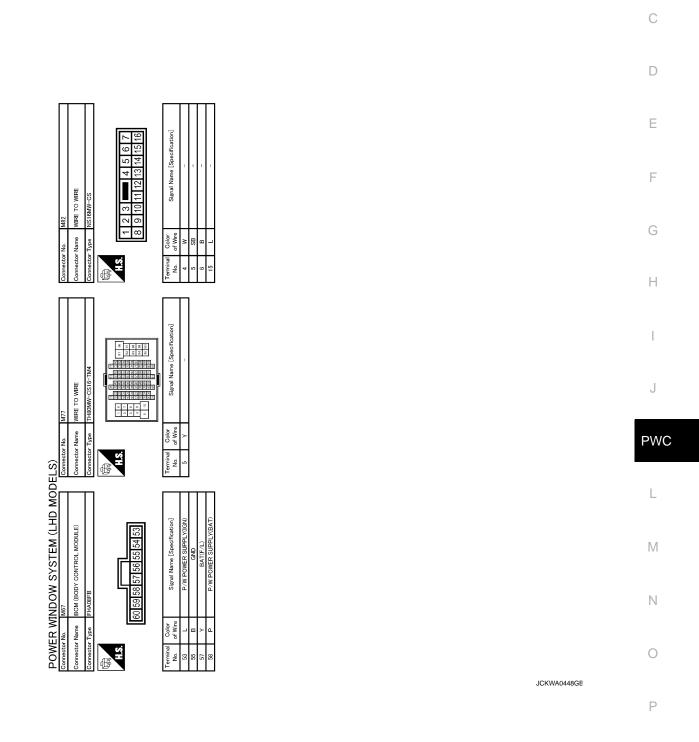


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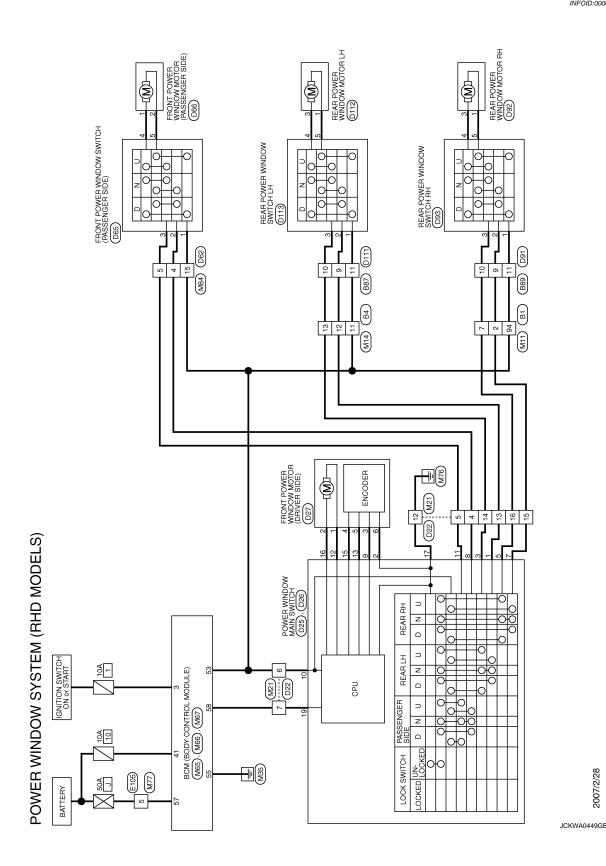


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Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) -

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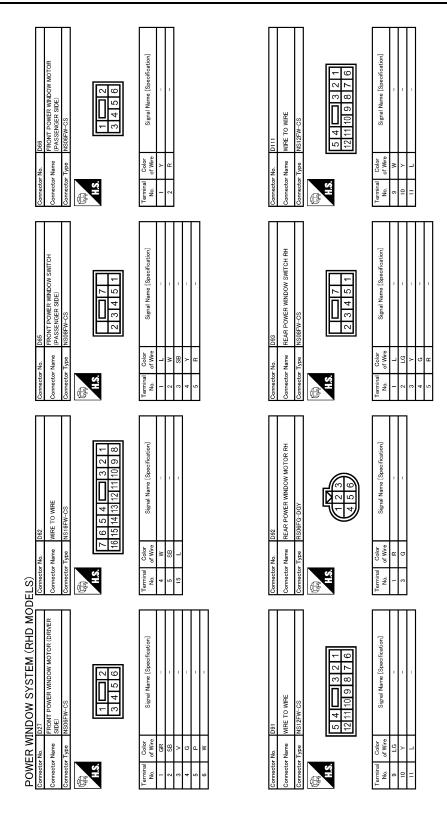
2007/2/28



**PWC-52** 

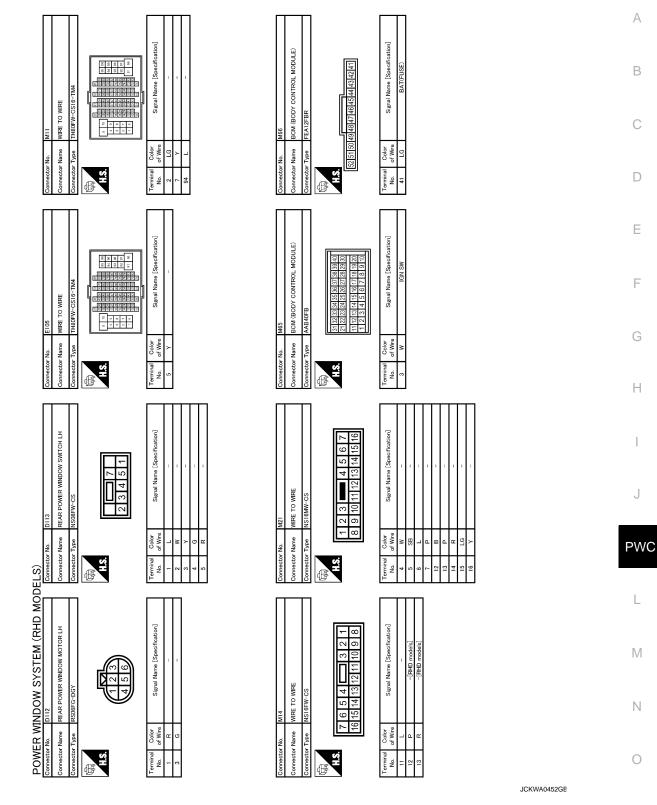
А Signal Name [Specification] Signal Name [Specification] POWER WINDOW MAIN SWITCH В 17 18 19 WIRE TO WIRE С Color of Wire Color of Wire nector Name lector Name H.S. Terminal No. H.S. erminal No. D G E Ε Signal Name [Specification] 5 12 F WIRE TO WIRE G G BB Color of Wire nector Name ŋ H.S. 15 Terminal No. Ē Н Signal Name [Specification] Signal Name [Specification] OWER WINDOW MAIN SWITCH 2 ć J WIRE TO WIRE 11 30 З 2 20 σ -- 8 ω Color of Wire Color of Wire 비명명 < BH > Connector Name 0 Connector Name œ PWC HS Terminal No. H.S. Terminal No. Connect POWER WINDOW SYSTEM (RHD MODELS) 2 Ω ß ß 8 L Signal Name [Specification] Signal Name [Specification] 8 6 Μ WIRE TO WIRE WIRE TO WIRE 4 ć 5 14 Ν 7 6 <u>(</u> 16 15 1 Color of Wire Color of Wire щ Ю : C onnector Name nector Name ALS. H.S.H erminal No. erminal No. Ο ß ſ JCKWA0450GE

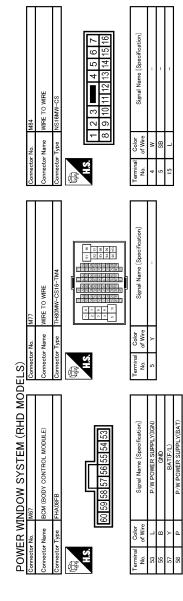
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Fail Safe

# FAIL-SAFE CONTROL BY DTC

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

# **PWC-56**

JCKWA0453GE

INFOID:000000001548870

< ECU DIAGNOSIS >

DTC	Fail-safe	Cancellation					
B2190: NATS ANTENNA AMP	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC					
B2191: DIFFERENCE OF KEY	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>						
B2192: ID DISCORD BCM-ECM	Fuel cut (ECM)	Erase DTC					
B2193: CHAIN OF BCM-ECM	Fuel cut (ECM)	Erase DTC					
B2194: DISCORD BCM-I-KEY	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC					
B2195: ANTI SCANNING	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC					
B2196: DONGLE NG	<ul> <li>Inhibits engine cranking</li> <li>Inhibits steering lock unlocking (Intelligent Key unit)</li> <li>Fuel cut (ECM)</li> </ul>	Erase DTC					
stops power supply to protect Condition of cancellation 1. Turn ignition switch OFF 2. Pass more than 1 minut 3. Turn ignition switch ON 4. Operate the rear wiper s HIGH FLASHER OPERA	e te after the rear wiper stop. switch.						
BCM detects the turn signal BCM increases the turn sigr lamp operating. <b>NOTE:</b>	al while activating the hazard warning lamp.	pen is detected with the turn signal					
FAIL-SAFE CONTROL B	Y LIGHT & RAIN SENSOR MALFUNCTION sensor serial link error and the light & rain sens fail-safe when light & rain sensor has a malfunct	sor malfunction.					
<ul> <li>Fail-safe Control</li> <li>Auto light control: Headlar</li> <li>Front wiper control: The o switch is turned OFF.</li> </ul>	np is turned ON. condition just before the activation of fail-safe	is maintained until the front wiper					
DTC Inspection Prior	ity Chart						
	ity Chart	INFOID:000000001548871					
Priority	DTC	INFOID:000000001548871					

B2190: NATS ANTENNA AMP
B2191: DIFFERNCE OF KEY
B2192: ID DISCORD BCM-ECM

B2193: CHAIN OF BCM-ECM
B2194: DISCORD BCM-I-KEY
B2195: ANTI SCANNING
B2196: DONGLE NG

2

< ECU DIAGNOSIS >

#### DTC Index

INFOID:000000001548872

#### NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- PAST: Displays when there is a malfunction that is detected in the past and stored.

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

DTC	TI	ME	Fail-safe	Reference
U1000: CAN COMM CIRCUIT	0	1 - 39	—	BCS-33
U1010: CONTROL UNIT (CAN)	0	1 - 39	_	BCS-34
B2190: NATS ANTENNA AMP	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-41</u></li> <li>Without Intelligent Key system: <u>SEC-254</u></li> </ul>
B2191: DIFFERENCE OF KEY	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-43</u></li> <li>Without Intelligent Key system: <u>SEC-256</u></li> </ul>
B2192: ID DISCORD BCM-ECM	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-38</u></li> <li>Without Intelligent Key system: <u>SEC-251</u></li> </ul>
B2193: CHAIN OF BCM-ECM	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-40</u></li> <li>Without Intelligent Key system: <u>SEC-253</u></li> </ul>
B2194: DISCORD BCM-I-KEY	CRNT	PAST	×	<u>SEC-53</u>
B2195: ANTI SCANNING	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-54</u></li> <li>Without Intelligent Key system: <u>SEC-264</u></li> </ul>
B2196: DONGLE NG	CRNT	PAST	×	<ul> <li>With Intelligent Key system: <u>SEC-55</u></li> <li>Without Intelligent Key system: <u>SEC-265</u></li> </ul>

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

< ECU DIAGNOSIS >

# POWER WINDOW MAIN SWITCH

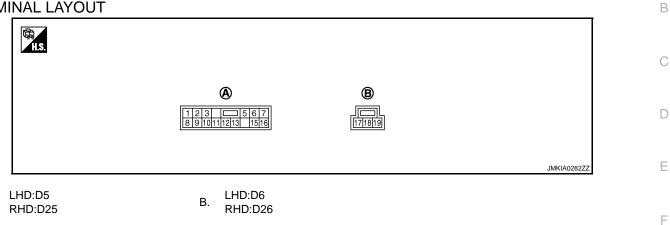
## **Reference Value**

INFOID:000000001515861

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## **TERMINAL LAYOUT**



#### PHYSICAL VALUES

Α.

#### POWER WINDOW MAIN SWITCH

	iinal No. e color)	Description		Condition	Voltage [V]	
+	-	Signal name	Signal name Input/ Output		(Approx.)	
1 (R)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in pow- er window main switch is UP at operated.	Battery voltage	
2 (W)	Ground	Encoder ground	_	_	0	
3 (O)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in pow- er window main switch is DOWN at operated.	Battery voltage	
5 (Y)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is DOWN at operated.	Battery voltage	
6 (BR)	Ground	Door lock and unlock switch UNLOCK signal	Input	When door lock and unlock switch in power window main switch is UNLOCK sig- nal	Battery voltage	
7 (LG)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is UP at operated.	Battery voltage	
8 (BR)	Ground	Front power window motor (passenger side) UP signal	Output	When front RH switch in power window main switch is UP at operated.	Battery voltage	
9 (V)	2	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	



## POWER WINDOW MAIN SWITCH

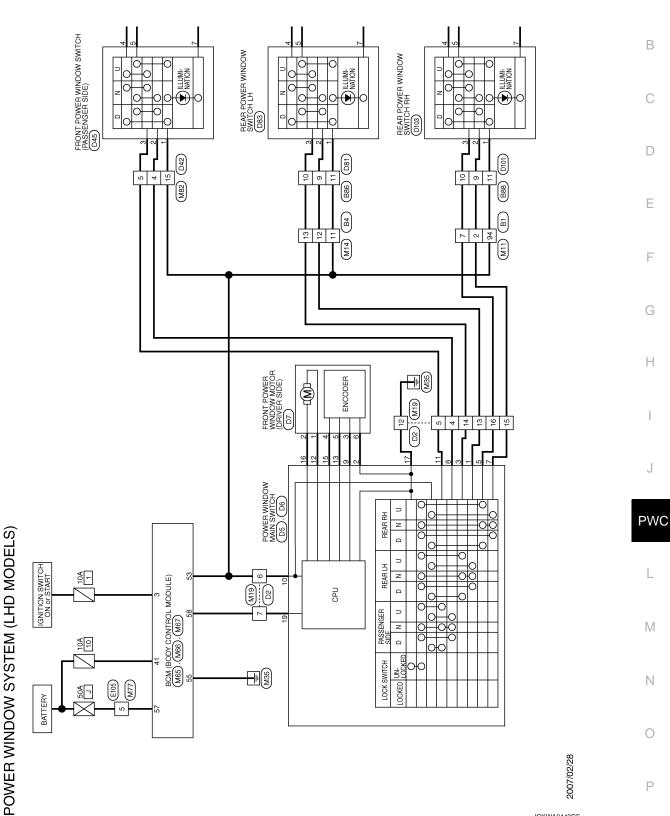
Terminal No. (Wire color)		Description		Condition	Voltage [V]
+	-	Signal name	Input/ Output	Condition	(Approx.)
10 (L)	Ground	Ignition switch power supply	Input	IGN SW ON	Battery voltage
				Other than above	0
11 (SB)	Ground	Front power window motor (passenger side) DOWN signal	Output	When front RH switch in power window main switch is DOWN at operated.	Battery voltage
12 (GR)	16	Front power window motor (driver side) DOWN signal	Output	When front LH switch in power window main switch is DOWN at operated.	Battery voltage
13 (P)	2	Encoder pulse signal 1	Input	When front power window motor (driver side) operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
15 (G)	Ground	Encoder power supply	Output	When ignition switch ON.	Battery voltage
16 (L)	12	Front power window motor (driver side) UP signal	Output	When front LH switch in power window main switch is UP at operated.	Battery voltage
17 (B)	Ground	Ground	_	—	0
18 (G)	Ground	Door lock and unlock switch LOCK signal	Input	When door lock and unlock switch in power window main switch is LOCK signal	Battery voltage
19 (P)	Ground	Battery power supply	Input	Ignition switch OFF	Battery voltage

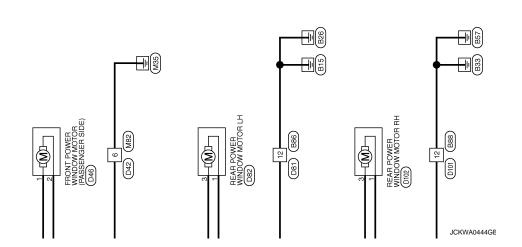
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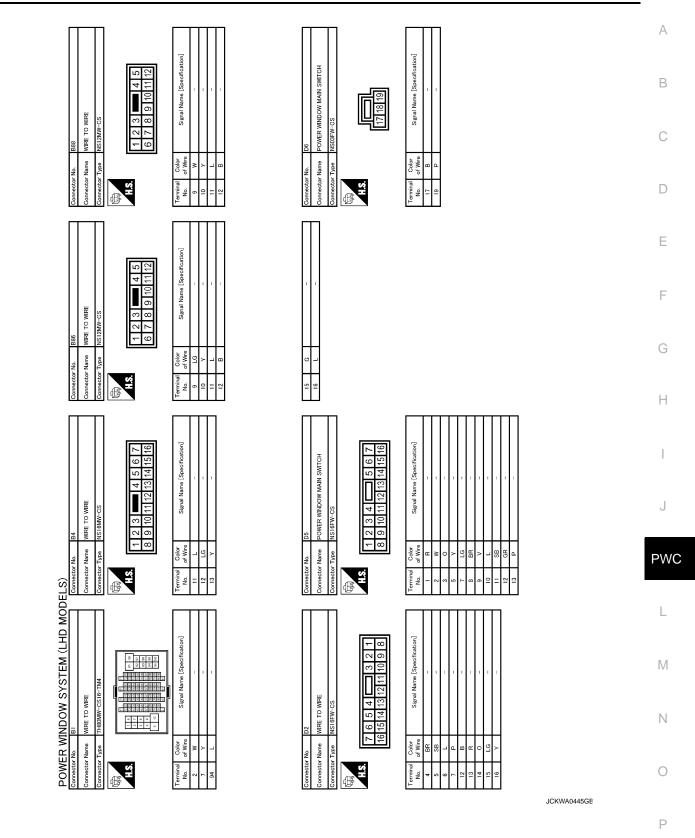
# Wiring Diagram - POWER WINDOW CONTROL SYSTEM (LHD MODELS) -

А INFOID:000000001551242

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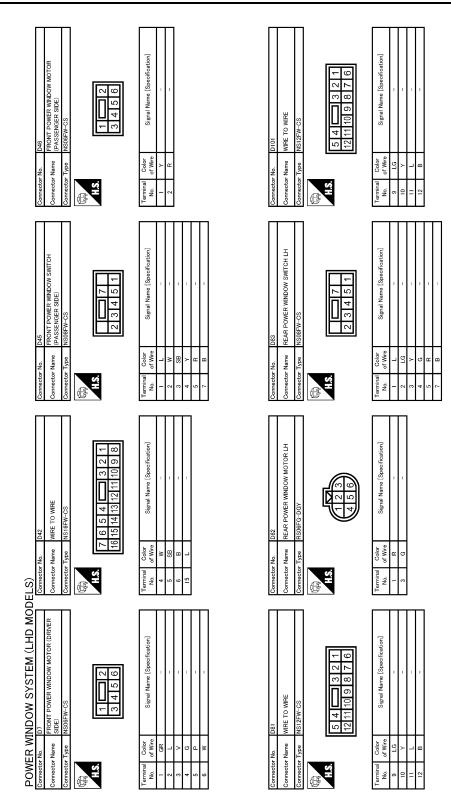






## **POWER WINDOW MAIN SWITCH**

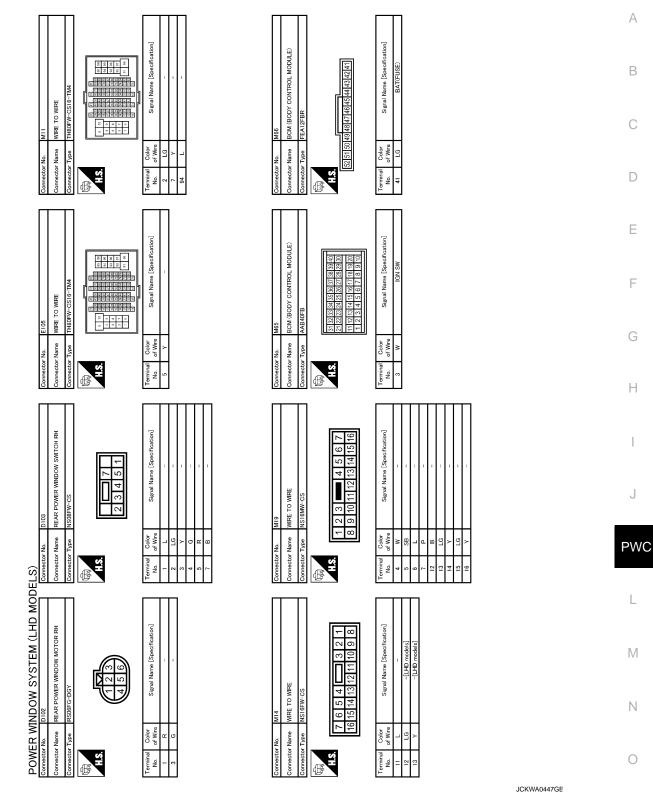
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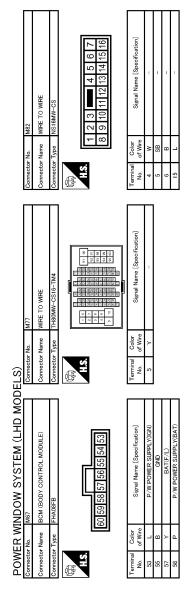


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## **POWER WINDOW MAIN SWITCH**

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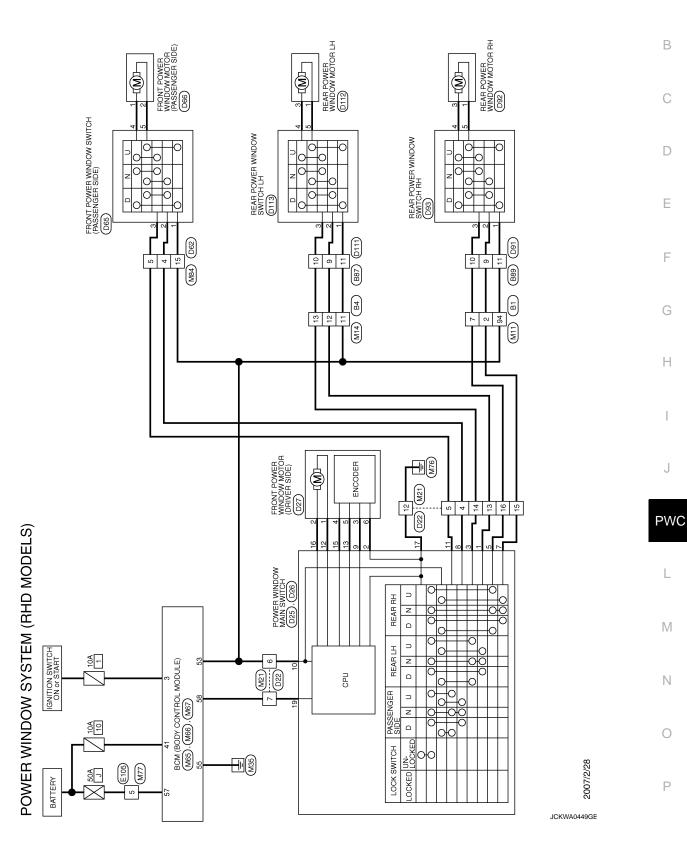


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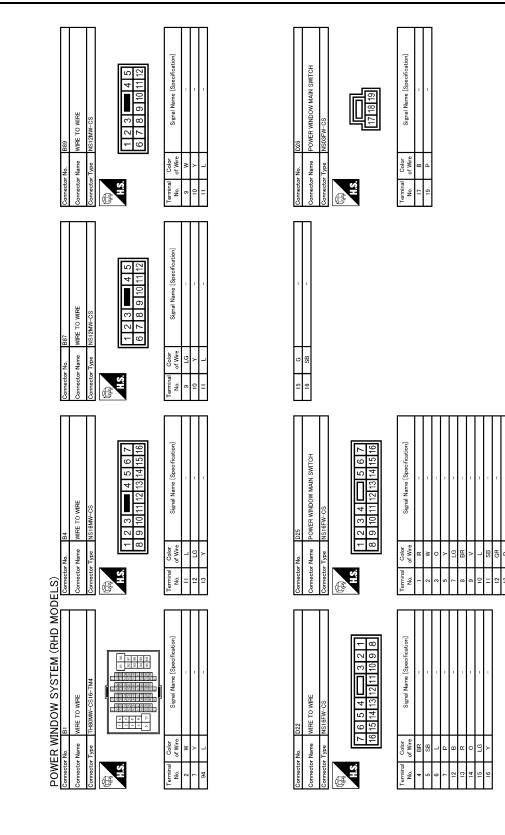
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# Wiring Diagram - POWER WINDOW CONTROL SYSTEM (RHD MODELS) -

INFOID:000000001551243 A



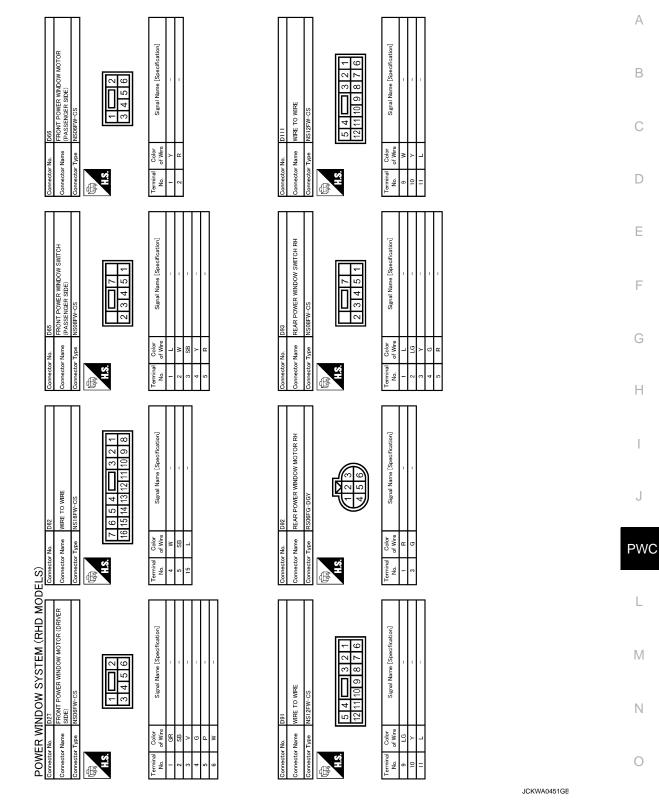
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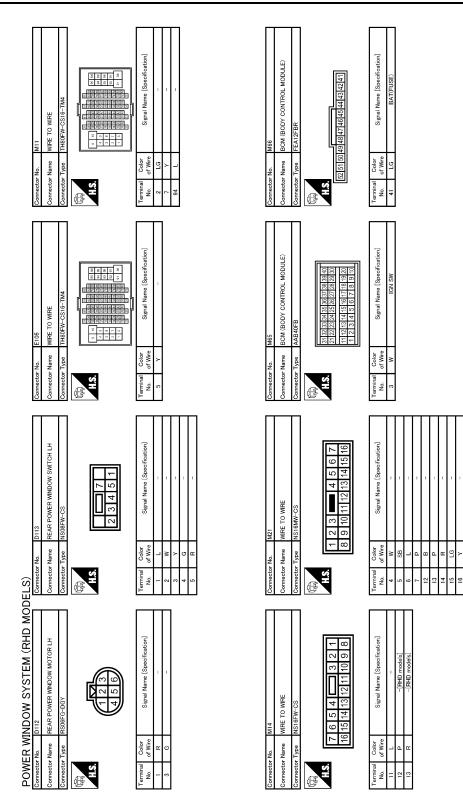
## **POWER WINDOW MAIN SWITCH**

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## **POWER WINDOW MAIN SWITCH**

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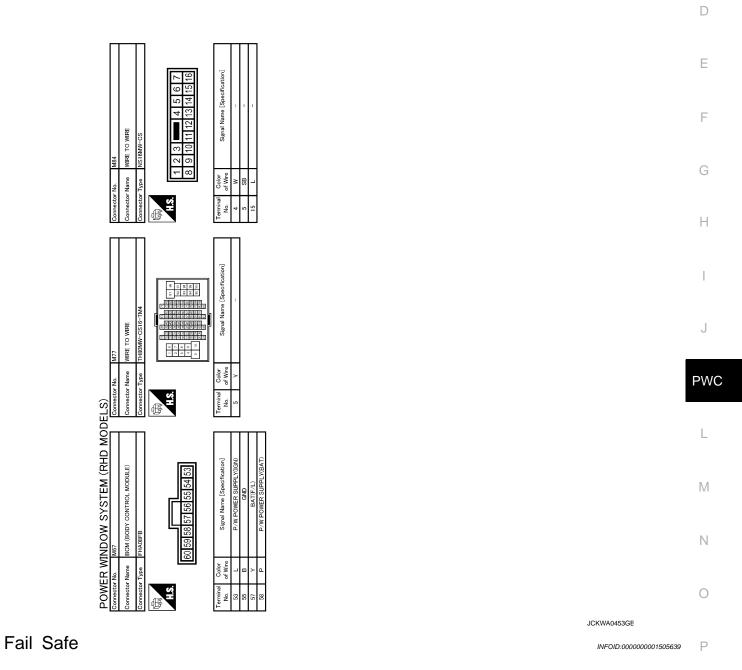
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#### FAIL-SAFE CONTROL

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

# **PWC-71**

## POWER WINDOW MAIN SWITCH

#### < ECU DIAGNOSIS >

Error	Error condition	
Pulse sensor malfunction	When only one side of pulse signal is being detected for more than the specified value.	
Both pulse sensors mal- function	When both pulse signals have not been detected for more than the specified value during glass open/ close operation.	
Pulse direction malfunction	When the pulse signal that is detected during glass open/close operation detects the opposite condition of power window motor operating direction.	
Glass recognition position malfunction 1	When it detects the error between glass fully closed position in power window switch memory and actual fully closed position during glass open/close operation is more than the specified value.	
Glass recognition position malfunction 2	When it detects pulse count more than the value of glass full stroke during glass open/close operation.	
Malfunction of not yet up- dated closed position of glass	When glass open/close operation is continuously performed without fully closing more than the specified value (approximately 10 strokes).	

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

- Auto-up operation
- Anti-pinch function

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

# NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH

< 31MPTOM DIAGNOSIS >	
SYMPTOM DIAGNOSIS	A
NONE OF THE POWER WINDOWS CAN BE OPERATED USING ANY SWITCH	В
Diagnosis Procedure	D
1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT	С
Check BCM power supply and ground circuit. Refer to <u>PWC-9, "BCM : Diagnosis Procedure"</u> .	
Is the inspection result normal?	D
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	_
2.CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT	E

	power window main switch power supply and ground circuit.
Refer to	PWC-9, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".
<u>Is the ir</u>	spection 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-39. "Intermittent Incident"</u>.
- NO >> GO TO 1.

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#### DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

# DRIVER SIDE POWER WINDOW DOES NOT OPERATE

**Diagnosis** Procedure

INFOID:000000001505641

1.CHECK FRONT POWER WINDOW MOTOR (DRIVER SIDE)

Check power window motor.

Refer to <u>PWC-19</u>, "DRIVER 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-39. "Intermittent Incident".

NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE	
< SYMPTOM DIAGNOSIS >	
FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE	٨
WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE	А
POWER WINDOW SWITCH	
WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE	В
POWER WINDOW SWITCH : Diagnosis Procedure	
	С
1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	0
Check front power window switch (passenger side). Refer to <u>PWC-14</u> , "Component Function Check".	D
Is the inspection result normal?	D
YES >> GO TO 2.	
NO >> Repair or replace the malfunctioning parts	Е
2.CHECK FRONT POWER WINDOW MOTOR (PASSENGER SIDE)	
Check front power window motor (passenger side).	F
Refer to <u>PWC-20, "PASSENGER SIDE : Component Function Check"</u> . Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	G
<b>3.</b> CONFIRM THE OPERATION	
Confirm the operation again.	Н
Is the result normal?	
YES >> Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u> . NO >> GO TO 1.	1
WITH FRONT POWER WINDOW SWITCH ONLY	
WITH FRONT POWER WINDOW SWITCH ONLY : Diagnosis Procedure INFOLD:00000001505643	J
1.CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIR-	
	PWC
Check front power window switch (passenger side) power supply and ground circuit.	
Refer to <u>PWC-11, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure"</u> .	
<u>Is the inspection result normal?</u> YES >> GO TO 2.	L
NO >> Repair or replace the malfunctioning parts.	
2. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	$\mathbb{M}$
Check front power window switch (passenger side).	
Refer to <u>PWC-14</u> , "Component Function Check".	Ν
<u>Is the inspection result normal?</u> YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts	$\sim$
3. CONFIRM THE OPERATION	0
Confirm the operation again.	
Is the result normal?	Ρ
<ul> <li>YES &gt;&gt; Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.</li> <li>NO &gt;&gt; GO TO 1.</li> </ul>	

## REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

REAR LH SIDE POWER WINDOW DOES NOT OPERATE WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH

WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH : Diagnosis Procedure

INFOID:000000001505644

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch. Refer to PWC-16, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH. Refer to PWC-22, "REAR LH : 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?

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

>> GO TO 1. NO

## WITH REAR POWER WINDOW SWITCH LH ONLY

# WITH REAR POWER WINDOW SWITCH LH ONLY : Diagnosis Procedure

INFOID:000000001505645

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

Check rear power window switch power supply and ground circuit. Refer to PWC-12, "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 SWITCH

Check rear power window switch.

Refer to PWC-16, "Component Function Check".

Is the inspection result normal?

YFS >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 ${
m 3.}$  confirm the operation

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

#### REAR RH SIDE POWER WINDOW DOES NOT OPERATE < SYMPTOM DIAGNOSIS > REAR RH SIDE POWER WINDOW DOES NOT OPERATE А WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH В WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH : Diagnosis Procedure INFOID:000000001505646 1.CHECK REAR POWER WINDOW SWITCH Check rear power window switch. Refer to PWC-16, "Component Function Check". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2.CHECK REAR POWER WINDOW MOTOR RH Check rear power window motor RH. F Refer to PWC-24, "REAR RH : 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. Н Is the result normal? >> Check intermittent incident. Refer to GI-39, "Intermittent Incident". YES >> GO TO 1. NO WITH REAR POWER WINDOW SWITCH RH ONLY WITH REAR POWER WINDOW SWITCH RH ONLY : Diagnosis Procedure INFOID:000000001505647 1.CHECK REAR POWER WINDOW SWITCH POWER SUPPLY AND GROUND CIRCUIT PWC Check rear power winodw switch power supply and ground circuit. Refer to PWC-12, "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 SWITCH Μ Check rear power window switch. Refer to PWC-16, "Component Function Check". Ν Is the inspection result normal? YFS >> GO TO 3. NO >> Repair or replace the malfunctioning parts. ${ m 3.}$ CONFIRM THE OPERATION Confirm the operation again. Is the result normal? Ρ YES >> Check intermittent incident. Refer to GI-39, "Intermittent Incident".

NO >> GO TO 1.

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

#### < SYMPTOM DIAGNOSIS >

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

**Diagnosis Procedure** 

INFOID:000000001505648

**1.**PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed. Refer to PWC-4, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special

Repair Requirement".

Is the inspection result normal?

YES >> INSPECTION END.

NO >> GO TO 2.

2. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-26. "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

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

NO >> GO TO 1.

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

< SYMPTOM DIAGNOSIS >	
AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-	
MALLY (DRIVER SIDE)	А
Diagnosis Procedure	В
1.PERFORM INITIALIZATION PROCEDURE	
Initialization procedure is executed and operation is confirmed. Refer to <u>PWC-4</u> , "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : <u>Special</u> <u>Repair Requirement</u> ".	С
Is the inspection result normal?         YES       >> INSPECTION END.         NO       >> GO TO 2.	D
2.check encoder	Е
Check encoder. Refer to <u>PWC-26, "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
<ul> <li>YES &gt;&gt; Check intermittent incident. Refer to <u>GI-39, "Intermittent Incident"</u>.</li> <li>NO &gt;&gt; GO TO 1.</li> </ul>	

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## POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

# POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

**Diagnosis Procedure** 

INFOID:000000001505650

1.REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

>> Refer to PWC-83, "Removal and Installation".

# POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >	
POWER WINDOW SWITCH ILLUMINATION DOES NOT ILLUMINATE	
PASSENGER SIDE	А
PASSENGER SIDE : Diagnosis Procedure	В
1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIRCUIT	
Check front power window switch (passenger side) power supply and ground circuit. Refer to <u>PWC-11, "FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure"</u> .	С
Is the inspection result normal?	D
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	
2.REPLACE FRONT POWER WINDOW SWITCH (PASSENGER SIDE)	Е
Replace front power window switch (passenger side).	
>> Refer to PWC-83. "Removal and Installation".	F
REAR LH	
REAR LH : Diagnosis Procedure	G
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-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> .	Н
Is the inspection result normal?	I
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	I
2.REPLACE REAR POWER WINDOW SWITCH LH	
Replace rear power window switch LH.	J
>> Refer to PWC-83, "Removal and Installation".	
REAR RH	PWC
REAR RH : Diagnosis Procedure	L
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-12, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"</u> .	Μ
Is the inspection result normal?	
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts.	Ν
2.RPLACE REAR POWER WINDOW SWITCH RH	
Replace rear power window switch RH.	0
>> Refer to PWC-83, "Removal and Installation".	
22 Refer to <u>r we be, Reflevar and Installation</u> .	Ρ

# 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. Information necessary to service the system safely is included in the "SRS AIRBAG" and "SEAT BELT" of this Service Manual.

#### WARNING:

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

# ON-VEHICLE REPAIR POWER WINDOW MAIN SWITCH

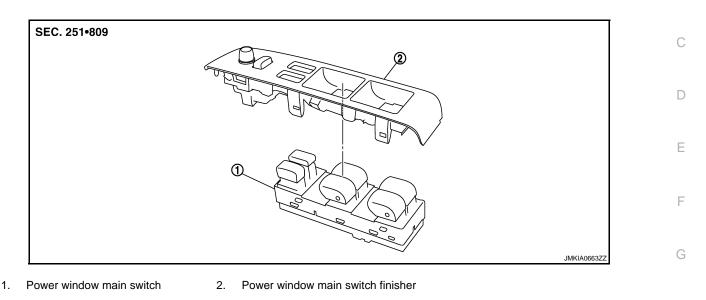
### Exploded View

INFOID:000000001505653 B

А

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INFOID:000000001505654



#### NOTE:

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

Refer to removal and installation procedure. Refer to PWC-83. "Removal and Installation".

## Removal and Installation

#### REMOVAL

- Remove the power window main switch finisher (2). Refer to <u>INT-10, "FRONT DOOR FINISHER : Exploded View"</u> and <u>INT-10, "FRONT DOOR FINISHER :</u> <u>PWC</u> <u>Removal and Installation"</u>.
- 2. Power window main switch (1) is removed from power window main switch finisher (2) using flat-head screw driver (A) etc.



#### **CAUTION:**

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

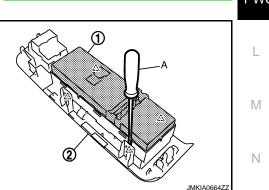
The same procedure is also performed for front power window switch (passenger side) and rear power window switch (LH & RH).



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-4</u>. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : <u>Special</u> <u>Repair Requirement</u>".





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**PWC-83**