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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 SR and SB section 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 SR section.
- 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.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least 3 minutes before performing any service.

Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

PREPARATION

< PREPARATION >	[LH FRONT ONLY AUTO DOWN]	
PREPARATION		А
PREPARATION		
Special Service Tool	INFOID:000000008942199	В
The actual shapes of Kent-Moore tools may differ from those of special service tools	illustrated here.	
Tool number (Kent-Moore No.) Tool name	Description	С
	Removing trim components	D E

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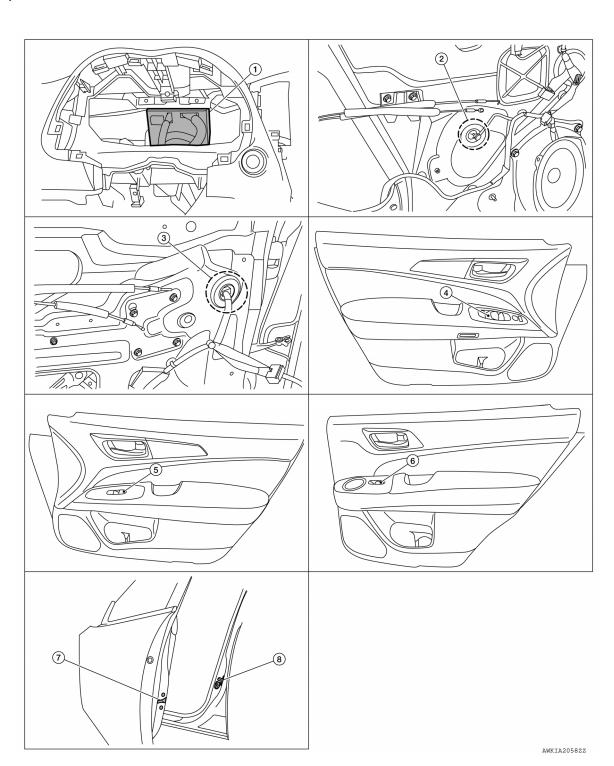
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



- BCM (view with the combination meter removed)
- Front power window motor LH (RH similar) (view with front door finisher removed)
- Rear power window motor LH (RH similar) (view with rear door finisher removed)

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LH FRONT ONLY AUTO DOWN]

- Main power window and door lock/ unlock switch
- 7. Front door lock assembly LH (key
- Power window and door lock/unlock 6. 5. switch RH Front door switch LH (RH similar)

8.

- Rear power window switch LH (RH similar)
- Α

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cylinder switch)

Component Description

Component	Function
BCM	Supplies power to the window switches.Controls retained power.
Main power window and door lock/un-lock switch	Directly controls all power window motors.
Power window and door lock/unlock switch RH	Controls power window motor of passenger door.
Rear power window switch	Controls right and left power window motors for the rear doors.
Power window motor	 Integrates the ENCODER and WINDOW MOTOR. Starts operating with signals from each power window switch. Transmits power window motor rotation as a pulse signal to power window switch.
Front door lock assembly (door key cylinder switch)	Transmits operation condition of door key cylinder switch to power window main switch.
Front door switch LH/RH	Detects door open/close condition and transmits it to the BCM.

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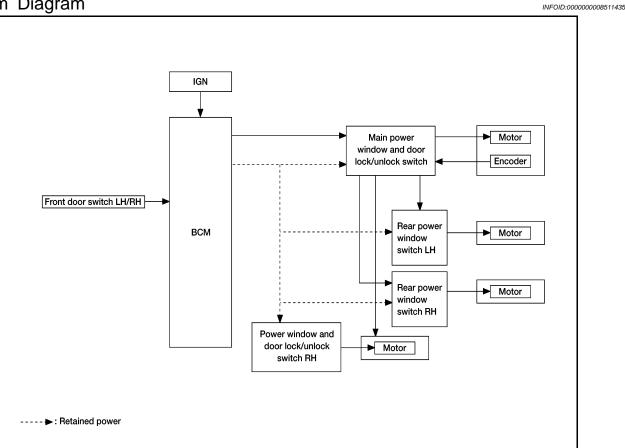
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SYSTEM

System Diagram



System Description

POWER WINDOW OPERATION

- Power window system is activated by the power window switch when the ignition switch is in the ON position
 or during the retained power operation after ignition switch turns OFF.
- Power window main switch can open/close door glass.
- Front and rear power window switch can open/close the corresponding door glass.
- Power window lock switch can lock all power windows other than driver seat.
- All power windows open when pressing Intelligent Key unlock button for 3 seconds.
- Power window serial link transmits the signals from power window main switch to each power window switch.

POWER WINDOW AUTO-OPERATION

- AUTO-DOWN operation can be performed when the front power window motor LH turns to AUTO.
- Encoder continues detecting the movement of power window motor and output the encoder pulse signal to power window switch while power window motor is operating.
- Power window motor is operable in case encoder is malfunctioning.
- AUTO-DOWN function does not operate if encoder is malfunctioning.

RETAINED POWER OPERATION

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

Retained Power Function Cancel Conditions

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

POWER WINDOW LOCK FUNCTION

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

DOOR KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1 second or more to OPEN or CLOSE all power windows when ignition switch is OFF. In addition, it stops when key position is moved to N (NEUTRAL) when operating.

Operation Condition

- · Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1 second or more to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for 1 second or more to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

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

Fail-safe

FAIL-SAFE CONTROL

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

Malfunction	Malfunction 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 that 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 that 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
- Retained power function

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

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[LH FRONT ONLY AUTO DOWN]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

		Direct Diagnostic Mode						
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

RETAINED PWR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LH FRONT ONLY AUTO DOWN]

RETAINED PWR: CONSULT Function (BCM - RETAINED PWR)

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DATA MONITOR

Monitor Item [Unit]	Description
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[LH FRONT ONLY AUTO DOWN]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

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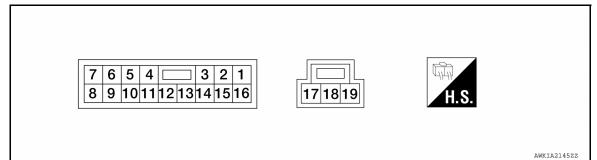
ECU	Reference
	BCS-28, "Reference Value"
BCM	BCS-48, "Fail Safe"
DCIVI	BCS-48, "DTC Inspection Priority Chart"
	BCS-50, "DTC Index"

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Terminal No. (Wire color)		Description		Condition	Voltage		
+	-	Signal name	Input/ Output	Gondinon	(Approx.)		
1 (B)	Ground	Ground		_	0		
2 (Y)	16	Front power window motor RH DOWN signal	Output	When front RH switch in power window main switch is operated DOWN.	Battery voltage		
4 (SB)	12	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms		
5 (Y)	12	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB		
6 (L)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage		
7 (V)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage		
8 (LG)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage		

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH FRONT ONLY AUTO DOWN]

Termir (Wire	nal No. color)	Description		Condition	Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
9 (SB)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage
-				IGN SW ON	Battery voltage
10	Ground	RAP signal	Input	Within 45 second after ignition switch is turned to OFF.	Battery voltage
(BR)				When driver side or passenger side door is opened during retained power operation.	0
12 (BR)	Ground	Encoder ground	_	_	0
14 (LG)	Ground	Encoder power supply	ncoder power supply Output		10
16 (R)	2	Front power window motor RH UP signal		When front RH switch in power window main switch is operated UP.	Battery voltage
17 (Y)	19 Front power window motor LH UP signal		Output	When front LH switch in power window main switch is operated UP.	Battery voltage
18 (Y)	Ground	Battery power supply	Input	_	Battery voltage
19 (L)	17 Front power window motor LH DOWN signal		Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage

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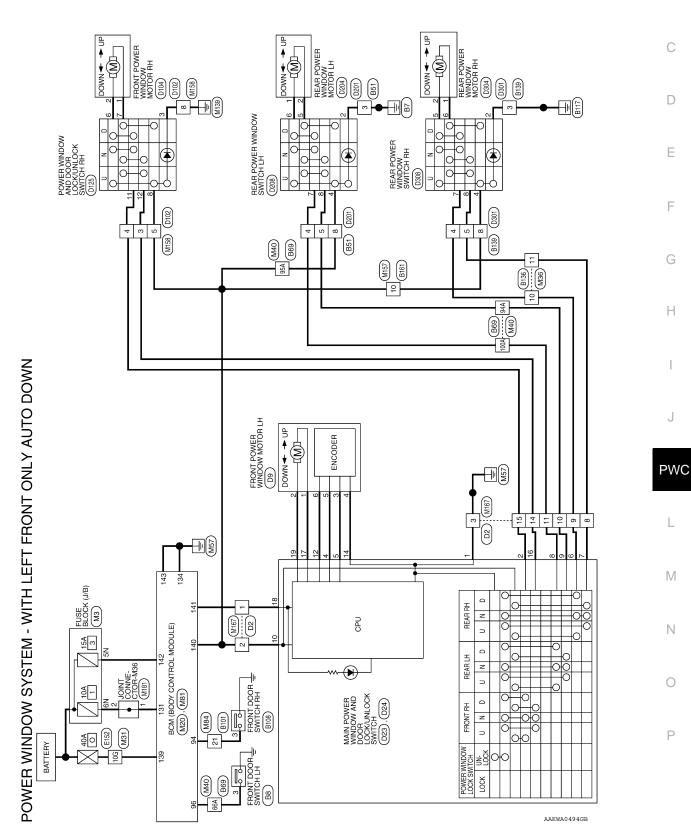
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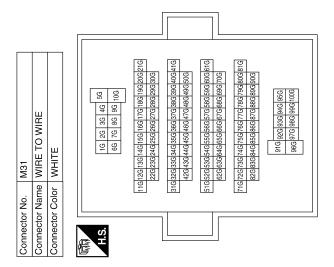
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WIRING DIAGRAM

POWER WINDOW SYSTEM

Wiring Diagram - With Left Front Only Auto Down





Signal Name	I
Color of Wire	M
Terminal No.	10G

Connector Name BCM (BODY CONTROL MODULE) POWER WINDOW SYSTEM - WITH LEFT FRONT ONLY AUTO DOWN Connector Color GRAY

92 91 90 89 88 87 86 85 84 83 82 81	1 100 99 98 97 96 95 94 93		Signal Name	AS DOOR SW	W.2 0000 00
91 90 86	104 103 102 101 100 99		Color of Wire	თ	Ja
	E C]	Terminal No.	94	90

	FUSE BLOCK (J/B)	ITE		Signal Name	1	I
. M3		lor WHITE	3N 3N 6N 5N 6N 5N	Color of Wire	>	×
Connector No.	Connector Name	Connector Color	原动 H.S.	Terminal No.	NS	N9

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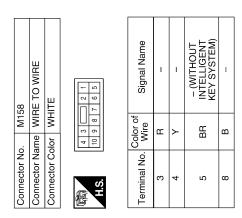
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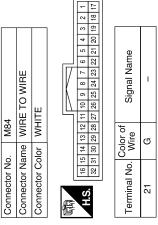
M81 BCM (BODY CONTROL MODULE) WHITE	142 141 140 138 138	of Signal Name	BAT BCM FUSE	GND 2	BAT POWER F/L	P/W POWER SUPPLY IGN	P/W POWER SUPPLY BAT	BAT FRONT DOOR	GND 1						
	143 143 14	No. Wire	>	В	M	BR	>	\	В						
Connector No. Connector Name Connector Color	H.S.	Terminal No.	131	134	139	140	141	142	143						
) RE TO WIRE ITE	14 24 34 44 54 64 77 84 94 104 11A[2A[3A] 14A[15A[15A[15A[2A]20A]21A 22A[23A]24A[25A[25A[25A[25A]20A]30A	31A 32A 33A 34A 35A 36A 37A 38A 39A 40A 41A 42A 43A 44A 45A 46A 46A 47A 48A 49A 50A	51A 52A 53A 54A 55A 56A 57A 58A 59A 60A 61A	62A 63A 64A 65A 66A 67A 68A 69A 70A	718 728 738 748 758 768 778 788 798 808 818	82A 83A 84A 85A 86A 87A 88A 89A 90A	91A 92A 93A 94A 95A	96A 97A 98A 99A TOUA		Signal Name	1	1	ı	ı	
o. M40 ame WIRE Tolor WHITE	11A12A13 22A23	31A 32A 33 42A 43	51A 52A 53	62A 63	71A 72A 73	82A 83				Color of Wire	BG	SB	BR	Pl	
Connector No. M40 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.									Terminal No.	66A	94A	95A	100A	
Connector No. M36 Connector Name WIRE TO WIRE Connector Color WHITE	20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1 40 39 38 37 38 35 34 33 32 31 30 29 29 27 26 55 24 23 22 21	Terminal No. Wire Signal Name	10 L –	- V											

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		WIRE		2 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı
F	M157	ne WIRE TO WIRE	or WHITE	6 5 4 6 7 12 12	Color of Wire	BR
	Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	10
_				<u> </u>		



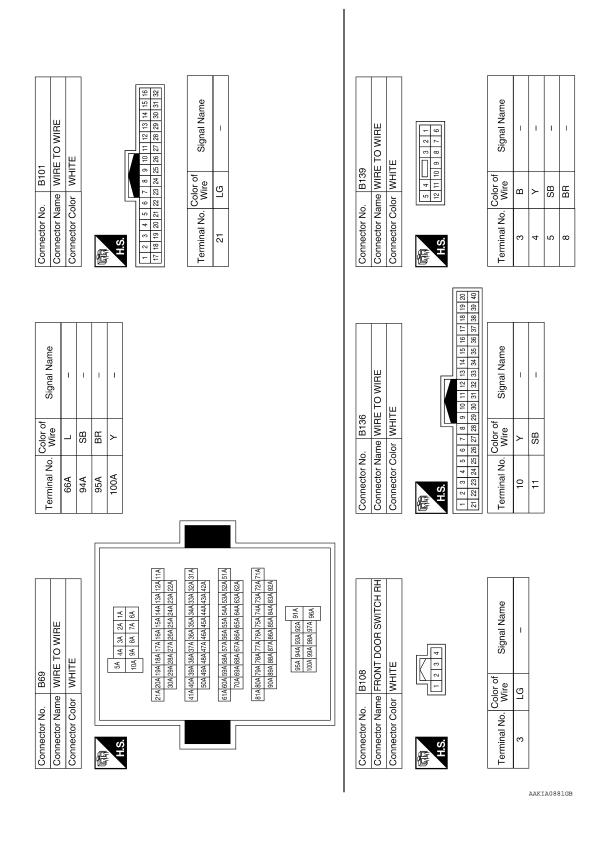
Connector No.	or No.	M181	-
Connect	or Name	ğ	Connector Name JOINT CONNECTOR-M36
Connect	Connector Color WHITE	MH	TE
H.S.		4 3	2 10
Terminal No.		Color of Wire	Signal Name
-		>	ı
2		M	-

M167 WIRE TO WIRE	12 11 10 9 8 1 1 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name	I	İ	ī	ı	Ī	I	I	Ī	1
$\overline{}$	→ " -	Color of Wire	٨	BR	В	>	Т	SB	ГG	Ж	٨
Connector No. Connector Name	H.S.	Terminal No.	1	2	3	8	6	10	11	14	15

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		ше							В
TO WIRE	5 4 4 12 10 9 8 7 6 4 6 7 6 6 7 9 1 1 10 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	1 1	1 1					С
ame WIRE TO	5 4 [12 11 10]	Color of Wire	<u></u> >	SB BR					D
Connector No. B51 Connector Name WIRE TO WIRE Connector Color WHITE	用.S.	Terminal No.	0 4	ع <u>ب</u>					Е
			\neg						F
WITCH LH		ame							G
B8 FRONT DOOR SWITCH LH WHITE	4	Signal Name	1						Н
	-	୍ଡି≶	_						I
Connector No. Connector Name Connector Color	南 H.S.	Terminal No.	0						J
									PWC
문	26 16 76 66	315G14G13G12G11G 325G24G23G22G	41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 31G 5NG 49G 48G 47G 44G 45G 44G 43G 42G	61 G 60 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G	1756 146 830 820 820 820 820 820 820 820 820 820 82	Signal Name	1		L
Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE	5G 4G 3G 2G 10G 9G 8G 7G	21G20G19G18G17G16G15G14G1 30G29G28G27G26G25G24G2	39G38G37G360 49G48G47G460	59G58G57G56	81G80G179G176G176G176G176G176G176G176G176G176G176				M
No. E1 Name WI Color WI		216206	416406	616606	816806	Color of Wire	۵		N
Connector No. Connector Name Connector Color	所 H.S.					Terminal No.	10G		0
								AAKIA0880GB	Р
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MOTOR DR DOWN

ф В

MOTOR DR UP Signal Name

Color of Wire

Terminal No.

MOTOR AS UP ENCODER +

14

ENCODER GND

BB 2 4

12

17 8 6

			1							_
	FRONT POWER WINDOW MOTOR LH	WHITE	<u> </u>	Signal Name	ı	I	ı	ı	ı	ı
6Q .	e	_	0 0	Color of Wire	>	_	>	ГĠ	SB	BB
Connector No.	Connector Name	Connector Color	崎高 H.S.	Terminal No.	-	2	ε	4	5	9

Signal Name

Color of Wire

Terminal No.

Sign						
Color of Wire	>	_	>	PI	SB	BR
Terminal No.	1	2	3	4	5	9

2 L	3 \	4 LG	5 SB	6 BR					Connector No.	Connector Name	Connector Color		晋	H.S.	
					J			-				_			
-	ı	1	ı	ı	1	-	-		Signal Name	ENCODER SIG-1 (DLP)	MOTOR RR DOWN	MOTOR RR UP	MOTOR RL DOWN	MOTOR RL UP	IGN
BR	В	>	_	SB	re	Œ	>		Color of Wire	<u>}</u>	٦	>	FG	SB	BR
2	3	8	6	10	11	14	15		Terminal No.	5	9	7	8	6	10
										•			•	•	

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

D24

WHITE

B161 WIRE TO WIRE WHITE	3	Signal Name	I
	0 0	Color of Wire	BR
Connector No. Connector Name Connector Color	H.S.	Terminal No.	10

Connector Name WIRE TO WIRE

Connector No.

Connector Color WHITE

3	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH (WITH LEFT FRONT ONLY AUTO DOWN)	WHITE	4	Signal Name	GND	MOTOR AS DOWN	ENCODER SIG-2 (ULP)
). D23			7 6 5 8 9 10	Color of Wire	В	>	SB
Connector No.	Connector Name	Connector Color	SH 管	Terminal No.	-	2	4

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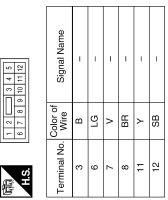
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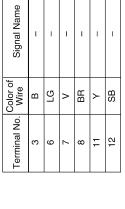
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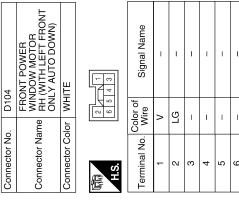


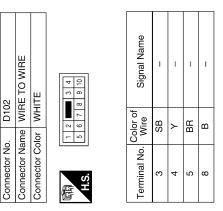
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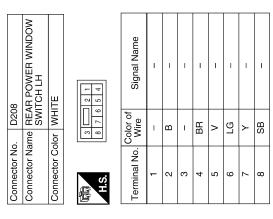




Signal Name	1	1	1	1	ı	I	
Color of Wire	^	re	ı	1	1	1	
minal No. Wire	-	2	က	4	2	9	







Connector Name REAR POWER WINDOW MOTOR LH	ITE	14	Signal Name	ı	ı	I	I	I	ı
 me RE,	lor WH	6 5	Color of Wire	ГG	>	ı	1	I	ı
Connector Na	Connector Color WHITE	所 H.S.	Terminal No.	-	2	3	4	5	9

Connector No.	D201
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
H.S.	2 3 mm 4 5 7 8 9 10 11 12
100	olor of

D204

Connector No.

E TO WIRE	TE	9 10 11 12	Signal Name	ı	I	l	ī
me WIF	lor WH	6 1 2 8 8	Color of Wire	В	Υ	SB	BR
Connector Name WIRE TO WIRE	Connector Color WHITE	馬.H.S.	Terminal No.	င	4	9	8

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Connector No. E26 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Color of Signal Name 14 Y/R - 15 GR -	Connector No. E124 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK Terminal No. Wire Signal Name 59 B GND (POWER)	A B C D
Connector No. E25 Connector Name INTELLIGENT KEY WARNING BUZZER Connector Color BROWN	(1 2 3) H.S.	Terminal No. Color of Signal Name 1 Y/R – 3 GR –	PDM E/R (INTELLIGENT POWER DISTRIBUTION POWER DISTRIBUTION MODULE ENGINE ROOM)	F G H
Connector No. E3 Connector Name HORN Connector Color BLACK	H.S.	Terminal No. Color of Signal Name 1 G	Connector No. E41 Connector Name WIRE TO WIRE Connector Color GRAY Connector Color GRAY	PWC L M

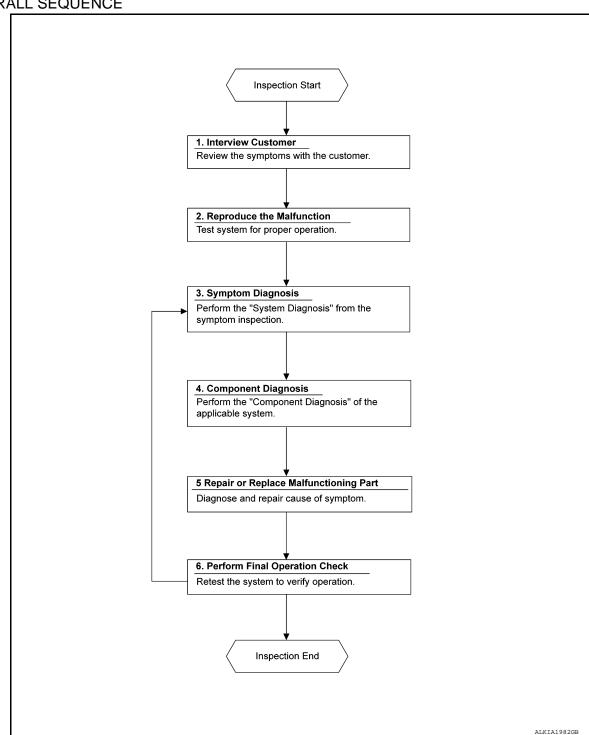
PWC-25 Revision: October 2012 2013 Pathfinder NAM

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH FRONT ONLY AUTO DOWN]

>> GO TO 2.	Δ
2. CONFIRM THE SYMPTOM	
Check the malfunction on the vehicle that the customer describes. Inspect the relation of the symptoms and the condition when the symptoms occur.	Е
>> GO TO 3.	
3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS	
Use Symptom diagnosis from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms.	
>> GO TO 4.	
4. PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM	E
Perform the diagnosis with Component diagnosis of the applicable system.	
>> GO TO 5.	
5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS	
Repair or replace the specified malfunctioning parts.	(
>> GO TO 6.	
6. FINAL CHECK	
Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.	
Are the malfunctions corrected?	
YES >> Inspection End. NO >> GO TO 3.	

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

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Regarding Wiring Diagram information, refer to BCS-53, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.				
139	Fusible link battery power	O (40A)				
131	BCM battery fuse	1 (10A)				

Is the fuse or fusible link blown?

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

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

- Disconnect BCM connector M81.
- Check voltage between BCM connector M81 terminals 131, 139 and ground.

BCM		Ground	Voltage	
Connector	Terminal	Ground	Voltage (Approx.)	
M81	131		Pottory voltage	
IVIO I	139	_	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M81 terminals 134, 143 and ground.

BCM		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M81	134	_	Yes	
IVIO I	143	_	165	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

WERT WINDOW WATER BOSON PRIOR

- BCM supplies power.
- It operates each power window motor via corresponding power window switch and makes window move up/ down when main power window and door lock/unlock switch is operated.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW MAIN SWITCH: Component Function Check

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Main Power Window And Door Lock/unlock Switch

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Check power window motor operation with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.

NO >> Refer to PWC-29, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

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Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

CHECK POWER SUPPLY CIRCUIT

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- Turn ignition switch ON.
- Check voltage between main power window and door lock/unlock switch connectors D23, D24 and ground.

Tel				
(+)	Voltage (Approx.)			
Main power window and door lock/unlock switch Terminal		(-)	(Approx.)	
D23	10	Ground	Pattony voltago	
D24	18	Giouria	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM, main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- Check continuity between BCM connector and main power window and door lock/unlock switch connectors.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M81	140	D23	10	Yes
IVIO	141	D24	18	163

Check continuity between BCM connector M81 and ground.

BCM connector	Terminal		Continuity
M81	140	Ground	No
IVIO I	141		No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D23	1	Glound	Yes

Is the inspection result normal?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5.
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6.
- YES >> Check main power window and door lock/unlock switch output signal (front power window switch LH) GO TO 7.
- YES >> Check main power window and door lock/unlock switch output signal (front power window switch RH) GO TO 8.
- NO >> Repair or replace the harness or connectors.

f 4. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M81 and ground.

Terr	V 16			
(+)	(_)	Voltage (Approx.)		
BCM connector	Terminal	(-)	(11 - /	
M81	140	Ground	Battery voltage	
IVIOI	141	Ground	Battery Voltage	

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

${f 5.}$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH LH)

- 1. Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch D23 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/ unlock switch connector	Terminal	(–)	position (rear LH)	(Approx.)
	9	Ground	UP	Battery voltage
D23			DOWN	0
D23		Ground	UP	0
8			DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".
- **6.** CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)
- Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch D23 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(–)	position (rear RH)	(Approx.)
	-		UP	Battery voltage
Doo	7	Cround	DOWN	0
D23		Ground	UP	0
	6		DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".
- 7. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH LH)
- 1. Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch D24 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/ unlock switch connector	Terminal	(–)	position (front LH)	(Approx.)
D24 -	17	47	UP	Battery voltage
		Ground	DOWN	0
	40	Ground	UP	0
	19		DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".
- 8. Check main power window and door lock/unlock switch output signal (front power window switch RH)
- 1. Connect main power window and door lock/unlock switch.
- Turn ignition switch ON.
- Check voltage between main power window and door lock/unlock switch D23 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(–)	position (front RH)	(Approx.)
	16	10	UP	Battery voltage
D23		Cround	DOWN	0
D23	2	Ground 2	UP	0
			DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:00000000008843982

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Check main power window and door lock/unlock switch D12.

Teri	minal	Main power window and doo	r lock/unlock switch condition	Continuity
10	9	Rear LH		
10	7	Rear RH	UP	
10	16	Front RH		
8	9	Rear LH		
6	7	Rear RH	NEUTRAL	Yes
2	16	Front RH		ies
10	8	Rear LH		
10	6	Rear RH	DOWN	
10	2	Front RH		
1	12		-	

2. Check continuity between main power window and door lock/unlock switch D12 (power window lock switch) (Lock operation).

Terminal		Main power window and door lock/unlock switch condition		Continuity
9		Rear LH		
7		Rear RH	UP	
16		Front RH		
8		Rear LH		
9		Neal LFI		
7	1	Rear RH	NEUTRAL	No
6	1	Neal KII	NEUTRAL	NO
2		Frank DII		
16		Front RH		
8		Rear LH		
6		Rear RH	DOWN	
2		Front RH		

^{3.} Check continuity between main power window and door lock/unlock switch D12 (power window lock switch) (Unlock operation).

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Terminal	Main power window and doo	Main power window and door lock/unlock switch condition	
9	Rear LH		
7	Rear RH	UP	
16	Front RH		
8	Rear LH		
9	Real Ln		
7	Door DII	NEUTDAL	Voc
6	Rear RH	NEUTRAL	Yes
2	Front RH		
16	FIORICKH		
8	Rear LH		
6	Rear RH	DOWN	
2	Front RH		

<u>Is the inspection result normal?</u>

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

BCM supplies power.

Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

Power Window And Door Lock/unlock Switch RH

${f 1}$. CHECK POWER WINDOW MOTOR FUNCTION

Check front power window motor operation with power window and door lock/unlock switch RH. Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

>> Refer to PWC-33, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure". NO

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Power Window And Door Lock/Unlock Switch RH Power Supply Circuit Check

${f 1.}$ CHECK POWER SUPPLY CIRCUIT (POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH)

Turn ignition switch ON.

Check voltage between power window and door lock/unlock switch RH connector D125 and ground.

	Terminal		
(+)			Voltage
Power window and door lock/unlock switch RH connector	Terminal	(–)	(Approx.)
D125	8	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- Check continuity between BCM connector M81 and power window and door lock/unlock switch RH connector D125.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M81	140	D125	8	Yes

4. Check continuity between BCM connector M81 and ground.

BCM connector	Terminal	Ground	Continuity
M81	140	Ground	No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

3. CHECK HARNESS CONTINUITY (POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH)

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and power window and door lock/unlock switch RH.
- 3. Check continuity between main power window and door lock/unlock switch connector D23 and power window and door lock/unlock switch RH connector D125.

Main power window and door lock/unlock switch connector	Ierminal	Power window and door lock/ unlock switch RH connector	Terminal	Continuity
D23	2	D125	11	Yes
D23	16	D120	12	165

4. Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
D23	2	Ground	No
	16		NO

Is the inspection result normal?

YES >> GO TO 5

NO >> Repair or replace the harness or connectors.

4. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- 2. Turn ignition switch ON.
- Check voltage between BCM connector M81 and ground.

Terr	ninals		V/ I/
(+)		(_)	Voltage (Approx.)
BCM connector	Terminal	(-)	(11 - 7
M81	140	Ground	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

5. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

< DTC/CIRCUIT DI	AGNOSIS >	[LH FROM	NI ONLY AUTO DOWN]	
Refer to PWC-35, "F	RONT POWER \	WINDOW SWITCH: Component Inspection".		
Is the inspection res	ult normal?			/
		nt. Refer to GI-49, "Intermittent Incident".		
	power window a	nd door lock/unlock switch RH. Refer to <u>PWC-</u>	63, "Removal and Installa-	
<u>tion"</u> .				[
FRONT POWE	R WINDOW S	WITCH : Component Inspection	INFOID:000000008843987	
COMPONENT INS	PDECTION			(
4				
I. CHECK POWER	R WINDOW AND	DOOR LOCK/UNLOCK SWITCH RH		
Check power window	w and door lock/u	nlock switch RH D125.		
Term	ninal	Power window switch condition	Continuity	
8	6	1 ower window switch conducti	Continuity	E
12	7	UP		
	7			
12		NEUTRAL	Yes	F
6	11			
8	7	DOWN		
6	11			(
Is the inspection res				
		ock/unlock switch RH is OK. nd door lock/unlock switch RH. Refer to <u>PWC-</u>	63 "Pomoval and Installa	ŀ
tion".	power wiridow ar	id door lock/difflock Switch KH. Refer to <u>PWC-</u>	03. Removal and installa-	
REAR POWER	WINDOW S	WITCH		
	\^(\ \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	UTCLL : Decembring		
REAR POWER	WINDOW SV	VITCH : Description	INFOID:000000008843988	
BCM supplies pow	er.			
	w motor will be o	operated if rear power window switch is oper	ated. Rear power window	,
switch.				
REAR POWER	WINDOW SV	VITCH: Component Function Check	\ INFOID:000000008843989	P۱
Dan Dan 14/2 - 1	0			
Rear Power Windo				
I. CHECK REAR F	POWER WINDOW	MOTOR FUNCTION		
Check rear power w	indow motor oper	ation with rear power window switch.		
Is the inspection res	ult normal?			-
		h power supply and ground circuit are OK.		
NO >> Refer to	PWC-35, "REAR	POWER WINDOW SWITCH : Diagnosis Pro	<u>cedure"</u> .	
REAR POWER	WINDOW SV	VITCH : Diagnosis Procedure	INFOID:000000008843990	
5 " " " 5		51400 (5 8141)		
Regarding Wiring Di	agram intormation	n, refer to <u>PWC-17. "Wiring Diagram - With Le</u>	It Front Only Auto Down".	(
Poor Power Winds	w Switch Bowe	r Supply Circuit Chock		
A		r Supply Circuit Check		
	STIDDLY CIRCL	H I		

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

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

	Terminal				
	(+)			Condition	Voltage (Approx.)
	ower window connector	Terminal	(–)		
LH	D208	4	Ground	Ignition switch ON	Rattory voltago
RH	D308	4	Giodila	ignition switch ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 2 (Rear power window switch LH).

YES >> GO TO 3 (Rear power window switch RH).

NO >> GO TO 4.

2. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch LH.
- Check continuity between main power window and door lock/unlock switch connector and rear power window switch LH connector.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
D23	8	D208	7	Yes
D23	9	D208	8	162

4. Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/unlock switch connector	Terminal	01	Continuity	
D23	8	Ground	No	
D23	9		INO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- Check continuity between main power window and door lock/unlock switch connector and rear power window switch RH connector.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D23	6	D308	7	- Yes
	7	D300	8	

4. Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/un- lock switch connector	Terminal	Ground	Continuity
D23	6		No
	7		

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

4. CHECK HARNESS CONTINUITY

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Disconnect BCM, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.

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

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M81	140	LH	D208	4	Yes
IVI8'I	140	RH	D308	7	163

Check continuity between BCM connector and ground.

BCM connector	DOM COMPECTOR TEMPINAL		Continuity
M81	140	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> Repair or replace harness or connectors.

${f 5}$. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-37, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to PWC-64, "Removal and Installation".

REAR POWER WINDOW SWITCH: Component Inspection

INFOID:000000000884399

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Teri	minal	Power window switch condition	Continuity	
4	6	UP		
7	5	UF .		
5	8	NEUTRAL	Yes	
6	7	NEOTRAL		
4	6	DOWN		
5	8	DOWN		

Rear power window switch LH

Ter	minal	Power window switch condition	Continuity	
4	5	UP		
7	6	- UF		
6	8	NEUTRAL	Yes	
5	7	NEOTICAL	165	
4	6	DOWN		
5	8	DOWN		

Rear power window switch RH

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-64, "Removal and Installation".

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000008843992

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

DRIVER SIDE : Component Function Check

INFOID:0000000008843993

1. CHECK FRONT POWER WINDOW MOTOR LH CIRCUIT

Check front power window motor LH operation with the main power window and door lock/unlock switch. <u>Is the inspection result normal?</u>

YES >> Front power window motor LH is OK.

NO >> Refer to PWC-38, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000008843994

Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect front power window motor LH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor LH connector D9 and ground.

Terminal					
(+)			Main power window and door lock/unlock switch con-	Voltage	
Front power window motor LH connector	Terminal	(-)	dition	(Approx.)	
	1 Ground	Ground	UP	Battery voltage	
D9			DOWN	0	
Da		Giodila	UP	0	
	2		DOWN	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- 3. Check continuity between main power window and door lock/unlock switch connector D24 and front power window motor LH connector D9.

Main power window and door lock/un- lock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D24	19	D9	2	Yes
D24	17	. D9	1	163

^{4.} Check continuity between main power window and door lock/unlock switch connector D24 and ground.

< DTC/CIRCUIT DIAGNOSIS >		[LH FRON	T ONLY AUTO DOWN]
Main power window and door lock/un- lock switch connector	Terminal	Crownd	Continuity
D24	19	Ground	No
	17		
Is the inspection result normal?			
YES >> Replace main power wir lation".	ndow and door lock/unlo	ck switch. Refer to <u>PWC</u>	-62, "Removal and Instal-
NO >> Repair or replace harnes	SS.		
3. CHECK FRONT POWER WINDO	OW MOTOR LH		
Check front power window motor LH			-
Refer to PWC-39, "DRIVER SIDE : 0			
Is the inspection result normal?			
YES >> Check intermittent incide NO >> Replace front power win			Installation"
•		1 WO 02, Nemovar and	THIStallation .
DRIVER SIDE : Component	inspection		INFOID:0000000008843995
COMPONENT INSPECTION			
1. CHECK FRONT POWER WINDO	OW MOTOR I H		
Check motor operation by connectin		ectly to nower window m	notor D0
	g the battery voltage an	celly to power willdow if	
Terminal		Motor	condition
(+)	(–)		
1	2		UP
2	1	D	OWN
Is the inspection result normal? YES >> Front power window mo NO >> Replace front power win PASSENGER SIDE	dow motor LH. Refer to	GW-14, "Removal and I	nstallation".
PASSENGER SIDE : Descri	ption		INFOID:000000008843997
Door glass moves UP/DOWN by rec power window and door lock/unlock		nain power window and o	door lock/unlock switch or
PASSENGER SIDE: Compo	onent Function Che	eck	INFOID:000000008843998
1. CHECK FRONT POWER WINDS			
Check front power window motor RH			ck/unlock switch or power
window and door lock/unlock switch.			
Is the inspection result normal?			
YES >> Front power window mo NO >> Refer to PWC-39, "PASS		osis Procedure".	
PASSENGER SIDE : Diagno	sis Procedure		INFOID:000000008843999
_			

Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Front Power Window Motor RH Circuit Check

 $1. \ \mathsf{CHECK} \ \mathsf{POWER} \ \mathsf{WINDOW} \ \mathsf{AND} \ \mathsf{DOOR} \ \mathsf{LOCK/UNLOCK} \ \mathsf{SWITCH} \ \mathsf{RH} \ \mathsf{OUTPUT} \ \mathsf{SIGNAL}$

Turn ignition switch OFF.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

INFOID:00000000008844000

- Disconnect front power window motor RH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor RH connector D104 and ground.

Т	erminal			
(+)			Front power window motor	Voltage (V)
Front power window motor RH connector	Terminal	(–)	RH condition	(Approx.)
	1		UP	Battery voltage
D104	1	Ground	DOWN	0
D104		Giouna	UP	0
	2		DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D125 and front power window motor RH connector D104.

Power window and door lock/un- lock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity	
D125	6	D104	2	Yes	
5120	7	D104	1	103	

4. Check continuity between power window and door lock/unlock switch connector D125 and ground.

Power window and door lock/unlock switch RH connector	Terminal		Continuity
D125	6	Ground	No
D123	7		NO

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-63, "Removal and Installation"

NO >> Repair or replace the harness or connectors.

3. CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to PWC-40, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace front power window motor RH. Refer to GW-14, "Removal and Installation".

PASSENGER SIDE : Component Inspection

COMPONENT INSPECTION

COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Check motor operation by connecting the battery voltage directly to front power window motor RH D104.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Te	erminal	Motor condition
(+)	(-)	- Wotor condition
1	2	UP
2	1	DOWN

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace front power window motor RH. Refer to <u>GW-14, "Removal and Installation"</u>.

REAR LH

REAR LH: Description

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

REAR LH: Component Function Check

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Check rear power window motor LH operation with main power window and door lock/unlock switch or rear power window switch LH.

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-41, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Rear Power Window Motor LH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH LH OUTPUT SIGNAL

- Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH.
- 3. Turn ignition switch ON.
- Check voltage between rear power window motor LH connector D204 and ground.

	Terminal			
(+)			Window	Voltage
Rear power window motor LH connector	Terminal	(–)	condition	(Approx.)
	4		UP	Battery voltage
D204	ı	Ground	DOWN	0
D204	2	Giouna	UP	0
	2		DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- Check continuity between rear power window switch LH connector D208 and rear power window motor LH connector D204.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D208	6	D204	1	Yes
2200	5	5204	2	163

Check continuity between rear power window switch LH connector D208 and ground.

Rear power window switch LH connector	Terminal		Continuity
D208	6	Ground	No
	5		No

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-42, "REAR LH: Component Inspection".

NO >> Repair or replace the harness or connectors.

$3.\,$ CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-42, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-18, "Removal and Installation".

REAR LH: Component Inspection

INFOID:0000000008844004

INFOID:0000000008844005

INFOID:0000000008844006

INFOID:0000000008844007

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COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR LH

Check motor operation by connecting the battery voltage directly to rear power window motor LH D204.

Terr	minal	Motor condition
(+)	(–)	Wotor condition
2	1	UP
1	2	DOWN

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Replace rear power window motor LH. Refer to <u>GW-18</u>, "Removal and Installation".

REAR RH

REAR RH: Description

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock 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 operating power window main switch or rear power window switch RH.

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Refer to PWC-42, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Rear Power Window Motor RH Circuit Check

${f 1}$. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor RH.
- 3. Turn ignition switch ON.
- Check voltage between rear power window motor RH connector D304 and ground.

Terminal					
(+)			Rear power window	Voltage	
Rear power window motor RH connector	Terminal	(–)	switch RH condition	(Approx.)	
			UP	Battery voltage	
D204	2	Crownd	DOWN	0	
D304	4	D304	Ground	UP	0
1		DOWN	Battery voltage		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 2. Disconnect rear power window switch RH.
- Check continuity between rear power window switch RH connector D308 and rear power window motor RH connector D304.

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity
D308	5	D304	2	Yes
2000	6	2504	1	103

Check continuity between rear power window switch RH connector D308 and ground.

Rear power window switch RH connector	Terminal		Continuity
D308	5	Ground	No
	6		NO

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-43, "REAR RH: Component Inspection".

NO >> Repair or replace harness or connectors.

3. CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-43, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to GW-18, "Removal and Installation".

REAR RH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW MOTOR RH

Check motor operation by connecting the battery voltage directly to rear power window motor RH D304.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Terr	ninal	Motor condition
(+)	(–)	iviolal condition
1	2	DOWN
2	1	UP

Is the inspection result normal?

YES >> Power window motor is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-18</u>, "<u>Removal and Installation</u>".

[LH FRONT ONLY AUTO DOWN]

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DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000008844009

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Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE : Component Function Check

INFOID:0000000008844010

INFOID:0000000008844011

1. CHECK ENCODER OPERATION

Check front door glass LH perform AUTO DOWN operation normally with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to PWC-45. "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

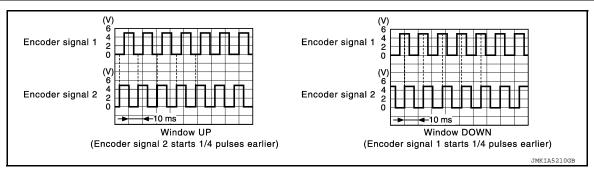
Regarding Wiring Diagram information, refer to PWC-17, "Wiring Diagram - With Left Front Only Auto Down".

Encoder Circuit Check

1. CHECK ENCODER OPERATION

- Connect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check signal between main power window and door lock/unlock switch connector D23 and ground with oscilloscope.

Signal name	(+)	(+)		Signal
3	Main power window and door lock/un- lock switch connector	Terminal	(–)	(Reference value)
Encoder signal 1	D23	5	Ground	Refer to following signal
Encoder signal 2	. 523	4	Giodila	Telef to following signal



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 2.

$2.\,$ CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

- Turn ignition switch ON.
- Check voltage between front power window motor LH connector D9 and ground.

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Termir	V 16		
(+)	(-)	Voltage (Approx.)	
Front power window motor LH connector	Terminal	()	,
D9	4	Ground	10

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK HARNESS CONTINUITY 1

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- 3. Check continuity between main power window and door lock/unlock switch connector D23 and front power window motor connector D9.

Main power window and door lock/ unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D23	14	D9	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D23	14	Glound	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".

NO >> Repair or replace harness or connectors.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect front power window motor LH.
- 3. Check continuity between front power window motor LH connector D9 and ground.

Front power window motor LH connector	Terminal Ground		Continuity
D9	6	Ground	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY 2

- Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/unlock switch connector D12 and front power window motor LH connector D9.

Main power window and door lock/un- lock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D23	12	D9	6	Yes

Is the inspection result normal?

YES >> Check main power window and door lock/unlock switch. Refer to PWC-32, "POWER WINDOW MAIN SWITCH: Component Inspection".

NO >> Repair or replace the harness or connectors.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window D23 and door lock/unlock switch connector and front power window motor LH connector D9.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

Main power window and door lock/unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D23	5	D9	3	Yes
523	4	59	5	163

3. Check continuity between main power window and door lock/unlock switch connector D23 and ground.

Main power window and door lock/unlock switch connector	Terminal	01	Continuity
D23	5	Ground	No
D23	4		INO

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-14</u>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

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DOOR SWITCH

Component Function Check

INFOID:0000000008847041

1. CHECK FUNCTION

- 1. Select DOOR LOCK of BCM using CONSULT.
- Select DOOR SW-DR, DOOR SW-AS, DOOR SW-RL, DOOR SW-RR, in DATA MONITOR mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Cor	ndition	Status
DOOR SW-DR	Driver side door	Open	On
DOOK SW-DK	Driver side door	Closed	Off
DOOR SW-AS	Passenger side door	Open	On
DOOR SW-AS		Closed	Off
DOOR SW-RL	Rear door LH	Open	On
DOOR SW-RL		Closed	Off
DOOR SW-RR	Rear door RH	Open	On
DOOR 5W-RR	Real door RH	Closed	Off

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to PWC-48, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008847042

Regarding Wiring Diagram information, refer to <u>DLK-72, "Wiring Diagram"</u>.

1. CHECK DOOR SWITCH INPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect malfunctioning door switch connector.
- 3. Check signal between malfunctioning door switch harness connector and ground using oscilloscope.

	(+) Door switch		()	Signal
	DOOL SMITCH	T	(–)	(Reference value)
Conne	ector	Terminal		
Driver side	B8			
Passenger side	B108			(V) 15
Rear LH	B18			10 5
Rear RH	B116	3	Ground	7.0 - 8.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR SWITCH CIRCUIT

- Disconnect BCM connector.
- Check continuity between door switch harness connector and BCM harness connector.

[LH FRONT ONLY AUTO DOWN]

Door switch		BCM		Continuity	
Conr	nector	Terminal	Connector	Terminal	Continuity
Driver side	B8			96	
Passenger side	B108	2	M20	94	Van
Rear LH	B18	3	M20	82	Yes
Rear RH	B116			93	

3. Check continuity between door switch harness connector and ground.

Door switch			Continuity	
Conr	Connector 1			Continuity
Driver side	B8		Ground	
Passenger side	B108	2	Giodila	No
Rear LH	B18	3		INO
Rear RH	B116			

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> Repair or replace harness.

3.CHECK DOOR SWITCH

Refer to PWC-49, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-310, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK DOOR SWITCH

- Turn ignition switch OFF.
 Disconnect malfunctioning door switch connector.
- 3. Check continuity between door switch terminals.

Door switch		Condition		Continuity
	Terminal		Condition	
3	Ground contact is part of the	Door switch	Pressed	No
3	switch.	Door Switch	Released	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunction door switch. Refer to <u>DLK-310, "Removal and Installation"</u>.

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INFOID:0000000008847043 PWC

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POWER WINDOW LOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW LOCK SWITCH

Description INFOID:0000000008844017

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

INFOID:0000000008844018

1. CHECK POWER WINDOW LOCK SIGNAL

Exchange for a normal main power window and door lock/unlock switch, and check operation. <u>Is the inspection result normal?</u>

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-62, "Removal and Installation".
- NO >> Check condition of harness and connector.

POWER WINDOWS DO NOT OPERATE WITH POWER WINDOW MAIN SWITCH

[LH FRONT ONLY AUTO DOWN] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS POWER WINDOWS DO NOT OPERATE WITH POWER WINDOW MAIN

SWITCH	
Diagnosis Procedure	486
1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT	
Check BCM power supply and ground circuit. BCS-78, "Removal and Installation".	_
Is the inspection result normal?	
YES >> GO TO 2.	
NO >> Repair or replace the malfunctioning parts.	
2. CHECK POWER WINDOW MAIN SWITCH POWER SUPPLY AND GROUND CIRCUIT	
Check power window switch power supply and ground circuit. Refer to PWC-29, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".	_
Is the inspection result normal?	
YES >> GO TO 3.	
NO >> Repair or replace the malfunctioning parts.	
3. CONFIRM THE OPERATION	
Confirm the operation again.	_
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> . NO >> GO TO 1.	

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008511487

1. CHECK DRIVER SIDE POWER WINDOW MOTOR

Check driver side power window motor.

Refer to PWC-38, "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 inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1.

FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE [LH FRONT ONLY AUTO DOWN] < SYMPTOM DIAGNOSIS > FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE Α WHEN POWER WINDOW MAIN SWITCH IS OPERATED WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure ${f 1}$.CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH Check power window and door lock/unlock switch RH circuit. Refer to PWC-33, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION Confirm the operation again. Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident". F NO >> GO TO 1. WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED WHEN FRONT POWER WINDOW SWITCH (PASSENGER SIDE) IS OPERATED: Diagnosis Procedure INFOID:0000000008511489 Н ${f 1}$.replace power window and door lock/unlock switch RH Replace power window and door lock/unlock switch RH. Refer to PWC-62, "Removal and Installation". >> Inspection End. WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED **PWC** WHEN BOTH POWER WINDOW MAIN SWITCH AND FRONT POWER WINDOW SWITCH ARE OPERATED: Diagnosis Procedure INFOID:0000000008511490 1. CHECK FRONT POWER WINDOW SWITCH (PASSENGER SIDE) POWER SUPPLY AND GROUND CIR-**CUIT** Check power window and door lock/unlock switch RH power supply and ground circuit. M Refer to PWC-33, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure". Is the inspection result normal? YES >> GO TO 2. N NO >> Repair or replace the malfunctioning parts. 2.check front power window motor RH circuit Check front power window motor RH circuit. Refer to PWC-33, "FRONT POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? Р YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. 3.CONFIRM THE OPERATION Confirm the operation again. Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

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>> GO TO 1.

NO

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

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

WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure

INFOID:0000000008511491

1. CHECK REAR POWER WINDOW SWITCH LH CIRCUIT

Check rear power window switch LH circuit.

Refer to PWC-35, "REAR POWER WINDOW SWITCH: 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 inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1.

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED

WHEN REAR POWER WINDOW SWITCH LH IS OPERATED: Diagnosis Procedure

INFOID:0000000008511492

1. REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.

Refer to PWC-62, "Removal and Installation".

>> Inspection End.

WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH ARE OPERATED

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

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

Check rear power window switch power supply and ground circuit.

Refer to PWC-35, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-41, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1.

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH FRONT ONLY AUTO DOWN] < SYMPTOM DIAGNOSIS > REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α WHEN POWER WINDOW MAIN SWITCH IS OPERATED WHEN POWER WINDOW MAIN SWITCH IS OPERATED: Diagnosis Procedure 1. CHECK REAR POWER WINDOW SWITCH RH CIRCUIT Check rear power window switch RH circuit. Refer to PWC-35, "REAR POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal? D >> GO TO 2. >> Repair or replace the malfunctioning parts. 2.CONFIRM THE OPERATION Confirm the operation again. Is the inspection result normal? >> Check intermittent incident. Refer to GI-49, "Intermittent Incident". F >> GO TO 1. WHEN REAR POWER WINDOW SWITCH RH IS OPERATED WHEN REAR POWER WINDOW SWITCH RH IS OPERATED: Diagnosis Procedure INFOID:0000000008511495 ${f 1}$.REPLACE REAR POWER WINDOW SWITCH RH Н Replace rear power window switch RH. Refer to PWC-62, "Removal and Installation".

>> Inspection End. WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW

WHEN BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW

SWITCH RH ARE OPERATED: Diagnosis Procedure INFOID:0000000008511496

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

Check rear power window switch power supply and ground circuit.

Refer to PWC-35, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

YES

YES

NO

NO

NO >> Repair or replace the malfunctioning parts.

2.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

SWITCH RH ARE OPERATED

Refer to PWC-42, "REAR RH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

>> Repair or replace the malfunctioning parts. NO

3.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1. **PWC**

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AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NORMAL-LY

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATE NOR-MALLY

DRIVER SIDE

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000008511497

1. CHECK ENCODER (DRIVER SIDE) CIRCUIT

Check encoder (driver side) circuit.

Refer to PWC-45, "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 inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1.

POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NOR-MALLY

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW RETAINED POWER FUNCTION DOES NOT OPERATE NORMALLY

Diagnosis Procedure

INFOID:0000000008511502

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1. CHECK DOOR SWITCH

Check door switch.

Refer to DLK-168, "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 inspection result normal?

YES >> Check intermittent incident. Refer to GI-49. "Intermittent Incident".

NO >> GO TO 1.

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DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

Diagnosis Procedure

INFOID:0000000008511503

$1. {\sf CHECK} \ {\sf FRONT} \ {\sf DOOR} \ {\sf LOCK} \ {\sf ASSEMBLY} \ {\sf LH} \ ({\sf DOOR} \ {\sf KEY} \ {\sf CYLINDER} \ {\sf SWITCH})$

Check front door lock assembly LH (door key cylinder switch).

Refer to DLK-189, "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 inspection result normal?

YES >> Check intermittent incident. Refer to GI-49. "Intermittent Incident".

NO >> Inspection End.

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE	<u> </u>
Diagnosis Procedure	INFOID:0000000008511504
1. CHECK REMOTE KEYLESS ENTRY FUNCTION	
Check remote keyless entry function.	
Is the inspection result normal?	
YES >> GO TO 2. NO >> Refer to <u>DLK-236, "Diagnosis Procedure"</u> .	
2.CHECK POWER WINDOW OPERATION	
Check power window operation.	
In the inspection result normal?	
YES >> GO TO 3. NO >> Refer to PWC-29, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".	
3.CONFIRM THE OPERATION	
Confirm the operation again.	
Is the inspection result normal?	
YES >> Check intermittent incident. Refer to <u>GI-49, "Intermittent Incident"</u> . NO >> GO TO 1.	
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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000008511505

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch. Refer to PWC-62, "Removal and Installation".

>> Inspection End.

POWER WINDOW SWITCH DOES NOT ILLUMINATE

POWER WINDOW SWITCH DOES NOT ILLUMINATE < SYMPTOM DIAGNOSIS > [LH FRONT ONLY AUTO D	OWNII
SYMPTOM DIAGNOSIS > [LH FRONT ONLY AUTO DIAGNOSIS > [LH FRO	OVVINI
DRIVER SIDE	А
DRIVER SIDE : Diagnosis Procedure	0000008511506
1.REPLACE POWER WINDOW MAIN SWITCH	В
Replace power window main switch.	
Refer to PWC-62, "Removal and Installation".	С
>> Inspection End.	D
PASSENGER SIDE	
PASSENGER SIDE : Diagnosis Procedure	0000008511507
1.REPLACE POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH	
Replace power window and door lock/unlock switch RH. Refer to PWC-62, "Removal and Installation".	F
>> Increation End	
>> Inspection End. REAR LH	G
REAR LH : Diagnosis Procedure	0000008511508
1. REPLACE REAR POWER WINDOW SWITCH LH	
Replace rear power window switch LH. Refer to PWC-62, "Removal and Installation".	
>> Inspection End. REAR RH	J
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1.REPLACE REAR POWER WINDOW SWITCH RH	
Replace rear power window switch RH. Refer to PWC-62, "Removal and Installation".	L
>> Inspection End.	M
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MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

< REMOVAL AND INSTALLATION >

[LH FRONT ONLY AUTO DOWN]

REMOVAL AND INSTALLATION

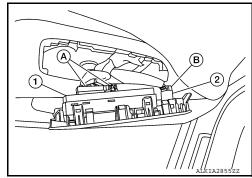
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Removal and Installation

INFOID:0000000008511510

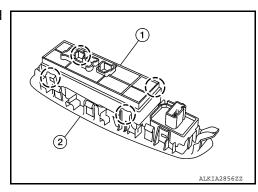
REMOVAL

- Remove the main power window and door lock/unlock switch from the front door finisher using a suitable
- Disconnect the harness connectors (A) from the main power window and door lock/unlock switch (1) and harness connector (B) from the mirror control switch (2).



3. Release the pawls, then separate the main power window and door lock/unlock switch (1) from the switch finisher (2).





INSTALLATION

Installation is in the reverse order of removal.

NOTE:

When the main power window and door lock/unlock switch is removed or replaced, it is necessary to perform the initialization procedure. Refer to PWC-26, "Work Flow".

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

< REMOVAL AND INSTALLATION >

[LH FRONT ONLY AUTO DOWN]

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Removal and Installation

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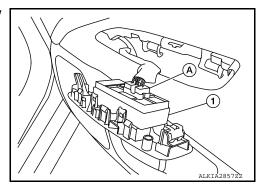
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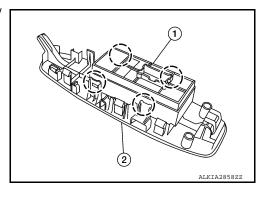
REMOVAL

- 1. Remove the power window and door lock/unlock switch RH from the front door finisher using a suitable tool.
- 2. Disconnect the harness connector (A) from the power window and door lock/unlock switch RH (1).



 Release four pawls, then separate power window and door lock/ unlock switch RH (1) from switch finisher (2).

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INSTALLATION

Installation is in the reverse order of removal.

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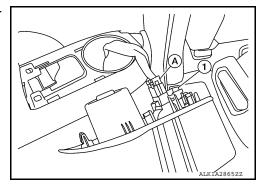
REAR POWER WINDOW SWITCH

Removal and Installation

INFOID:0000000008511512

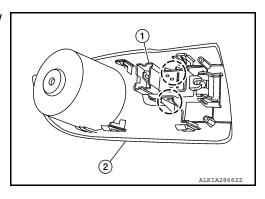
REMOVAL

- 1. Remove the rear door cup holder mat.
- 2. Remove the rear power window switch from the rear door finisher using a suitable tool.
- 3. Disconnect the harness connector (A) from the rear power window switch (1).



4. Release the two pawls, then separate the rear power window switch (1) from the switch finisher (2).





INSTALLATION

Installation is in the reverse order of removal.

PRECAUTIONS

< PRECAUTION >

[LH & RH FRONT AUTO UP/DOWN]

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 SR and SB section 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 SR section.
- 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.

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least 3 minutes before performing any service.

Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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PREPARATION

< PREPARATION >

[LH & RH FRONT AUTO UP/DOWN]

PREPARATION

PREPARATION

Special Service Tool

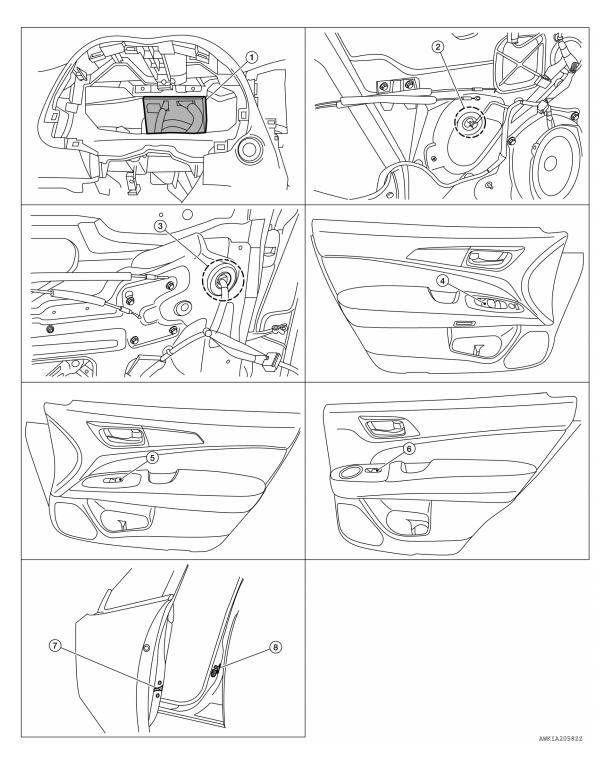
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Tool number (Kent-Moore No.) Tool name		Description
— (J-46534) Trim tool set	AWJIA04832Z	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



- BCM (view with the combination meter removed)
- Front power window motor LH (RH similar) (view with front door finisher removed)
- Rear power window motor LH (RH similar) (view with rear door finisher removed)

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COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LH & RH FRONT AUTO UP/DOWN]

- 4. Main power window and door lock/ unlock switch
- 7. Front door lock assembly LH (key cylinder switch)
- 5. Power window and door lock/unlock 6. switch RH
- Rear power window switch LH (RH similar)
- 8. Front door switch LH (RH similar)

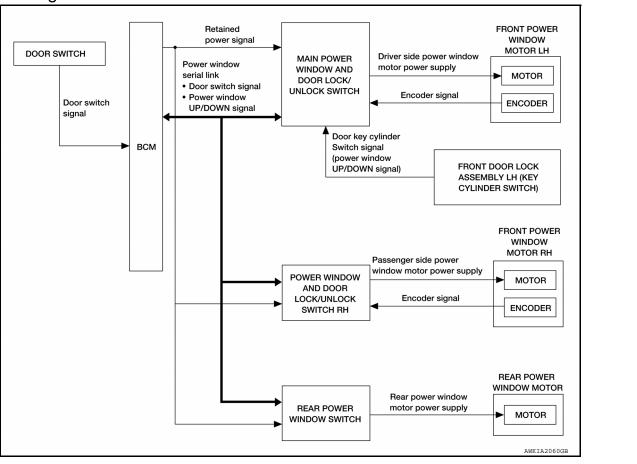
Component Description

INFOID:0000000008843868

Component	Function				
BCM	Supplies power to the window switches.Controls retained power.				
Main power window and door lock/unlock switch	Directly controls all power window motors.				
Power window and door lock/unlock switch RH	Controls power window motor of passenger door.				
Rear power window switch	 Controls anti-pinch operation of power window. Controls right and left power window motors for the rear doors. 				
Power window motor	 Integrates the CPU and WINDOW MOTOR. Starts operating with signals from each power window switch. Transmits power window motor rotation as a pulse signal to power window switch. Controls anti-pinch operation for all windows. 				
Front door lock assembly (door key cylinder switch)	Transmits operation condition of door key cylinder switch to power window main switch.				
Front door switch LH/RH	Detects door open/close condition and transmits it to the BCM.				

SYSTEM

System Diagram



System Description

INFOID:0000000008843870

POWER WINDOW OPERATION

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

- Power window main switch can open/close door glass.
- Front and rear power window switch can open/close the corresponding door glass.
- Power window lock switch can lock all power windows other than driver seat.
- All power windows open when pressing Intelligent Key unlock button for 3 seconds.
- If door glass receives resistance that is more than the specified value and the power window is in the AUTO-UP operation, power window will move in the reverse direction (Anti-Pinch Function).

POWER WINDOW AUTO-OPERATION

- AUTO-UP/DOWN operation can be performed when each power window motor turns to AUTO.
- Power window switch reads the changes of the CPU signal and stops AUTO operation when door glass is at fully opened/closed position.
- Power window motor is operable in case of CPU malfunctioning.
- AUTO function does not operate if the CPU is malfunctioning.

POWER WINDOW SERIAL LINK

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

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

- Keyless power window down signal.
- · Door switch signal.

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INFOID:0000000008843869

Revision: October 2012 **PWC-69** 2013 Pathfinder NAM

[LH & RH FRONT AUTO UP/DOWN]

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

- Front passenger side door window operation signal.
- Retained power operation signal.

RETAINED POWER OPERATION

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

Retained Power Function Cancel Conditions

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

POWER WINDOW LOCK FUNCTION

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

ANTI-PINCH OPERATION

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

Operation Condition

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

NOTE:

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

DOOR KEY CYLINDER SWITCH OPERATION

Hold the door key cylinder to the LOCK or UNLOCK direction for 1 second or more to OPEN or CLOSE all power windows when ignition switch is OFF. In addition, it stops when key position is moved to N (NEUTRAL) when operating.

Operation Condition

- Ignition switch OFF.
- Hold door key cylinder to LOCK position for 1 second or more to perform CLOSE operation of the door glass.
- Hold door key cylinder to UNLOCK position for 1 second or more to perform OPEN operation of the door glass.

KEYLESS POWER WINDOW DOWN FUNCTION

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

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

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

Fail-safe INFOID-000000008843871

FAIL-SAFE CONTROL

Window system switches to fail-safe control when a malfunction is detected in the CPU during UP and DOWN operation. Switches to fail-safe control when an error beyond the regulation value is detected between the fully closed position and the actual position of the glass.

SYSTEM

[LH & RH FRONT AUTO UP/DOWN]

Malfunction	Malfunction 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 that 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 that the specified value (approximately 10 strokes).

It changes to condition before initialization and the following functions do not operate when switched to fail-safe control:

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

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

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DIAGNOSIS SYSTEM (BCM)

[LH & RH FRONT AUTO UP/DOWN]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000008849986

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description				
Ecu Identification	The BCM part number is displayed.				
Self Diagnostic Result	The BCM self diagnostic results are displayed.				
Data Monitor	The BCM input/output data is displayed in real time.				
Active Test	The BCM activates outputs to test components.				
Work support	The settings for BCM functions can be changed.				
Configuration	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM. 				
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.				

SYSTEM APPLICATION

BCM can perform the following functions.

	Sub System	Direct Diagnostic Mode						
System		Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

RETAINED PWR

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LH & RH FRONT AUTO UP/DOWN]

RETAINED PWR: CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000008849987

DATA MONITOR

Monitor Item [Unit]	Description
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT AUTO UP/DOWN]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000008843874

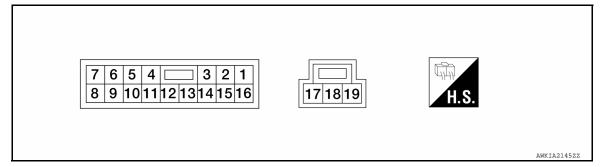
ECU	Reference
	BCS-28, "Reference Value"
BCM	BCS-48, "Fail Safe"
DCIVI	BCS-48, "DTC Inspection Priority Chart"
	BCS-50, "DTC Index"

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Termina	al No.	Description		Voltage		
+	-	Signal name	Input/ Output	Condition	(Approx.)	
1 (B)	Ground	Ground			0	
4 (SB)	12	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
5 (Y)	12	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
6 (L)	Ground	Rear power window motor RH DOWN signal	Output	When rear RH switch in power window main switch is operated DOWN.	Battery voltage	
7 (V)	Ground	Rear power window motor RH UP signal	Output	When rear RH switch in power window main switch is operated UP.	Battery voltage	
8 (LG)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage	
9 (SB)	Ground	Rear power window motor LH UP signal	Output	When rear LH switch in power window main switch is operated UP.	Battery voltage	

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POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT AUTO UP/DOWN]

Termina	al No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
				IGN SW ON	Battery voltage
10 (BR)	Ground	RAP signal	Input	Within 45 second after ignition switch is turned to OFF.	Battery voltage
			When front LH or RH door is opened during retained power operation.	0	
11 (P)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms
12 (BR)	Ground	Encoder ground	_	_	0
14 (LG)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
17 (Y)	19	Front door power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage
18 (Y)		Battery power supply	Input	_	Battery voltage
19 (L)	17	Front door power window motor LH DOWN signal	Output	When front LH switch in power window main switch is operated DOWN.	Battery voltage

Fail Safe

FAIL-SAFE CONTROL

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

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

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

· Auto-up operation

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT AUTO UP/DOWN]

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Retained power function

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

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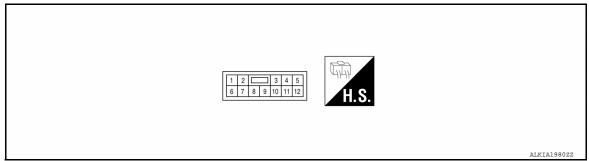
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FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	Voltage (Approx.)
3 (Y)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JPMIA0013GB
4 (LG)	Ground	Encoder ground	_	_	0
5 (BG)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
7 (B)	Ground	Ground	_	_	0
8 (BR)	Ground	Battery power supply	Input	_	Battery voltage
9 (V)	4	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms
10 (W)	4	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT AUTO UP/DOWN]

Termi	nal No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
11 (L)	12	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage
12 (BR)	11	Power window motor DOWN signal	Output	When power window motor is DOWN at operated.	Battery voltage

Fail Safe

FAIL-SAFE CONTROL

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

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

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

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

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

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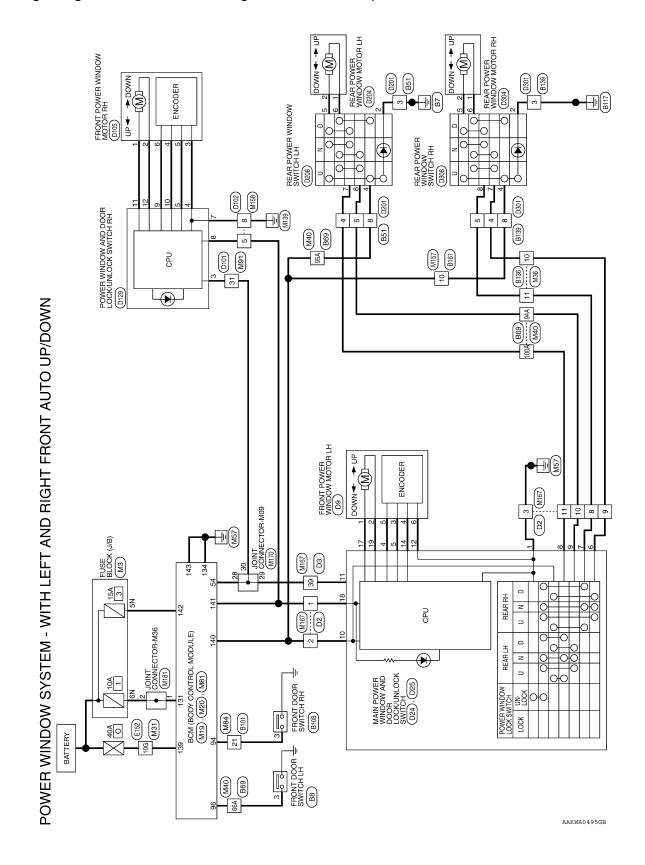
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WIRING DIAGRAM

POWER WINDOW SYSTEM

Wiring Diagram - With Left & Right Front Auto Up/Down

INFOID:0000000008843879



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5 4 3 2 1 25 24 23 22 21 В Signal Name 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 4 4 9 39 39 38 37 38 35 34 33 32 31 30 29 28 27 26 Connector Name | WIRE TO WIRE C Connector Color | WHITE M36 Color of Wire D _ > Connector No. Terminal No. Е 10 7 POWER WINDOW SYSTEM - WITH LEFT AND RIGHT FRONT AUTO UP/DOWN F Connector Name | BCM (BODY CONTROL MODULE) 84 83 82 81 96 95 94 93 AS DOOR SW DR DOOR SW Signal Name Signal Name 92 91 90 89 88 87 86 85 104 103 102 101 100 99 98 97 Н GRAY M20 Color of Wire Terminal No. Wire BG G ≥ Connector Color Connector No. Terminal No. 10G 94 96 J PWC 316326336346356366376386396406416 51 G 52 G 53 G 54 G 55 G 56 G 57 G 58 G 59 G 60 G 61 G 71G72G73G74G75G76G77G78G79G80G81G 82G83G84G85G86G87G88G89G90G 11G|12G|13G|14G|15G|16G|17G|18G|19G|20G|21 22G|23G|24G|25G|26G|27G|28G|29G|30G 42G43G44G45G46G47G48G49G50 Signal Name 16 26 36 46 ⁵⁶ 66 76 86 96 106 916 926 936 946 956 966 976 986 996 1006 62G63G64G65G66G67G68G69C Connector Name FUSE BLOCK (J/B) Connector Name | WIRE TO WIRE 7N 6N 5N 4N M Connector Color WHITE Connector Color | WHITE M31 Color of Wire МЗ ≥ Connector No. Ν Connector No. Terminal No. 5N 6N HS 0 AAKIA0885GB Ρ

		1	Olginal range	Connector Name		BCM
	66A	BG	1		(BOI	(BODY CONTROL MODULE)
	94A		-	Connector Color	or WHITE	ТЕ
	95A	BB	1			
1A 2A 3A 4A 5A	100A	re	1		137 136 135 134	137136135134133132131130129 143 142 141 140 139 138
SA 7A 8A 9A 10A 10A 110A 110				H.S.		
				Terminal No.	Color of Wire	Signal Name
				131	3	BAT BCM FUSE
42A 43A 44A 45A 46A 47A 48A 49A 50A				134	В	GND 2
	<u> </u>			139	8	BAT POWER F/L
				140	BR	P/W POWER SUPPLY IGN
718 / 728 / 334 / 34 / 54 / 54 / 148 / 34 8 1 8 32 82 83 84 85 86 87 88 88 89 90				141	>	P/W POWER SUPPLY BAT
				142	>	BAT FRONT DOOR
97A 98A 99A100A				143	В	GND 1
	Connector No.	or No. M91		Connector No.	M157	25
WIRE TO WIRE	Connecto	Connector Name WIRE	WIRE TO WIRE	Connector Name		WIRE TO WIRE
	Connector Color	or Color WHITE	E	Connector Color	or WHITE	ITE
10 9 8 7 6 5 4 3 2 1 26 55 24 23 22 21 20 19 18 17	H.S.	16 15 14 13 12 32 31 30 29 28	11 10 9 8 7 6 5 4 3 2 1 1 2 1 10 10 10 10 10 10 10 10 10 10 10 10 1	H.S.	6 5 4 15 14 13	12 11 10 3 8 8 1
Signal Name	Terminal No.	No. Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
1	31	>	1	10	BB	ı

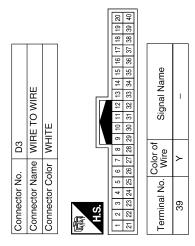
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Signal Name	CTOR-M36	Signal Name	В
	Connector No. M181 Connector Name JOINT CONNECTOR-M36 Connector Color WHITE	0	C
Color of Wire SB SB BB	Connector No. M181 Connector Name JOINT (Connector Color WHITE	<u> </u>	S >
Terminal No. 8 9 10 11 11 12	Connector No. Connector Nam Connector Colo	H.S. H.S.	- 01 E
			F
Vame	TOR-M09	3 2 1 14 13 12 25 24 23 Name	G
M167 Connector No. M167 Connector Name WIRE TO WIRE Connector Color WHITE	1 Y	3 1 2 2 2 2 3 3 1 1 1 2 2 3 1 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 1 2 3 1 1 1 2 3 1 1	н
Connector No. M167 Connector Name WIRE T Connector Color WHITE T 6 5 4 C T 6 5 4 C T 6 5 4 C T 7 6 5 4 C WHITE Terminal No. Wire	PB B B NO. M170 Name JOINT (Color WHITE	11 10 9 8 7 6 12 2 2 2 2 2 2 2 2 2 3 3 2 2 3 1 3 0 2 9 2 8 1 7 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$ \$ \$
Connector Nam Connector Colo Connector Colo H.S.	2 B 3 E Connector No. Connector Name Connector Color	H.S.	30 08
		28 22 1 22 21 1	PW
WIRE	INTELLIGENT KEY SYSTEM) SYSTEM)	8 7 6 5 4 28 27 25 24 25 24 II Name	L
M158 WIRE TO W WHITE	M168 WIRE TO WIRE	33 32 31 11 10 9 22 31 30 12 21 11 10 9 22 31 30 12 21 11 10 9 22 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 30 12 31 31 31 31 31 31 31 31 31 31 31 31 31	M
Cok W	tor No.	## H.S.	N
Connector Na Connector Co Connector Co H.S.	Connec Connec Connec	H.S. 20 19 18 17 16 40 39 38 37 38 Terminal No.	0
	ı		AAKIA0887GB

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Connector No. B51 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Color of Signal Name	3 B	4 Y	5 SB -	8 BR –							
Connector No. B8 Connector Name FRONT DOOR SWITCH LH Connector Color WHITE	H.S.	Terminal No. Wire Signal Name	3 -								1		
E152 WIRE TO WIRE WHITE	56 46 36 26 16 106 96 66 76 66	21G20G19G18G17G16G15G14G13G12G11G 3ng2agapagapagapagapagapagapagapagapagapag	71 F	41G40G39G38G37G36G35G34G33G32G31G	500 490 480 47 0 450 450 440 450 450	61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G	7.00,000,000,000,000,000,000,000,000,000	81G80G79G78G77G76G75G74G73G72G71G 90G89G88G87G86G85G84G83G82G	95G 94G 93G 92G 91G	5000		or of Signal Name	1
Connector No. E152 Connector Name WIRE TO Connector Color WHITE	赋 H.S.	216		419		616		816				Terminal No. Wire	10G

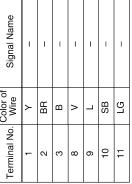
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Terminal No. Wire Signal Name Signal			A B
Connector No. 260 Connector No. 260 Connector No.	E TO WIRE 10 11 12 13 14 15 16 26 27 28 29 39 31 32 Signal Name	TO WIRE Signal Name	
Connector No. B69		B139 Signature B139 Signature B139 Signature Birania Signature	D
Cornector No. B69 Connector Marrie Wille TO WIFE Connector Name Wille TO WIFE Connector No. B108 Connector Color WHITE ignal Name To Signal	Connector Na Connector Connector Connector Connector Connector Connector Connector Connector Connector Na 1 2 2 4 5 17 18 19 20 21 21 21 21 21 21 21 21 21 21 21 21 21	Connector No Connector No Connector No Connector Connector Connector Connector No Solution So	Е
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Connector No. B69 Connector No. B69 Connector No. B69 Connector No. B136 Connector	аше	19 10 11 19 11 19 11 19 11 11 11 11 11 11 11	G
Connector No. B69 Connector No. B69 Connector No. WHITE Connector Color WHITE Connector Color WHITE Connector No. B108 Connec	Signal IX	TO WIRE 10 11 12 13 14 10 11 12 13 14 1	Н
Connector No. B69 Connector No. B69 Connector No. WHITE Connector Color WHITE Connector Color WHITE Connector No. B108 Connec	Color of Wire SB SB Y	26 27 28 29 Wire Wire SB	I
Connector No. B69 Connector Name WIRE TO WIRE Connector Color WHITE Shall S	7 Terminal No. 66A 94A 95A 100A	Connector No Connector No Connector No Connector No Connector Connector Connector Connector Connector Connector No Connect	J
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Connector No.	9		D2	2						
Connector Name WIRE TO WIRE	lan	e	>	Æ	ш	[은	∣≥	≅	Ш	
Connector Color	綅	Ę	>	WHITE	쁜	l				
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¥	8	6	10	8 9 10 11 12 13 14 15 16	12	13	14	15	9	

Signal Name	I	ı	I	ı	ı	_	I
Color of Wire	\	BR	В	>	Γ	SB	ГG
Terminal No.	-	2	3	∞	6	10	11



Connector Name WIRE TO WIRE	WHITE	3	Signal Name	
Ime WII		8 9 10 11 ■	Color of Wire	
Connector Na	Connector Color	麻麻 H.S.	Terminal No.	

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Connector No.

Connector Name AND DOOR LOCK/UNLC	ame ANE	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	olor WHITE	TE
H.S.		81
Terminal No.	Color of Wire	Signal Name
17	λ	MOTOR DR UP
18	λ	B+
19	٦	MOTOR DR DOWN

	FRONT POWER WINDOW MOTOR LH	WHITE	3 3 1	Signal Name	ı	1	l	ı	1	l
- D9			6 8	Color of Wire	>	_	>	5	SB	BR
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	٦	2	က	4	5	9

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ENCODER SIG1 ENCODER SIG2

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Signal Name

Terminal No.

ENCODER +

GND BAT

HH HH В

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ENCODER

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4 2 / MOTOR DOWN

MOTOR UP

	WIRE		8 9 10 11 12 13 14 15 16	17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32	
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6	am	응	2	8	
Ž	ž	Q	-	17	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		Y.S.	

Terminal No. Wire Signal Name		
Terminal No. Wire 31 Y		_
Terminal No.	Color of Wire	Υ
	Terminal No.	31

Signal Name	_
Color of Wire	Y
Terminal No.	31

Signal Name	MOTOR RR UP	MOTOR RL DOWN	MOTOR RL UP	IGN	ENCODER GND	ENCODER +
Color of Wire	^	ГG	SB	BR	BR	LG
Terminal No. Wire	7	8	6	10	12	14

D25	Connector Name SWITCH (WITH LEFT AND RIGHT FRONT AUTO DOWN)	WHITE	5 4 3 2 1	r of Signal Name	GND	3 ENCODER SIG-2 (ULP)	ENCODER SIG-1 (DLP)	MOTOR RR DOWN
	ame N	lor /	<u></u>	Color of Wire	В	SB	Υ	_
Connector No.	Connector Na	Connector Color WHITE	原动 H.S.	Terminal No.	1	4	9	9

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT AND RIGHT FRONT AUTO DOWN) Connector Color WHITE	Connector No.	D129
Connector Color WHITE	Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT ANE RIGHT FRONT AUTO DOWN)
	Connector Color	WHITE

	Connector No.	D129
	Connector Name	Connector Name SWITCH RH (WIT BOOR LOCK/UNI SWITCH RH (WIT RIGHT FRONT A
	Connector Color WHITE	WHITE
_	9	

_	_	
	Connector Color	研 H.S.

Signal Name	I	I	ı	I	I	I
Color of Wire	٦	BR	LG	>	BG	^
Terminal No.	-	2	က	4	2	9

Connector Name	Connector Color	咸司 H.S.

Connector No. D105

Connector No.	D102)2					
Connector Name WIRE TO WIRE	₹	쀭		>	≝	щ	
Connector Color WHITE	٧	¥	Е				
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Į.	2	9	7	-	0	10	
2					ı	ı	



Signal Name	-	ı	
Color of Wire	BR	В	
Terminal No.	2	8	

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Connector No.	Vo. D201 Vame WIRE	Connector No. D201 Connector Name WIRE TO WIRE	Connector No. Connector Name	Vo. D204	D204 REAR POWER WINDOW	Connector No. Connector Name		D208 REAR POWER WINDOW	
Connector Color WHITE	Solor WH	ITE	Connector Color	_	TE	Connector Color			
用.S.	1 9	2 3 mm 4 5 7 8 9 10 11 12	原 H.S.		6 5 4 4 3	原 H.S.		8 7 6 5 4	1
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
က	В	ı	-	PI	1	-	1	1	
4	>	ı	2	>	1	2	В	1	
2	SB	ı	ო	1	ı	က	1	1	
∞	BR	1	4	1	-	4	BB	1	
			5	ı	1	2	>	1	
			9	-	1	9	FG	1	
						7	>	I	
						8	SB	1	
Connector No.	Jo. D301		Connector No.	lo. D304	4	Connector No.	lo. D308	8	
Connector N	lame WIF	Connector Name WIRE TO WIRE	Connector Name		REAR POWER WINDOW MOTOR RH	Connector Name		REAR POWER WINDOW SWITCH RH	
	VOIOL WHILE	=	Connector Color		TE	Connector Color	_		
ą.	Ŀ								7
H.S.	6 1	2 3	所,		6 5 4 3 1	H.S.		8 7 6 5 4	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
8	В	ı	-	FG	1	-	ı	1	
4	Y	ı	2	>	1	2	В	1	
5	SB	-	3	-	_	ဇ	ı	I	
80	BB	ı	4	1	1	4	BB	1	
			2	ı	ı	5	>	1	
			9	1	-	9	re	ı	
						7	>	ı	
						c	9		_

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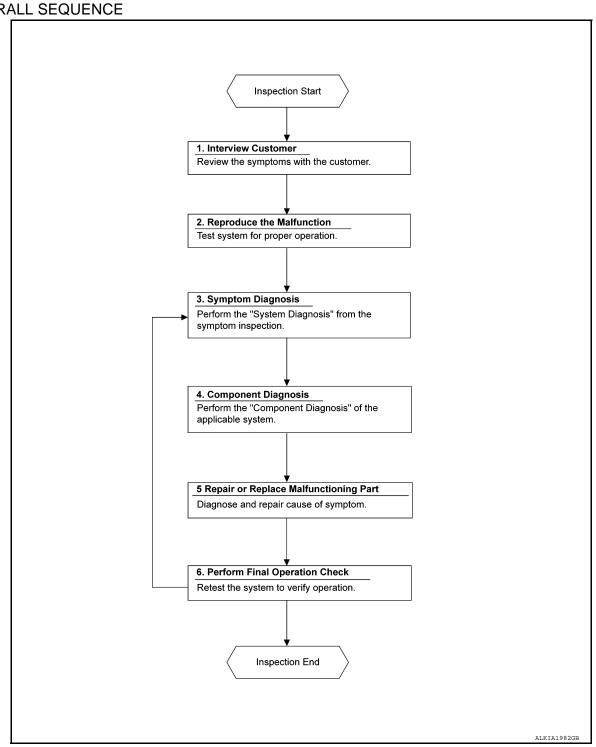
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000008929700 В

OVERALL SEQUENCE



DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[LH & RH FRONT AUTO UP/DOWN]

>> GO TO 2.

2. CONFIRM THE SYMPTOM

Check the malfunction on the vehicle that the customer describes.

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

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS

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

>> GO TO 4.

4. PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6. FINAL CHECK

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

Are the malfunctions corrected?

YES >> Inspection End.

NO >> GO TO 3.

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL [LH & RH FRONT AUTO UP/DOWN]

< BASIC INSPECTION >

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMI-NAL

Description INFOID:0000000008843881

When the negative battery terminal is disconnected, the initialization is necessary for normal operation of power window system.

CAUTION:

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

- Auto-up operation
- Anti-pinch function

Work Procedure

INFOID:0000000008843882

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1. SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-93, "Work Procedure".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-94, "Work Procedure".

>> Inspection End.

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PWC-91 Revision: October 2012 2013 Pathfinder NAM

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

< BASIC INSPECTION >

[LH & RH FRONT AUTO UP/DOWN]

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

Description INFOID:0000000008843883

When the negative battery terminal is disconnected, the initialization is necessary for normal operation of power window system.

CAUTION:

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

- Auto-up operation
- Anti-pinch function

Work Procedure

1.SYSTEM INITIALIZATION

Perform system initialization. Refer to PWC-93, "Work Procedure".

>> GO TO 2.

2. CHECK ANTI-PINCH FUNCTION

Check anti-pinch function. Refer to PWC-94, "Work Procedure".

>> Inspection End.

SYSTEM INITIALIZATION

< BASIC INSPECTION >

[LH & RH FRONT AUTO UP/DOWN]

SYSTEM INITIALIZATION

Description

If any of the following operations are performed, the initialization is necessary for normal operation of power window system.

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

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

- Auto-up operation
- Anti-pinch function

Work Procedure

1.STEP 1

- Disconnect battery negative terminal or power main switch connector. Reconnect it after a minute or more.
- 2. Turn ignition switch ON.
- 3. Operate the power window switch to fully open the window. (This operation is not necessary if the window is already fully open).
- 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after the glass stops at fully closed position, keep pulling the switch for 4 seconds or more.

PWC-93

5. Retest the AUTO-UP function operation.

>> GO TO 2.

2.STEP 2

Check anti-pinch function. Refer to PWC-94, "Work Procedure".

>> Inspection End.

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2013 Pathfinder NAM

Revision: October 2012

CHECK ANTI-PINCH FUNCTION

< BASIC INSPECTION >

[LH & RH FRONT AUTO UP/DOWN]

CHECK ANTI-PINCH FUNCTION

Description INFOID:0000000008843887

If any of the following operations are performed, the initialization is necessary for normal operation of power window system.

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

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

- Auto-up operation
- · Anti-pinch function

Work Procedure

1. CHECK ANTI-PINCH FUNCTION

- Fully open the door window.
- Place a piece of wood near fully closed position.
- · Close door glass completely with AUTO-UP.
- Check the following conditions
- Check that glass lowers for approximately 150 mm (5.91 in.) without pinching piece of wood and stops.
- Check that glass does not rise not 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.

>> Inspection End.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000008851173

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Regarding Wiring Diagram information, refer to BCS-53, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
139	Fusible link battery power	O (40A)
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M81.

Check voltage between BCM connector M81 terminals 131, 139 and ground.

В	CM	Ground	Voltage
Connector	Terminal	Giodila	(Approx.)
M81	131		Pottoni voltago
IVIOI	139	_	Battery voltage

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M81 terminals 134, 143 and ground.

В	CM	Ground	Continuity	
Connector	Terminal	Ground	25dity	
M81	134	_	Yes	
IVIOI	143	_	ies	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

BCM supplies power.

 It operates each power window motor via corresponding power window switch and makes window move up/ down when main power window and door lock/unlock switch is operated.

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INFOID:0000000008844021

Revision: October 2012 **PWC-95** 2013 Pathfinder NAM

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000008844022

Main Power Window And Door Lock/unlock Switch

${f 1}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH FUNCTION

Check power window motor operation with main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch power supply and ground circuit are OK.

NO >> Refer to PWC-96, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000008844023

Regarding Wiring Diagram information, refer to <u>PWC-80</u>, "Wiring Diagram - With Left & Right Front Auto <u>Up/Down"</u>.

Main Power Window And Door Lock/unlock Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

- 1. Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/unlock switch connectors and ground.

	Terminal			
(+)			Voltage (Approx.)	
Main power window and door lock/un- lock switch connector	Terminal	(–)	(Approx.)	
D25	10	Ground	Battery voltage	
D24	18	Giodila		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM, main power window and door lock/unlock switch, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- Check continuity between BCM connector and main power window and door lock/unlock switch connectors.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M81	140	D25	10	Yes
141	D24	18	163	

4. Check continuity between BCM connector M81 and ground.

BCM connector	Terminal		Continuity	
M81	140	Ground	No	
	141		No	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

3. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/unlock switch connector D25 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D25	1	Ground	Yes

Is the inspection result normal?

- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch LH) GO TO 5.
- YES >> Check main power window and door lock/unlock switch output signal (rear power window switch RH) GO TO 6.
- YES >> Check main power window and door lock/unlock switch output signal (front power window switch LH) GO TO 7.
- NO >> Repair or replace the harness and connectors.

4. CHECK BCM OUTPUT SIGNAL

- Connect BCM.
- Turn ignition switch ON. 2.
- Check voltage between BCM connector M81 and ground.

(+)		(-)	Voltage (Approx.)	
BCM connector	Terminal	(-)		
M81	140	Ground	Pattery voltage	
IVIO I	141	Giouna	Battery voltage	

Is the measurement value within the specification?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

$oldsymbol{5}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-ER WINDOW SWITCH LH)

- Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.
- Check voltage between main power window and door lock/unlock switch connector D25 and ground.

To	erminal				
(+)		Window switch	Voltage		
Main power window and door lock/unlock switch connector Terminal		(-)	position (rear LH)	(Approx.)	
	9	O a sura d	UP	Battery voltage	
Doe			DOWN	0	
D25	_	- Ground	UP	0	
	8		DOWN	Battery voltage	

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation". After that, refer to PWC-99, "POWER WINDOW MAIN SWITCH: Special Repair Requirement".

$oldsymbol{6}$. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POW-ER WINDOW SWITCH RH)

- Connect main power window and door lock/unlock switch.
- Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch connector D25 and ground.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

1	erminal			
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector Terminal		(–)	position (rear RH)	(Approx.)
	7	- Ground	UP	Battery voltage
Doe			DOWN	0
D25			UP	0
	6		DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation".
- /. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (FRONT POWER WINDOW SWITCH LH)
- 1. Connect main power window and door lock/unlock switch.
- 2. Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch connector D25 and ground.

T	erminal				
(+)			Window switch	Voltage	
Main power window and door lock/unlock switch connector Terminal		(–)	position (front LH)	(Approx.)	
	17	Ground	UP	Battery voltage	
Dos			DOWN	0	
D25			UP	0	
	19		DOWN	Battery voltage	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation".

POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:0000000008844024

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

1. Check main power window and door lock/unlock switch D25.

Terr	minal	Main power window and do	Continuity	
10	1	Rear LH	UP	
10	7	Rear RH	OF OF	
8	9	Rear LH	NEUTRAL	
6	7	Rear RH	NEOTRAL	Yes
10	8	Rear LH	DOWN	
10	6	Rear RH		
1	12		-	

Check continuity between main power window and door lock/unlock switch D25 (power window lock switch). (Lock operation).

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

Termi	nal	Main power window and door	r lock/unlock switch condition	Continuity
9		Rear LH	UP	No
7		Rear RH	UP	
8		Door I U	NEUTRAL	
9	1	Rear LH		
7		Rear RH		
6		Real Kri		
8		Rear LH	DOWN	
6		Rear RH	DOWN	

3. Check continuity between main power window and door lock/unlock switch D25 (power window lock switch). (Unlock operation).

Terr	minal	Main power window and do	Main power window and door lock/unlock switch condition	
9		Rear LH	UP	
7		Rear RH	- OF	
8		Rear LH		
3	1	Keai Lii	NEUTRAL	Yes
9	'	Rear RH	NEOTIVE	
7		ixeai XII		
8		Rear LH	DOWN	
6		Rear RH	DOWN	

Is the inspection result normal?

YES >> Main power window and door lock/unlock switch is OK.

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation". After that, refer to PWC-99. "POWER WINDOW MAIN SWITCH: Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000008844025

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-94, "Work Procedure".

Is the inspection result normal?

YES >> Inspection end.

BCM supplies power.

NO >> Refer to PWC-111, "DRIVER SIDE: Component Function Check".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

Front power window motor RH will be operated if power window and door lock/unlock switch RH is operated.

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000008844027

Power Window And Door Lock/unlock Switch RH

PWC-99 Revision: October 2012 2013 Pathfinder NAM **PWC**

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

1. CHECK FRONT POWER WINDOW MOTOR RH FUNCTION

Check front power window motor RH operation with power window and door lock/unlock switch RH. Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH power supply and ground circuit are OK.

NO >> Refer to PWC-100, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000008844028

Regarding Wiring Diagram information, refer to <u>PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/Down"</u>.

Power Window And Door Lock/unlock Switch RH Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between power window and door lock/unlock switch RH connector D129 and ground.

Ter	Terminal				
(+)	(+)				
Power window and door lock/unlock switch RH connector	Terminal	(–)	(Approx.)		
D129	8	Ground	Battery voltage		

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- Disconnect BCM and power window and door lock/unlock switch RH.
- Check continuity between BCM connector M81 and power window and door lock/unlock switch RH connector D129.

BCM connector	Terminal	Power window and door lock/un- lock switch RH connector	Terminal	Continuity
M81	141	D129	8	Yes

4. Check continuity between BCM connector M81 and ground.

BCM connector	Terminal	Ground	Continuity
M81	141	Ground	No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

3. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D129 and ground.

Power window and door lock/unlock switch RH	Terminal	Ground	Continuity
D129	7	Ground	Yes

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the harness or connectors.

POWER SUPPLY AND GROUND CIRCUIT [LH & RH FRONT AUTO UP/DOWN] < DTC/CIRCUIT DIAGNOSIS > 4. CHECK BCM OUTPUT SIGNAL А 1. Connect BCM. 2. Turn ignition switch ON. Check voltage between BCM connector M81 and ground. В Terminals Voltage (+)(Approx.) (-) BCM connector **Terminal** M81 141 Ground Battery voltage D Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident". NO >> Replace BCM. Refer to BCS-78, "Removal and Installation". FRONT POWER WINDOW SWITCH: Special Repair Requirement INFOID:0000000008844029 1. PERFORM INITIALIZATION PROCEDURE Perform initialization procedure. Refer to PWC-93, "Work Procedure". Is the inspection result normal? YES >> GO TO 2.

Check anti-pinch operation.

NO

Refer to PWC-94, "Work Procedure".

2 . CHECK ANTI-PINCH OPERATION

Is the inspection result normal?

YES >> Inspection end.

>> Refer to PWC-113, "PASSENGER SIDE: Component Function Check".

>> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

BCM supplies power.

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

REAR POWER WINDOW SWITCH: Component Function Check

Rear Power Window Switch

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 power supply and ground circuit are OK.

>> Refer to PWC-101, "REAR POWER WINDOW SWITCH: Diagnosis Procedure". NO

REAR POWER WINDOW SWITCH : Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/ Down".

Rear Power Window Switch Power Supply Circuit Check

CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

	Terminal					
	(+)			Condition	Voltage	
	ver window connector	Terminal	(–)		(Approx.)	
LH	D208	4	Ground	Ignition switch ON	Pattory voltage	
RH	D308	4 Ground		ignition switch ON	Battery voltage	

Is the inspection result normal?

YES >> GO TO 2 (Rear power window switch LH).

YES >> GO TO 3 (Rear power window switch RH).

NO >> GO TO 4.

2. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH LH)

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch LH.
- Check continuity between main power window and door lock/unlock switch connector D25 and rear power window switch LH connector D208.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch LH connector		Continuity
D25	8	D208	7	Yes
D23	9	D200	8	163

4. Check continuity between main power window and door lock/unlock switch connector D25 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
D25	8	Ground	No
D23	9		NO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

3. CHECK HARNESS CONTINUITY (REAR POWER WINDOW SWITCH RH)

- 1. Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.
- Check continuity between main power window and door lock/unlock switch connector D25 and rear power window switch RH connector D308.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
D25	6	D308	7	Yes
D25	7	2300	8	163

4. Check continuity between main power window and door lock/unlock switch connector D25 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
D25	6	Ground	No
D23	7		INO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

4. CHECK HARNESS CONTINUITY

- Disconnect BCM and rear power window switch.
- Check continuity between BCM connector and rear power window switch connector.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M81	140	LH	D208	1	Yes
IVIO	140	RH	D308	4	163

Check continuity between BCM connector M81 and ground.

BCM connector	Terminal	Ground	Continuity
M81	140	Glound	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> Repair or replace the harness or connectors.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-103, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

>> Replace rear power window switch. Refer to PWC-139, "Removal and Installation". NO

REAR POWER WINDOW SWITCH: Component Inspection

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH D208.

Terr	Terminal Power window switch condition		Continuity
4	5	UP	
7	6	Or .	
8	5	NEUTRAL Yes	
6	7	NEOTIME	163
4	6	DOWN	
5	8	DOWN	

Is the inspection result normal?

>> Rear power window switch LH is OK. YES

NO >> Replace rear power window switch. Refer to PWC-139, "Removal and Installation".

2.CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH D308.

Ter	Terminal Power window switch condition		Continuity				
4	5	LID		LIP		UP	
7	6	Or Or					
7	5	NEUTRAL	Yes				
6	8	NEOTIAL	165				
4	6	DOWN					
5	8	BOWN					

Is the inspection result normal?

YES >> Rear power window switch RH is OK.

>> Replace rear power window switch. Refer to PWC-139, "Removal and Installation". NO

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000008844034

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

DRIVER SIDE: Component Function Check

INFOID:0000000008844035

1. CHECK POWER WINDOW MOTOR CIRCUIT

Check front power window motor LH operation with operating main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Front power window motor LH is OK.

NO >> Refer to PWC-104, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000008844036

Regarding Wiring Diagram information, refer to <u>PWC-80</u>, "Wiring Diagram - With Left & Right Front Auto Up/<u>Down"</u>.

Front Power Window Motor LH Circuit Check

1. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL

- 1. Disconnect front power window motor LH.
- 2. Turn ignition switch ON.
- 3. Check voltage between front power window motor LH connector D9 and ground.

Terminal				
(+)			Main power window and door	Voltage
Power window motor LH connector	Terminal	(–)	lock/unlock switch condition	(Approx.)
	4		UP	Battery voltage
D9	· ·	Ground	DOWN	0
Da	2	Giodila	UP	0
	2		DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and front power window motor LH.
- 3. Check continuity between main power window and door lock/unlock switch connector D24 and front power window motor connector LH D9.

Main power window and door lock/ unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D24	17	D9	1	Yes
D24	19	D9	2	163

^{4.} Check continuity between main power window and door lock/unlock switch connector D24 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

Main power window and door lock/unlock switch connector	Terminal		Continuity
	17	Ground	No
	19		
Is the inspection result normal? YES >> Replace main power window and do Installation". After that, refer to PWC-S NO >> Repair or replace the harness or conn 3. CHECK POWER WINDOW MOTOR	93, "Work Procedu		<u>-137, "Removal and</u>
Check front power window motor LH.			
Refer to PWC-105, "DRIVER SIDE : Component I	nspection".		
Is the inspection result normal? YES >> Check intermittent incident. Refer to Government to the second sec			<u>n"</u> . After that, refer to
DRIVER SIDE : Component Inspection			INFOID:0000000008844037
COMPONENT INSPECTION 1. CHECK FRONT POWER WINDOW MOTOR L Check motor operation by connecting the battery v		power window motor	
(+) Terminal (-)		Motor cond	ition
2 1		DOWN	
1 2		UP	
Is the inspection result normal? YES >> Front power window motor LH is OK. NO >> Replace front power window motor L refer to PWC-93, "Work Procedure". DRIVER SIDE: Special Repair Require		4, "Removal and Ins	stallation". After that,
1. PERFORM INITIALIZATION PROCEDURE			
Perform initialization procedure.			
Refer to PWC-93 , "Work Procedure". Is the inspection result normal?			
YES >> GO TO 2 NO >> Check intermittent incident. Refer to G 2. CHECK ANTI-PINCH OPERATION	GI-49, "Intermittent	Incident".	
Check anti-pinch operation. Refer to PWC-94, "Work Procedure".			
Is the inspection result normal? YES >> Inspection End. NO >> Refer to PWC-111, "DRIVER SIDE : C PASSENGER SIDE	Component Function	n Check".	
PASSENGER SIDE : Description			INFOID:00000000884403S

Revision: October 2012 PWC-105 2013 Pathfinder NAM

Door glass moves UP/DOWN by receiving the signal from main power window and door lock/unlock switch or

power window and door lock/unlock switch RH.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

PASSENGER SIDE: Component Function Check

INFOID:0000000008844040

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

Check power window motor operation with operating main power window and door lock/unlock switch or power window and door lock/unlock switch RH.

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-106, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000008844041

Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/Down".

Front Power Window Motor RH Circuit Check

1. CHECK FRONT POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- 3. Turn ignition switch ON.
- 4. Check voltage between front power window motor RH connector D105 and ground.

Terminal					
(+)		(-)	Front power window mo- tor RH condition	Voltage (Approx.)	
Front power window motor RH connector	or RH connector Terminal			(11 - 7	
D105	1	- Ground	UP	Battery voltage	
			DOWN	0	
	2	Giodila	UP	0	
			DOWN	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D129 and front power window motor RH connector D105.

Power window and door lock/un- lock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity	
D129	11	D105	1	Yes	
	12	D103	2	163	

4. Check continuity between power window and door lock/unlock switch RH connector D129 and ground.

Power window and door lock/unlock switch RH connector	Terminal		Continuity
D129	11	Ground	No
D129	12		NO

Is the inspection result normal?

- YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-138, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".
- NO >> Repair or replace harness or connectors.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

$3.\,$ CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to PWC-107, "PASSENGER SIDE: Component Inspection".

Is the inspection result normal?

NO

>> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

>> Replace front power window motor RH. Refer to GW-14, "Removal and Installation". After that, refer to PWC-94, "Work Procedure".

PASSENGER SIDE: Component Inspection

INFOID:0000000008844042

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COMPONENT INSPECTION

1. CHECK FRONT POWER WINDOW MOTOR RH

Check motor operation by connecting the battery voltage directly to front power window motor RH D105.

(+) Terminal (-)		- Motor condition	
2	1	DOWN	

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Replace front power window motor RH. Refer to GW-14, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".

PASSENGER SIDE: Special Repair Requirement

INFOID:0000000008844043

INFOID:0000000008844044

INFOID:0000000008844045

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-94, "Work Procedure".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-113, "PASSENGER SIDE: Component Function Check".

REAR LH

REAR LH: Description

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

REAR LH: Component Function Check

1. CHECK REAR POWER WINDOW MOTOR LH CIRCUIT

Check rear power window motor LH operation with main power window and door lock/unlock switch or rear power window switch LH.

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

NO >> Refer to PWC-108, "REAR LH: Diagnosis Procedure" **PWC**

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

REAR LH: Diagnosis Procedure

INFOID:0000000008844046

Regarding Wiring Diagram information, refer to <u>PWC-80</u>, "Wiring Diagram - With Left & Right Front Auto Up/ <u>Down"</u>.

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor LH connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between rear power window motor LH connector D204 and ground.

Terminal					
(+)		(-)	Window condition	Voltage (Approx.)	
Rear power window motor LH connector	indow motor LH connector Terminal				
D204	2	Ground	UP	Battery voltage	
			DOWN	0	
	1	Ground	UP	0	
			DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window switch LH.
- Check continuity between rear power window switch LH connector D208 and rear power window motor LH connector D204.

Rear power window switch LH connector	Terminal	minal Rear power window motor LH connector		Continuity	
D208	5	D204	2	Yes	
5200	6	5204	1	165	

4. Check continuity between rear power window switch LH connector D208 and ground.

Rear power window switch LH connector	Terminal		Continuity	
D208	5	Ground	No	
	6			

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-103, "REAR POWER WINDOW SWITCH: Component Inspection".

NO >> Repair or replace the harness or connectors.

$3.\,$ CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to PWC-108, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-18, "Removal and Installation".

REAR LH: Component Inspection

INFOID:0000000008844047

COMPONENT INSPECTION

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

1. CHECK REAR POWER WINDOW MOTOR LH

Check motor operation by connecting the battery voltage directly to rear power window motor LH D204.

Terminal		Motor condition	
(+)	(-)	Wotor condition	
1	2	DOWN	
2	1	UP	

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

>> Replace rear power window motor LH. Refer to GW-18, "Removal and Installation". NO

REAR RH

REAR RH: Description

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

REAR RH: Component Function Check

1. CHECK REAR POWER WINDOW MOTOR RH CIRCUIT

Check rear power window motor RH operation with operating main power window and door lock/unlock switch or rear power window switch RH.

Is the inspection result normal?

>> Rear power window motor RH is OK. YES

>> Refer to PWC-109, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/ Down".

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

- Turn ignition switch OFF.
- Disconnect rear power window motor RH.
- Turn ignition switch ON.
- Check voltage between rear power window motor RH connector D304 and ground.

Terminal					
(+) Rear power window motor RH connector Terminal		()	Rear power window switch RH condition	Voltage (Approx.)	
		- (-)			
	2		UP	Battery voltage	
D304	2	Ground	DOWN	0	
D304	4	Giouna	UP	0	
	ı		DOWN	Battery voltage	

Is the measurement value within the specification?

YES >> GO TO 3.

NO >> GO TO 2.

$2.\,$ CHECK HARNESS CONTINUITY

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

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

Check continuity between rear power window switch RH connector D308 and rear power window motor RH connector D304.

Rear power window switch RH connector	Terminal	Rear power window motor RH con- nector	Terminal	Continuity
D308	5	D304	2	Yes
	6	D304	1	163

4. Check continuity between rear power window switch RH connector D308 and ground.

Rear power window switch RH connector	Terminal		Continuity
D308	5	Ground	No
	6		INO

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-103, "REAR POWER WINDOW SWITCH: Component Inspection".

NO >> Repair or replace the harness or connectors.

$3.\,$ CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.

Refer to PWC-110, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to <u>GW-18</u>, "Removal and Installation".

REAR RH: Component Inspection

INFOID:0000000008844051

COMPONENT INSPECTION

1.check rear power window motor RH

Check motor operation by connecting the battery voltage directly to rear power window motor RH D304.

Terminal		Motor condition	
(+)	(–)	iviolor condition	
1	2	DOWN	
2	1	UP	

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

NO >> Replace rear power window motor RH. Refer to <u>GW-18</u>, "Removal and Installation".

[LH & RH FRONT AUTO UP/DOWN]

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DRIVER SIDE

DRIVER SIDE: Description

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Detects condition of the front power window motor LH operation and transmits to main power window and door lock/unlock switch as pulse signal.

DRIVER SIDE : Component Function Check

INFOID:0000000008844053

1. CHECK ENCODER OPERATION

Check front door glass LH perform AUTO open/close operation normally when operating main power window and door lock/unlock switch.

Is the inspection result normal?

YES >> Encoder operation is OK.

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

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000008844054

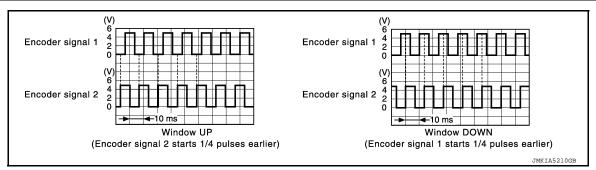
Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/Down".

Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- Check signal between main power window and door lock/unlock switch connector D25 and ground with oscilloscope.

	Terminals			
Signal name	(+)		Signal (Reference value)	
- g	Main power window and door lock/unlock switch connector	Terminal (-)		
Encoder signal 1	D25	5	Ground	Refer to following signal
Encoder signal 2	523	4	Ground	Trefer to following signal



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 2.

$2.\,$ CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

- Turn ignition switch ON.
- Check voltage between front power window motor LH connector D9 and ground.

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[LH & RH FRONT AUTO UP/DOWN]

(+)			Voltage (Approx.)	
Front power window motor LH connector	Terminal	(–)	(Approx.)	
D9	4	Ground	10	

Is the measurement value within the specification?

YES >> GO TO 4.

NO >> GO TO 3.

${f 3.}$ CHECK HARNESS CONTINUITY 1

- Turn ignition switch OFF.
- 2. Disconnect main power window and door lock/unlock switch and front power window motor LH.
- Check continuity between main power window and door lock/unlock switch connector D25 and front power window motor LH connector D9.

Main power window and door lock/ unlock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D25	14	D9	4	Yes

4. Check continuity between main power window and door lock/unlock switch connector D25 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D25	14	Ground	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and <a href="Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace the harness or connectors.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect front power window motor LH.
- Check continuity between front power window motor LH connector D9 and ground.

Front power window motor LH connector	Terminal	Ground	Continuity	
D9	6	Ground	Yes	

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY 2

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/unlock switch connector D25 and front power window motor LH connector D9.

Main power window and door lock/un- lock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D25	12	D9	6	Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace the harness or connectors.

6. CHECK HARNESS CONTINUITY 3

1. Disconnect main power window and door lock/unlock switch.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

Check continuity between main power window and door lock/unlock switch connector D25 and front power window motor LH connector D9.

Main power window and door lock/un- lock switch connector	Terminal	Front power window motor LH connector	Terminal	Continuity
D25	5	D9	3	Yes
	4	59	5	163

Check continuity between main power window and door lock/unlock switch connector D25 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
 D25	5	Ground	No
D23	4		NO

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to GW-14, "Removal and Installation". After that, refer to PWC-93, "Work Procedure"

NO >> Repair or replace the harness or connectors.

PASSENGER SIDE

PASSENGER SIDE : Description

Detects condition of the front power window motor RH operation and transmits to power window and door lock/unlock switch RH as pulse signal.

PASSENGER SIDE: Component Function Check

CHECK ENCODER OPERATION

Check front door glass RH perform AUTO open/close operation normally when operating power window and door lock/unlock switch RH.

Is the inspection result normal?

YES >> Encoder operation is OK.

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

PASSENGER SIDE : Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/ Down".

1. CHECK ENCODER SIGNAL

- Connect front power window motor RH.
- Turn ignition switch ON.
- Check signal between power window and door lock/unlock switch RH connector D129 and ground with oscilloscope.

	Terminals			
Signal name	(+)			Signal
C G. Carranto	Power window and door lock/unlock switch RH connector	Terminal	(-)	(Reference value)
Encoder signal 1	D129	9	Ground	Refer to following signal
Encoder signal 2	D129	10	Giodila	Refer to following signal

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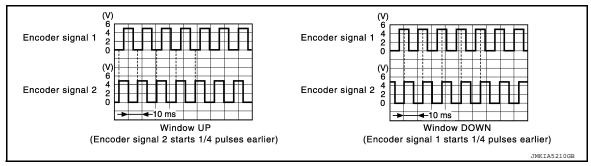
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Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 2.

2. CHECK FRONT POWER WINDOW MOTOR RH POWER SUPPLY

- Turn ignition switch ON.
- Check voltage between front power window motor RH connector D105 and ground.

	V 16			
(+)	(_)	Voltage (Approx.)		
Front power window motor RH connector	ndow motor RH connector Terminal		(11, -)	
D105	5	Ground	10	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK HARNESS CONTINUITY 1

- Turn ignition switch OFF.
- Disconnect power window and door lock/unlock switch RH and front power window motor RH.
- Check continuity between power window and door lock/unlock switch RH connector D129 and front power window motor RH connector D105.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D129	5	D105	5	Yes

Check continuity between power window and door lock/unlock switch RH connector D129 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D129	5	Ground	No

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-137, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace the harness or connectors.

4. CHECK GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect front power window motor RH.
- Check continuity between front power window motor RH connector D105 and ground.

Front power window motor RH connector	Terminal	Ground	Continuity
D105	3	Glound	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 5.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

5. CHECK HARNESS CONTINUITY 2

1. Disconnect power window and door lock/unlock switch RH.

Check continuity between power window and door lock/unlock switch RH connector D129 and front power window motor RH connector D105.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D129	4	D105	3	Yes

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-138, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace the harness or connectors.

6. CHECK HARNESS CONTINUITY 3

Disconnect power window and door lock/unlock switch RH.

Check continuity between power window and door lock/unlock switch RH connector D129 and front power window motor RH connector D105.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D129	9	D105	6	Yes
D129	10	D103	4	165

3. Check continuity between power window and door lock/unlock switch RH connector D129 and ground.

Power window and door lock/unlock switch RH connector	Terminal		Continuity
D129	9	Ground	No
D158	10		INU

Is the inspection result normal?

YES >> Replace front power window motor RH. Refer to <u>GW-14, "Removal and Installation"</u>. After that, refer to <u>PWC-93, "Work Procedure"</u>.

NO >> Repair or replace the harness or connectors.

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DOOR SWITCH

Component Function Check

INFOID:00000000008851174

1. CHECK FUNCTION

- 1. Select DOOR LOCK of BCM using CONSULT.
- 2. Select DOOR SW-DR, DOOR SW-AS, DOOR SW-RL, DOOR SW-RR, in DATA MONITOR mode.
- 3. Check that the function operates normally according to the following conditions.

Monitor item	Con	dition	Status
DOOR SW-DR	Driver side door	Open	On
DOOR SW-DR	Driver side door	Closed	Off
DOOR SW-AS	Passenger side door	Open	On
DOOK SW-AS		Closed	Off
DOOR SW-RL	Rear door LH	Open	On
DOOK SW-KL	Real door Ln	Closed	Off
DOOR SW-RR	Rear door RH	Open	On
DOOK SW-KK		Closed	Off

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to PWC-116, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008851175

Regarding Wiring Diagram information, refer to <u>DLK-72, "Wiring Diagram"</u>.

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect malfunctioning door switch connector.
- 3. Check signal between malfunctioning door switch harness connector and ground using oscilloscope.

	(+) Door switch		(–)	Signal
Connector Terminal			(Reference value)	
Driver side	B8			
Passenger side	B108			(V) 15
Rear LH	B18			10 5
Rear RH	B116	3	Ground	0 + 10ms PKIB4960J 7.0 - 8.0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK DOOR SWITCH CIRCUIT

- Disconnect BCM connector.
- Check continuity between door switch harness connector and BCM harness connector.

[LH & RH FRONT AUTO UP/DOWN]

	Door switch		ВСМ		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
Driver side	B8			96	
Passenger side	B108	3	M20	94	Von
Rear LH	B18		M20	82	Yes
Rear RH	B116			93	

3. Check continuity between door switch harness connector and ground.

Door switch			Continuity	
Coni	nector	Terminal		Continuity
Driver side	B8	Ground		
Passenger side	B108	2	Giouria	No
Rear LH	B18	3		INO
Rear RH	B116			

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".

NO >> Repair or replace harness.

3. CHECK DOOR SWITCH

Refer to PWC-117, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to <u>DLK-310, "Removal and Installation"</u>.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-49, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK DOOR SWITCH

- Turn ignition switch OFF.
 Disconnect malfunctioning door switch connector.
- 3. Check continuity between door switch terminals.

Door switch		Condition		Continuity	
Terminal					
3	Ground contact is part of the	Door switch	Pressed	No	
3	switch.	Door Switch	Released	Yes	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunction door switch. Refer to <u>DLK-310, "Removal and Installation"</u>.

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POWER WINDOW LOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW LOCK SWITCH

Description INFOID:000000008929695

Ground circuit of main power window and door lock/unlock switch shuts off if power window lock switch of main power window and door lock/unlock switch is operated. This inhibits all operation, except for the main switch.

Component Function Check

INFOID:0000000008929696

1. CHECK POWER WINDOW LOCK SIGNAL

Exchange for a normal main power window and door lock/unlock switch, and check operation.

Does power window lock operate?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and <a href="Installation". After that, refer to PWC-118, "Special Repair Requirement".

NO >> Check condition of harness and connector.

Special Repair Requirement

INFOID:0000000008929697

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-91, "Work Procedure".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

INFOID:0000000008852669

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Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

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

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000008852670

1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>BCS-15</u>, "DOOR LOCK: <u>CONSULT Function</u> (BCM - DOOR LOCK)".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-119, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000008852671

Regarding Wiring Diagram information, refer to <u>PWC-80</u>, "Wiring Diagram - With Left & Right Front Auto Up/ <u>Down"</u>.

Power Window Serial Link Check

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1. CHECK POWER WINDOW SWITCH OUTPUT SIGNAL

- 1. Remove Intelligent Key, and close front door LH and RH.
- 2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

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Revision: October 2012 PWC-119 2013 Pathfinder NAM

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

	Terminal		0	
(+)		(_)	Signal (Reference value)	
BCM connector	Terminal	(–)	,	
M81	54	Ground	(V) 15 10 5 0	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2.

$2.\,$ CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM and main power window and door lock/unlock switch.
- Check continuity between BCM connector M81 and main power window and door lock/unlock switch connector D25.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M81	54	D25	11	Yes

4. Check continuity between BCM connector M81 and ground.

BCM connector	Terminal	Ground	Continuity	
M81	54	Giodila	No	

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace harness or connectors.

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

Main power window and door lock/unlock switch, power window and door lock/unlock switch RH and BCM transmit and receive the signal by power window serial link.

The signal mentioned below is transmitted from BCM to main power window and door lock/unlock switch and power window and door lock/unlock switch RH

Keyless power window down signal

The signal mentioned below is transmitted from main power window and door lock/unlock switch to power window and door lock/unlock switch RH

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

FRONT POWER WINDOW SWITCH: Component Function Check

INFOID:0000000008852673

INFOID:0000000008852672

${f 1}$. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH OUTPUT SIGNAL

Check ("CDL LOCK SW", "CDL UNLOCK SW") in "DATA MONITOR" mode for "POWER DOOR LOCK SYSTEM" with CONSULT. Refer to <u>BCS-15</u>, "DOOR LOCK: <u>CONSULT Function</u> (<u>BCM - DOOR LOCK)"</u>.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

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INFOID:0000000008852674

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-121, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to PWC-80, "Wiring Diagram - With Left & Right Front Auto Up/Down".

Power Window Serial Link Check

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

- 1. Remove Intelligent Key, and close the front door LH and RH.
- 2. Check signal between BCM connector and ground with oscilloscope when door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".
- 3. Check that signals which are shown in the figure below can be detected during 10 second just after door lock and unlock switch (LH and RH) is turned to "LOCK" or "UNLOCK".

Terminal			<u> </u>	
(+)		()	Signal (Reference value)	
BCM connector	Terminal	(-)	(**************************************	
M81	54	Ground	(V) 15 10 5 0 10 ms PIIA1297E	

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> GO TO 2.

2. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM.
- Check continuity between BCM connector M81 and power window and door lock/unlock switch RH connector D129.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M81	54	D129	3	Yes

4. Check continuity between BCM connector M81 and ground.

BCM connector	Terminal	Ground	Continuity
M81	54	Oround	No

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-137, "Removal and <a href="Installation". After that, refer to PWC-93, "Work Procedure".

NO >> Repair or replace the harness or connectors.

POWER WINDOWS DO NOT OPERATE WITH POWER WINDOW MAIN SWITCH

[LH & RH FRONT AUTO UP/DOWN] < SYMPTOM DIAGNOSIS > SYMPTOM DIAGNOSIS Α POWER WINDOWS DO NOT OPERATE WITH POWER WINDOW MAIN **SWITCH** В Diagnosis Procedure INFOID:0000000008851180 $oldsymbol{1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT Check BCM power supply and ground circuit. Refer to BCS-72, "Diagnosis Procedure". D Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. Е 2. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH Check main power window and door lock/unlock switch. Refer to PWC-98, "POWER WINDOW MAIN SWITCH: Component Inspection". F Is the inspection result normal? YES >> GO TO 3. NO >> Repair or replace the malfunctioning parts. ${f 3.}$ check main power window and door lock/unlock switch power supply and GROUND CIRCUIT Н Check power window switch main power supply and ground circuit. Refer to PWC-96, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> GO TO 4. NO >> Repair or replace the malfunctioning parts. $oldsymbol{4}.$ CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH SERIAL CIRCUIT Check main power window and door lock/unlock switch serial circuit. Refer to PWC-119, "POWER WINDOW MAIN SWITCH: Component Function Check". Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident". NO >> Repair or replace the malfunctioning parts.

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DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008851181

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to PWC-104, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE [LH & RH FRONT AUTO UP/DOWN]

< SYMPTOM DIAGNOSIS >

Diagnosis Procedure

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPER-

ATE

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to PWC-99, "FRONT POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

 $2.\,$ CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH SERIAL LINK CIRCUIT

Check power window and door lock/unlock switch RH serial link circuit.

Refer to PWC-120, "FRONT POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 $3.\,$ CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to PWC-106, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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PWC-125 Revision: October 2012 2013 Pathfinder NAM

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INFOID:0000000008851182

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REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008851183

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-101, "REAR POWER WINDOW SWITCH: 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-107, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE Α **Diagnosis Procedure** INFOID:0000000008851184 1. CHECK REAR POWER WINDOW SWITCH RH В Check rear power window switch RH. Refer to PWC-101, "REAR POWER WINDOW SWITCH: Component Function Check". C Is the inspection result normal? YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2. CHECK REAR POWER WINDOW MOTOR RH D Check rear power window motor RH. Refer to PWC-109, "REAR RH: Component Function Check". Е Is the inspection result normal? YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident". >> Repair or replace the malfunctioning parts. NO F Н

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

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

Diagnosis Procedure

INFOID:0000000008851185

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK DOOR WINDOW SLIDING PART

- · A foreign material adheres to window glass or glass run rubber.
- · Glass run rubber wear or deformation.
- Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-111, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE) [LH & RH FRONT AUTO UP/DOWN]

< SYMPTOM DIAGNOSIS >

ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (PASSENGER SIDE)

Diagnosis Procedure

INFOID:0000000008851186

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure. Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

$2.\,$ CHECK DOOR WINDOW SLIDING PART

A foreign material adheres to window glass or glass run rubber.

· Glass run rubber wear or deformation.

Sash is tilted too much or not enough.

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to PWC-113, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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PWC-129 Revision: October 2012 2013 Pathfinder NAM

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY (DRIVER SIDE)

Diagnosis Procedure

INFOID:0000000008851187

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-111, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMAL-LY (PASSENGER SIDE)

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

AUTO OPERATION DOES NOT OPERATE BUT MANUAL OPERATES NORMALLY (PASSENGER SIDE)

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-113, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

Diagnosis Procedure

INFOID:0000000008851189

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to PWC-116, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS [LH & RH FRONT AUTO UP/DOWN]

< SYMPTOM DIAGNOSIS >

Diagnosis Procedure

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WIN-

DOWS

1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed. Refer to PWC-93, "Work Procedure".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

2.CHECK FRONT DOOR LOCK ASSEMBLY LH (DOOR KEY CYLINDER SWITCH)

Check front door lock assembly LH (door key cylinder switch).

Refer to DLK-189, "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 inspection result normal?

>> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> GO TO 1.

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PWC-133 Revision: October 2012 2013 Pathfinder NAM

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008851192

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to DLK-201, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-49, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000008851190

1. REPLACE MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

Replace main power window and door lock/unlock switch.

Refer to PWC-137, "Removal and Installation". After that, PWC-93, "Work Procedure".

>> INSPECTION END

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POWER WINDOW SWITCH DOES NOT ILLUMINATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT AUTO UP/DOWN]

POWER WINDOW SWITCH DOES NOT ILLUMINATE

DRIVER SIDE

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000008931692

1. REPLACE POWER WINDOW MAIN SWITCH

Replace power window main switch.

Refer to PWC-137, "Removal and Installation".

>> Inspection End.

PASSENGER SIDE

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000008931693

1. REPLACE POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Replace power window and door lock/unlock switch RH.

Refer to PWC-138, "Removal and Installation".

>> Inspection End.

REAR LH

REAR LH: Diagnosis Procedure

INFOID:0000000008931694

1. REPLACE REAR POWER WINDOW SWITCH LH

Replace rear power window switch LH.

Refer to PWC-139, "Removal and Installation".

>> Inspection End.

REAR RH

REAR RH: Diagnosis Procedure

INFOID:0000000008931695

1. REPLACE REAR POWER WINDOW SWITCH RH

Replace rear power window switch RH.

Refer to PWC-139, "Removal and Installation".

>> Inspection End.

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH AND INSTALLATION > [LH & RH FRONT AUTO UP/DOWN]

< REMOVAL AND INSTALLATION >

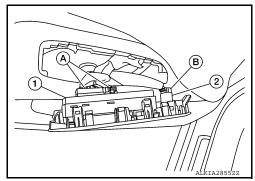
REMOVAL AND INSTALLATION

MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

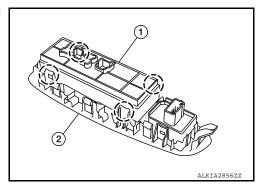
Removal and Installation

REMOVAL

- 1. Remove the main power window and door lock/unlock switch from the front door finisher using a suitable tool.
- Disconnect the harness connectors (A) from the main power window and door lock/unlock switch (1) and harness connector (B) from the mirror control switch (2).



Release the pawls, then separate the main power window and door lock/unlock switch (1) from the switch finisher (2).
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INSTALLATION

Installation is in the reverse order of removal.

NOTE:

When the main power window and door lock/unlock switch is removed or replaced, it is necessary to perform the initialization procedure. Refer to PWC-89, "Work Flow".

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POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

< REMOVAL AND INSTALLATION >

[LH & RH FRONT AUTO UP/DOWN]

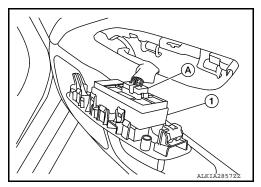
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Removal and Installation

INFOID:0000000008843976

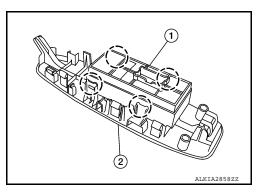
REMOVAL

- Remove the power window and door lock/unlock switch RH from the front door finisher using a suitable tool.
- 2. Disconnect the harness connector (A) from the power window and door lock/unlock switch RH (1).



Release four pawls, then separate power window and door lock/ unlock switch RH (1) from switch finisher (2).

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INSTALLATION

Installation is in the reverse order of removal.

REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

[LH & RH FRONT AUTO UP/DOWN]

REAR POWER WINDOW SWITCH

Removal and Installation

INFOID:0000000008843977

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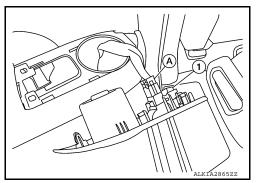
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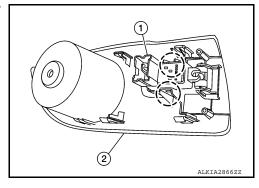
REMOVAL

- 1. Remove the rear door cup holder mat.
- 2. Remove the rear power window switch from the rear door finisher using a suitable tool.
- 3. Disconnect the harness connector (A) from the rear power window switch (1).



4. Release the two pawls, then separate the rear power window switch (1) from the switch finisher (2).

(_): Pawl



INSTALLATION

Installation is in the reverse order of removal.

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