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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 ANTI-PINCH]

PREPARATION PREPARATION Special Service Tool The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here. Tool number (Kent-Moore No.)

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

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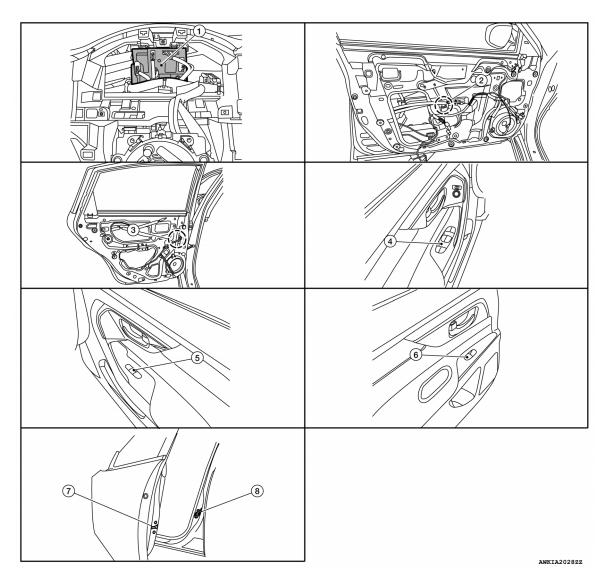
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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- BCM (view with combination meter removed)
- 4. Main power window and door lock/ unlock switch
- 7. Front door lock assembly LH (key cylinder switch)
- Front power window motor LH (RH similar)
- Power window and door lock/unlock 6. switch RH
- 8. Front door switch LH (RH similar)
- Rear power window motor LH (RH similar)
- Rear power window switch LH (RH similar)

Component Description

INFOID:0000000007987629

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LH FRONT ONLY ANTI-PINCH]

Component	Function
BCM	Supplies power to power window switches. Controls retained power.
Front power window motor LH	Integrates the ENCODER POWER and WINDOW MOTOR. Starts operating with signals from main power window and door lock/unlock switch. Transmits power window motor rotation as a pulse signal to main power window and door lock/unlock switch.
Front power window motor RH	Starts operating with signals from main power window and door lock/unlock switch & power window and door lock/unlock switch RH.
Main power window and door lock/unlock switch	 Directly controls all power window motor of all doors. Controls anti-pinch operation of front power window LH.
Power window and door lock/unlock switch RH	Controls front power window motor RH.
Rear power window switch	Controls rear power window motors LH and RH.
Rear power window motor	Starts operating with signals from main power window and door lock/unlock switch & rear power window switch.
Front door switch LH or RH	Detects door open/close condition and transmits to BCM.

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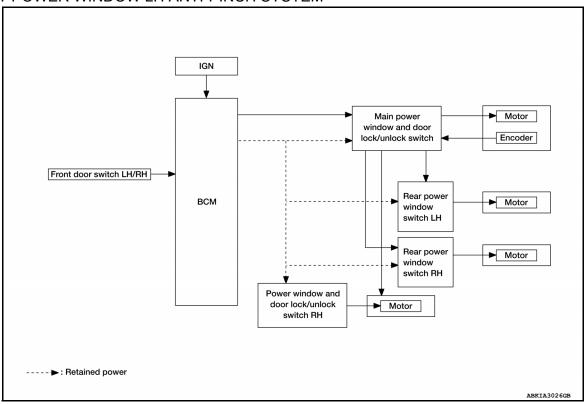
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SYSTEM

System Diagram

FRONT POWER WINDOW LH ANTI-PINCH SYSTEM



System Description

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MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch	Main power window and door lock/unlock switch function	Actuator
Encoder	Encoder pulse signal		
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal		Front power window motor
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control	Front power window motor
BCM	RAP signal		
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor

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 is turned OFF.
- Main power window and door lock/unlock switch can open/close all windows.
- Front & rear power window switches can open/close the corresponding windows.
- · Power window lock switch can lock all power windows other than driver seat.
- If door glass receives resistance that is more than the specified value and the power window is in the AUTO-UP operation (Front LH), power window will move in the reverse direction (Anti-Pinch Function).

POWER WINDOW AUTO-OPERATION (FRONT LH)

SYSTEM

< SYSTEM DESCRIPTION >

[LH FRONT ONLY ANTI-PINCH]

- AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits to main power window and door lock/unlock switch as the encoder pulse signal while power window motor is operating.
- Main power window and door lock/unlock switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- Power window motor is operable in case encoder is malfunctioning.

RETAINED POWER OPERATION

 Retained power operation is an additional power supply function that enables power window system to operate 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.
- When timer time passes. (45 seconds)
- AUTO function does not operate if encoder is malfunctioning.

POWER WINDOW LOCK FUNCTION

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

ANTI-PINCH OPERATION (FRONT LH)

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

OPERATION CONDITION

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

NŎTE:

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

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. Keyless power window down operation function can be changed by "PW DOWN SET" in "WORK SUPPORT" mode of "INTELLIGENT KEY" of "BCM" using CONSULT.

Fail-safe

FAIL-SAFE CONTROL

Revision: August 2012

Switches to fail-safe control when malfunction is detected in the 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.

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function open/close operation.

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SYSTEM

[LH FRONT ONLY ANTI-PINCH]

Malfunction	Malfunction condition
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.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[LH FRONT ONLY ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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 [Diagnosti	ic 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			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
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			×	×			
Trunk 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 ANTI-PINCH]

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.

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS INFORMATION >

[LH FRONT ONLY ANTI-PINCH]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

ECU	Reference
	BCS-28, "Reference Value"
DOM	BCS-47, "Fail Safe"
BCM	BCS-47, "DTC Inspection Priority Chart"
	BCS-49. "DTC Index"

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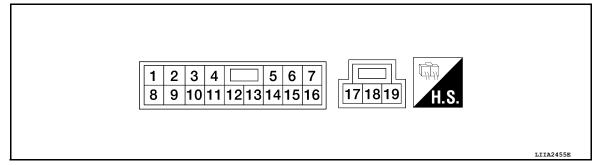
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POWER WINDOW MAIN SWITCH

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	Condition	(Approx.)	
1 (B)	Ground	Ground	_	_	0	
2 (L)	16	Front power window motor RH DOWN signal	Output	When front RH switch in power window main switch is operated DOWN.	Battery voltage	
4 (BG)	12	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB	
5 (R)	12	Encoder pulse signal 1	Input	When power window motor operates.	(V) 4 2 0 10 ms JMKIA0070GB	
6 (SB)	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 (L)	Ground	Rear power window motor LH DOWN signal	Output	When rear LH switch in power window main switch is operated DOWN.	Battery voltage	

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH FRONT ONLY ANTI-PINCH]

Terminal No. (Wire color)		Description		Condition	Voltage	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
9 (Y)	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 (BR) Ground	und RAP signal		Within 45 second after ignition switch is turned to OFF.	Battery voltage		
		T. I. Og. u.	Input	When driver side or passenger side door is opened during retained power operation.	0	
12 (B)	Ground	Encoder ground	_	_	0	
14 (P)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10	
16 (BR)	2	Front power window motor RH UP signal	Output	When front RH switch in power window main switch is operated UP.	Battery voltage	
17 (W)	19	Front power window motor LH UP signal	Output	When front LH switch in power window main switch is operated UP.	Battery voltage	
18 (LG)	Ground	Battery power supply	Input	_	Battery voltage	
19 (R)	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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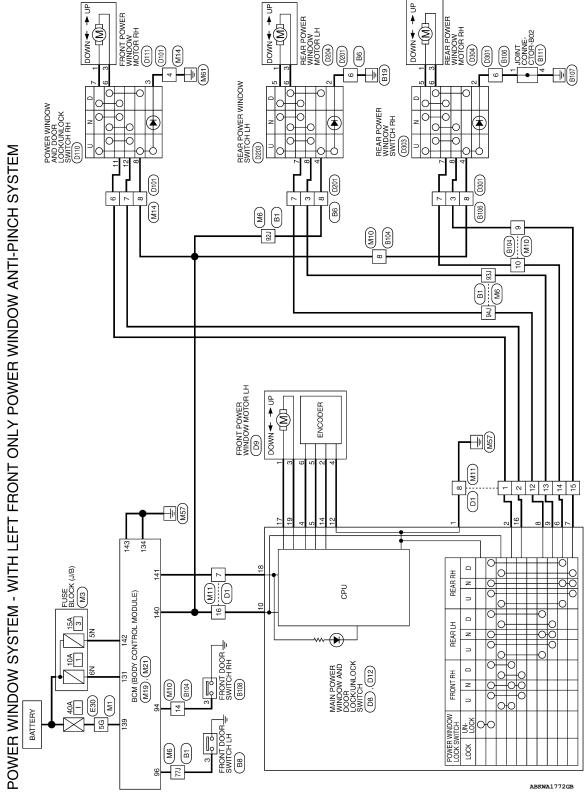
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WIRING DIAGRAM

POWER WINDOW SYSTEM

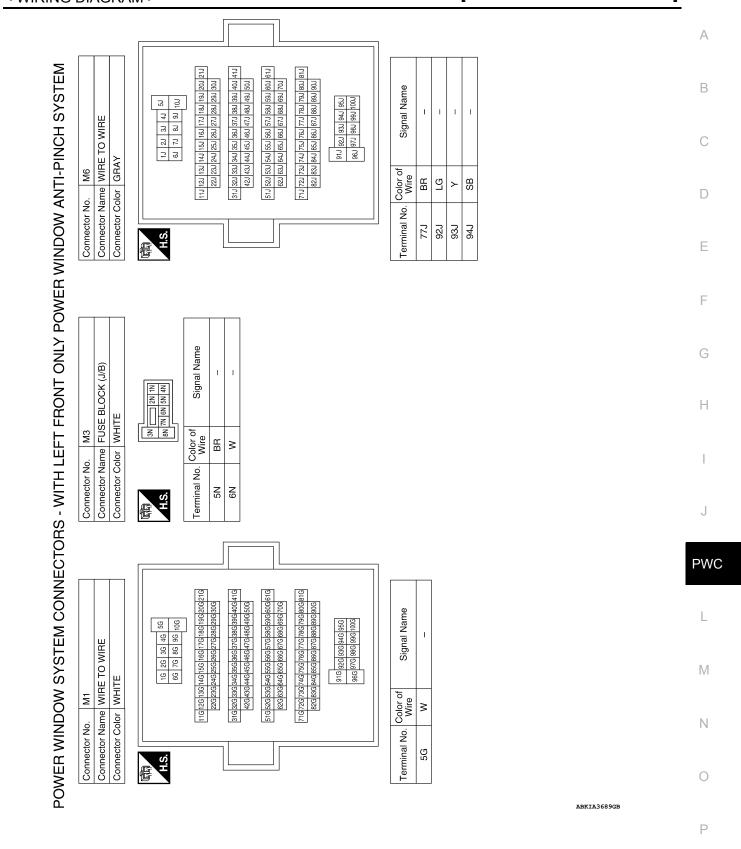
Wiring Diagram - With Left Front Only Power Window Anti- Pinch

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POWER WINDOW SYSTEM

[LH FRONT ONLY ANTI-PINCH]



Connector No.	, M14	4
Connector Name		WIRE TO WIRE
Connector Color	lor WHITE	ІТЕ
H.S.	- 4 2 r	8 2 9
Terminal No.	Color of Wire	Signal Name
4	GR	ı
9	>	I
7	>	I
8	ГG	1

Terminal No. Wire	Color of Wire	Signal Name
140	97	P/W POWER SUPPLY IGN
141	۸	P/W POWER SUPPLY BAT
142	BR	BAT FRONT DOOR
143	В	GND1

					ō.
-	Connector Name WIRE TO WIRE	ITE	4 5 6 7	01 01 +1 01 51	Signal Name
lo. M11	lame WIF	color WH	1 2 3	_	Color of Wire
Connector No.	Connector N	Connector Color WHITE		H.S.	Terminal No. Wire
	l				

Signal Name	ı	ı	ı	1	1	ı	1	1	ı
Color of Wire	>	>	>	В	SB	>	BR	^	LG
Terminal No. Wire	-	2	7	8	12	13	14	15	16

	M21	
	Connector No.	

Connector Name BCM (BODY CONTROL MODULE)	HTE	153 142 141 140 139 138	Signal Name	BAT BCM FUSE	GND2	BAT POWFR F/I
me BC MC	lor WF	137136	Color of Wire	8	ш	>
Connector Na	Connector Color WHITE	H.S.	Terminal No.	131	134	139

M10	WIRE TO WIRE	BROWN	
Connector No.	Connector Name WIRE TO WIRE	Connector Color BROWN	

100 8 8 11 11 11 11 11 11 11 11 11 11 11 11	Signal Name	ı	I	ı	I
7 6 5 4 <u> </u>	Color of Wire	ГG	^	BR	SB
H.S.	Terminal No.	8	6	10	14
		•			

Connector No.). M19	6
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	olor GRAY	АҮ
H.S.	92 91 90 89 88 87 104 103 105 101 99	100 99 98 97 96 95 94 93
Terminal No.	Color of Wire	Signal Name
94	SB	AS DOOR SW
96	BR	DR DOOR SW

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Signal Name	1	1										WIRE TO WIRE BROWN	13 14 15 16	Signal Name	1	1	ı	ı	
Color of Wire	_ L	g -	2								o. B104	_	1 2 3	Color of Wire		>	SB	_	
Terminal No. 77J	92)	930	5								Connector No.	Connector Name Connector Color	H.S.	Terminal No.	8	თ	10	14	
O WIRE			54 34 24 14 100 94 84 77 64	21.1 20.1 19.1 18.1 17.1 16.1 15.1 14.1 13.1 12.1 11.1 3.0 29.1 29.2 27.1 28.1 28.2 24.1 23.3 22.2	41J 40J 39J 38J 37J 36J 35J 34J 33J 32J 31J 50J 49J 48J 47J 46J 45J 44J 43J 42J	61.1 60.1 59.1 58.1 57.1 56.1 55.1 54.1 53.3 52.1 51.1 70.1 69.1 69.1 67.1 66.1 65.1 64.1 63.1 62.1	81.1 80.1 72.1 72.1 72.1 72.1 72.1 72.1 72.1 72	1001 994 934 937 964 965 967 967				FRONT DOOR SWITCH LH WHITE	<u></u>	Signal Name	1				
Connector No. B1 Connector Name WIRE TO WIRE Connector Color GRAY	_			21.7 20.1 19.1 18.1 30.1 29.1 28.1	41J 40J 39J 38J 50J 49J 48J	614 604 594 584	81.3 80J 79J 78J 90J 89J 88J	953			Connector No. B8	Connector Name FRONT Connector Color WHITE	1 2 3	Color of Wire	3 L	-			
Conne		F	HS						_		Conne	Conne	明.S.H.S.	Termi					
TO WIRE			56 46 36 26 16 106 96 86 76 66	21G20G19G18G17G16G15G14G13G12G11G 30G29G28G27G26G25G25G24G23G22G	41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 31G 50G 49G 48G 47G 46G 45G 44G 43G 42G	61G 60G 59G 59G 55G 55G 55G 55G 55G 57G 57G 57	81G80G79G78G77G76G75G74G73G72G71G 90G89G88G87G88G88G84G83G82G	95G 94G 93G 92G 91G 100G 99G 98G 97G 96G	Signal Name			WIRE TO WIRE WHITE	3 6 7 8	Signal Name	ı	ı	ı	ı	
Connector No. E30 Connector Name WIRE TO WIRE Connector Color WHITE			100	21G20G19G1	41G40G39G3	61G60G59G5	81G80G79G7	956	Color of Wire	<u> </u>	r No. B6		1 2 4 5 6 7	No. Wire	SB	В	PC		
Connector No. Connector Name		E	H.S.						Terminal No.	5G	Connector No.	Connector Name	同的 H.S.	Terminal No.	က	9	7	8	

-	Connector Name JOINT CONNECTOR-B02	<u> </u>	4 3 2 1		Signal Name	-	_
. B111	me JOI	lor WH	4		Color of Wire	В	В
Connector No.	Connector Na	Connector Color WHITE	僵	H.S.	Terminal No. Wire	1	4
	퓵						

	Connector Name FRONT POWER WINDOW MOTOR LH	GREEN	2 5 5	Signal Name	٩n	VCC	NO	GND	PLS A	- C
<u>8</u>	me FF	or GF		Color of Wire	8	۵	<u>~</u>	В	œ	2
Connector No.	Connector Na	Connector Color	呵呵 H.S.	Terminal No.	-	2	က	4	2	,

			i		
90	Connector Name FRONT DOOR SWITCH RH	IITE	3 4	Signal Name	-
. B108	me FR	lor WH	-	Color of Wire	٦
Connector No.	Connector Na	Connector Color WHITE	(京) H.S.	Terminal No.	3

Connector No.). D8	
Connector Name		MAIN POWER WINDOW DOOR LOCK/UNLOCK SWITCH
Connector Color		WHITE
师 H.S.		18 19
Terminal No.	Color of Wire	Signal Name
17	Μ	DR UP
18	ГG	BAT
19	ш	DR DN

Connector No.		B106	9(
Connector Name	ame	WIR	WIRE TO WIRE
Connector Color	olor	WHITE	ITE
所 H.S.		2 5	8 2 9
Terminal No.	Color of Wire	or of re	Signal Name
က	>		ı
9	В		ı
7	SB	m	ı
8			ı
		1	

D1 WIRE TO WIRE	WHITE	13 12 11 10 9 8	Signal Name	ı	ı	ı	ı	1	I	ı	ı	ı
Je J	-	7 6 5 16 15 14	Color of Wire	_	BR	ا ا	<u>m</u>	_	>	SB	>	BB
Connector No.	Connector Color	南京 H.S.	Terminal No.	-	2	7	8	12	13	14	15	16

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[LH FRONT ONLY ANTI-PINCH]

Connector No.	. D101)1
Connector Name		WIRE TO WIRE
Connector Color WHITE	lor WH	ITE
部 H.S.	8 3	6 2 2
	Color of	
Terminal No.	Wire	Signal Name
4	В	ı
9	_	ı
7	ГG	I
80	SB	I

Signal Name	ENCODER 2	ENCODER 1	RR DN	RR UP	RL DN	RL UP	ING	1	GND	ı	ENCODER +	UNLOCK	AS UP
Color of Wire	BG	æ	SB	>	_	>	BB	1	В	1	۵	Œ	BB
erminal No.	4	2	9	7	80	6	10	11	12	13	14	15	16

	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH (WITH LEFT FRONT LOUZY POWER WINDOW ANTI-PINCH SYSTEM)	TE	11 12 13 14 15 16	Signal Name	GND	AS DN	TOCK
. D12		lor WH	8 10 10 11	Color of Wire	В	_	Э
Connector No.	Connector Name	Connector Color WHITE	原 H.S.	Terminal No.	1	7	8

Connector No.	. D111	1
Connector Name	me FRC WIN SYS	FRONT POWER WINDOW MOTOR RH (WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	lor GREEN	EN
是 H.S.		(P) (Q) (Q) (Q) (Q) (Q) (Q) (Q) (Q) (Q) (Q
Terminal No.	Color of Wire	Signal Name
-	>	ı
2	1	ı
က	>	ı
4	ı	ı
2	ı	ı

Signal Name	ı	ı	DOWN	UP	IGN	1	ı	MAIN DOWN	MAIN UP
Color of Wire	1	1	>	>	SB	_	_	٦	LG
Terminal No.	4	5	9		8	6	10	11	12

01	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM)	WHITE	9 10 11 12	Signal Name	LOCK	UNLOCK	GND
. D110		-	6 7 8	Color of Wire	Q	BG	В
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2	3

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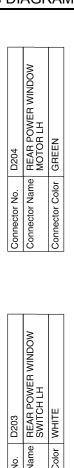
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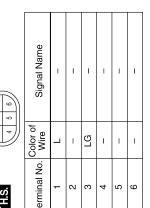
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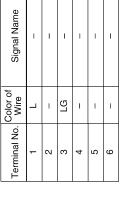
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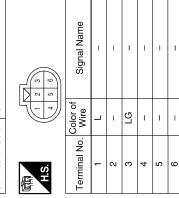


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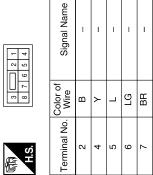








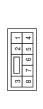


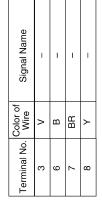


I)3
>		D303
0		Connector No.

REAR POWER WINDOW SWITCH RH	ITE	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	1	ı	ı	I	ı	ı
	lor WHITE	8 2	Color of Wire	В	>	_	LG	BR	>
Connector Name	Connector Color	原可 H.S.	Terminal No.	2	4	2	9	7	8







D301	WIRE TO WIRE	WHITE	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	





Signal Name	ı	I	I	1
Color of Wire	>	В	BR	Υ
Terminal No.	က	9	7	8

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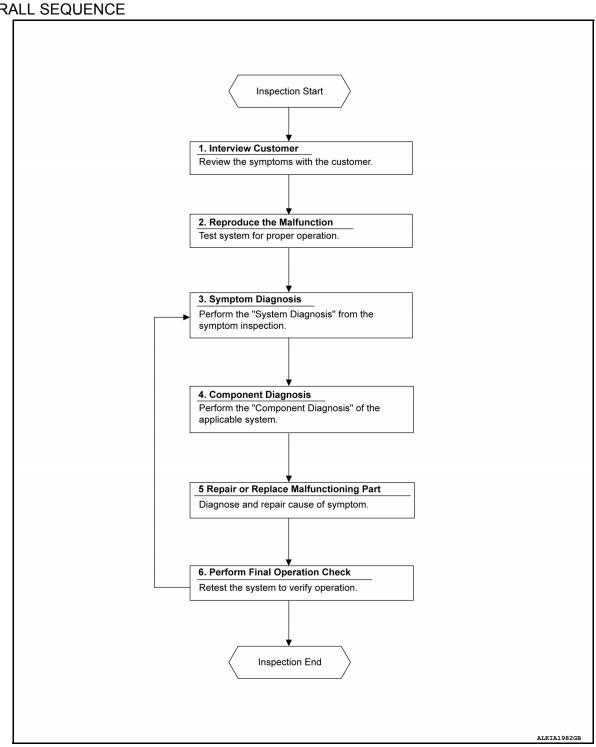
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000008666178 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 FRONT ONLY ANTI-PINCH]

>> 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.

${f 5}$. 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.

INSPECTION AND ADJUSTMENT [LH FRONT ONLY ANTI-PINCH] < BASIC INSPECTION > INSPECTION AND ADJUSTMENT Α ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: De-В scription INFOID:0000000007987622 Initial setting is necessary when battery terminal is disconnected. **CAUTION:** The following specified operations are not performed under the non-initialized condition. Auto-up operation Anti-pinch function D Retained power operation ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Spe-Е cial Repair Requirement INFOID:0000000007987623 INITIALIZATION PROCEDURE Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more. Turn ignition switch ON. 2. 3. Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open) 4. Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 4 seconds or more. Н 5. Inspect anti-pinch function. CHECK ANTI-PINCH FUNCTION 1. Fully open the door window. Place a piece of wood near fully closed position. Close door glass completely with AUTO-UP. Check that glass lowers for approximately 150 mm or 2 seconds without pinching piece of wood and stops.

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

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-11, "Fail-safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000007987624

Initial setting is necessary when replacing power window main switch.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement INFOID:0000000007987625

INITIALIZATION PROCEDURE

1. Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH FRONT ONLY ANTI-PINCH]

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

CHECK ANTI-PINCH FUNCTION

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

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-11, "Fail-safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

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Regarding Wiring Diagram information, refer to BCS-52, "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	I (40A)
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

NO >> GO TO 2

$2.\,$ CHECK POWER SUPPLY CIRCUIT

- Disconnect BCM connector M21.
- Check voltage between BCM connector M21 terminals 131, 139 and ground.

В	CM	Ground	Voltage (Approx.)	
Connector	Terminal	Giodila	(Approx.)	
M21	131	_	Pattony voltago	
M21	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 M21 terminals 134, 143 and ground.

В	CM	Ground	Continuity
Connector	Terminal	Ground	Continuity
M21	134		Yes
IVIZ I	143	_	165

Is the inspection result normal?

YES >> Inspection End.

Revision: August 2012

>> 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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PWC-29

2013 Altima Sedan

INFOID:0000000008700693

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000008700694

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-30, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000008700695

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</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 D8, D12 and ground.

Ter				
(+)			Voltage (Approx.)	
Main power window and door lock/unlock switch	Terminal	(–)	(Approx.)	
D12	10	Ground	Pattonyvoltago	
D8	18	Giouna	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 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
M21	140	D12	10	Yes
IVIZ I	141	D8	18	165

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal		Continuity
M21	140	Ground	No
IVIZ 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.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

3. Check continuity between main power window and door lock/unlock switch connector D8 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D8	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.
- 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.

4. CHECK BCM OUTPUT SIGNAL

- 1. Connect BCM.
- Turn ignition switch ON.
- 3. Check voltage between BCM connector M21 and ground.

Ter	Voltage (Approx.)			
(+)				
BCM connector	Terminal	(-)	(
M21	140	Ground	Rattery voltage	
IVIZ I	141	Giodila	Battery voltage	

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
- NO >> Replace BCM. Refer to BCS-77, "Removal and Installation".

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

- 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 D12 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	
D12		9		DOWN	0
DIZ		0		UP	0
		DOWN	Battery voltage		

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-47. "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-66, "Removal and Installation". After that, refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".
- 6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)
- 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 D12 and ground.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(–)	position (rear RH)	(Approx.)
	7		UP	Battery voltage
D12	1	Cround	DOWN	0
DIZ		Ground	UP	0
6			DOWN	Battery voltage

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to <u>PWC-66</u>, "Removal and Installation". After that, refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL <u>UNIT</u>: Special Repair Requirement".
- 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 D8 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/ unlock switch connector	Terminal	(-)	position (front LH)	(Approx.)
D8	17	— Ground	UP	Battery voltage
			DOWN	0
			UP	0
	19		DOWN	Battery voltage

Is the inspection result normal?

NO

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

>> Replace main power window and door lock/unlock switch. Refer to PWC-66, "Removal and Installation". After that, refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROLUNIT: Special Repair Requirement".

- 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.
- 2. Turn ignition switch ON.
- 3. Check voltage between main power window and door lock/unlock switch D12 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(–)	position (front RH)	(Approx.)
	16	Ground	UP	Battery voltage
D12			DOWN	0
D12	0		UP	0
	2		DOWN	Battery voltage

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-66, "Removal and Installation". After that, refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:0000000008700696

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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 do	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		
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).

Terr	minal	Main power window and doo	r lock/unlock switch condition	Continuity
9		Rear LH		
7		Rear RH	UP	
16		Front RH		
8		Rear LH		
9		Real LIT		
7	1	Rear RH	NEUTRAL	No
6	'	Front RH	NEUTRAL	INO
2				
16		FIUIL KII		
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).

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Revision: August 2012 PWC-33 2013 Altima Sedan

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Terr	minal	Main power window and door	lock/unlock switch condition	Continuity
9		Rear LH		
7		Rear RH	UP	
16		Front RH		
8		Rear LH		
9		Real LFI		
7	1	Door DU	NEUTRAL	Voc
6	ı	Rear RH	NEUTRAL	Yes
2		Front RH		
16		FIOHL KIT		
8		Rear LH		1
6		Rear RH	DOWN	
2		Front RH		

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 <u>PWC-66</u>, "Removal and Installation". After that, refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL <u>UNIT</u>: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000008700697

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to PWC-30, "POWER WINDOW MAIN SWITCH: Component Function Check".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000008700698

- · 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

INFOID:0000000008700699

Power Window And Door Lock/unlock Switch RH

$oldsymbol{1}_{-}$ CHECK POWER WINDOW MOTOR FUNCTION

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

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

NO >> Refer to PWC-35, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

FRONT POWER	R WINDOW	SWITCH:	Diagnosis	Procedure
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Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

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

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

- 1. Turn ignition switch ON.
- 2. Check voltage between power window and door lock/unlock switch RH connector D110 and ground.

-			
(+)			Voltage
Power window and door lock/unlock switch RH connector Terminal		(–)	(Approx.)
D110	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, power window and door lock/unlock switch RH, rear power window switch LH and rear power window switch RH.
- 3. Check continuity between BCM connector M21 and power window and door lock/unlock switch RH connector D110.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M21	140	D110	8	Yes

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal	Ground	Continuity
M21	140	Oround	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)

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 D12 and power window and door lock/unlock switch RH connector D110.

Main power window and door lock/unlock switch connector	Terminal	Power window and door lock/ unlock switch RH connector	Terminal	Continuity
D12	2	D110	11	Yes
	16		12	103

4. Check continuity between main power window and door lock/unlock switch connector D12 and ground.

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D12	2 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.
- 3. Check voltage between BCM connector M21 and ground.

Terr				
(+)		()	Voltage (Approx.)	
BCM connector	Terminal	(-)	(FF - 7	
M21	140	Ground	Battery voltage	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-77, "Removal and Installation".

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

Check power window and door lock/unlock switch RH.

Refer to PWC-36, "FRONT POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-66, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Component Inspection

INFOID:0000000008700701

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COMPONENT INSPECTION

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

Check power window and door lock/unlock switch RH D110.

Terminal		Power window switch condition	Continuity
8	7	UP	
12	6	- UP	
12	6	NEUTRAL	Yes
7	11	NEUTIVAL	165
8	6	DOWN	
7	11	DOWN	

Is the inspection result normal?

YES >> Power window and door lock/unlock switch RH is OK.

NO >> Replace power window and door lock/unlock switch RH. Refer to PWC-67, "Removal and Installation".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

BCM supplies power.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

 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

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Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to PWC-37, "REAR POWER WINDOW SWITCH : Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000008700704

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch ON.

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

Terminal					
(+)			Condition	Voltage	
Rear power window switch connector		Terminal	(–)		(Approx.)
LH	D203	1 Ground		Ignition switch ON	Battery voltage
RH	D303	1	Ground	ignition switch ON	Dattery 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 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
D12	8	D203	3	Yes
D12	9	5203	2	165

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

Main power window and door lock/unlock switch connector	Terminal	01	Continuity	
D12	8	Ground	No	
DIZ	9	1	INO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

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
D12	6	D303	3	Yes
DIZ	7	D303	2	163

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

Main power window and door lock/un- lock switch connector	Terminal	•	Continuity
D12	6	Ground	No
	7	_	INO

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

4. CHECK HARNESS CONTINUITY

- 1. 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
M21	140	LH	D203	1	Yes
M21 140	RH	D303	1	165	

3. Check continuity between BCM connector and ground.

BCM connector	Terminal	Ground	Continuity
M21	140	Oround	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-77, "Removal and Installation".

NO >> Repair or replace harness or connectors.

5. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to PWC-38, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to PWC-68, "Removal and Installation".

REAR POWER WINDOW SWITCH: Component Inspection

INFOID:0000000008700705

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Ter	Terminal Power window switch o		Continuity
1	5	UP	
2	4	Ur	
2	4	NEUTRAL	Yes
5	3	NEUTRAL	165
1	4	DOWN	
5	3	DOWN	

Is the inspection result normal?

YES >> Rear power window switch is OK.

NO >> Replace rear power window switch. Refer to PWC-68, "Removal and Installation".

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< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE: Description

INFOID:0000000007987647

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

DRIVER SIDE : Component Function Check

INFOID:0000000007987648

${f 1}$. 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-40, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007987649

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

Front Power Window Motor LH Circuit Check

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

- 1. 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.)	
	3	Ground	UP	Battery voltage	
D9			DOWN	0	
D9			UP	0	
			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.
- Check continuity between main power window and door lock/unlock switch connector D8 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	
	17	D9	1	Yes	
D0	19	D9	3	165	

^{4.} Check continuity between main power window and door lock/unlock switch connector D8 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Main power window and door lock/un- lock switch connector	Terminal		Continuity
D8	17	Ground	No
D6	19		NO
the inspection result normal? YES >> Replace main power wir	o <u>PWC-41, "DRIVER SI</u> ss.	ck switch. Refer to <u>PWC-</u> DE : Special Repair Requ	66, "Removal and Instaluirement".
heck front power window motor LH efer to PWC-41, "DRIVER SIDE : (the inspection result normal? YES >> Check intermittent incide NO >> Replace front power win	Component Inspection". ent. Refer to GI-47, "Inteded with the second control of the sec	GW-16, "Removal and In	stallation - Front Regula-
tor". After that, refer to P		: Special Repair Require	<u>ement"</u> .
OMPONENT INSPECTION	·		INFOID:000000007987650
.CHECK FRONT POWER WINDO		adle ta marriage (c. 1)	atas DO
neck motor operation by connecting	g the battery voltage dire	ectly to power window m	otor D9.
Terminal		Motor	condition
(+)	(–)	IVIOLOI	condition
3	1	DO	OWN
1	3		UP
the inspection result normal? YES >> Front power window monomoly NO >> Replace front power window tor". After that, refer to P	dow motor LH. Refer to WC-41, "DRIVER SIDE		
. PERFORM INITIALIZATION PRO	CEDI IRE		
erform initialization procedure. efer to PWC-27, "ADDITIONAL SE epair Requirement". the inspection result normal? YES >> GO TO 2. NO >> Check intermittent incide CHECK ANTI-PINCH OPERATIO	ERVICE WHEN REMOVE		VE TERMINAL : Special
Check anti-pinch operation. Refer to <u>PWC-27, "ADDITIONAL SE</u> Repair Requirement".		ING BATTERY NEGATI	VE TERMINAL : Special
s the inspection result normal? YES >> Inspection end. NO >> Refer to PWC-40, "DRIVERS SIDE	/ER SIDE : Component	Function Check".	

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

PASSENGER SIDE : Description

INFOID:0000000007987652

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.

PASSENGER SIDE: Component Function Check

INFOID:0000000007987653

1. CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

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

Is the inspection result normal?

YES >> Front power window motor RH is OK.

NO >> Refer to PWC-42, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000007987654

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

Front Power Window Motor RH Circuit Check

1. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK 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 D111 and ground.

Т	erminal			
(+) Front power window motor RH connector Terminal			Front power window motor	Voltage (V)
		(-)	RH condition	(Approx.)
	1	Crawad	UP	Battery voltage
D111			DOWN	0
DIII		Ground	UP	0
	3		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 D110 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
D110	7	D104	1	Yes
BIIO	6	D104	3	103

^{4.} Check continuity between power window and door lock/unlock switch connector D110 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

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Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

INFOID:0000000007987659

Rear Power Window Motor LH Circuit Check

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

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

Terminal				
(+)			Window	Voltage
Rear power window motor LH connector	Terminal	(–)	condition	(Approx.)
D204	1	Ground	UP	Battery voltage
			DOWN	0
	3		UP	0
			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 D203 and rear power window motor LH connector D204.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity	
D203	5	D204	1	Yes	
D203	4	D20 4	3	163	

Check continuity between rear power window switch LH connector D203 and ground.

Rear power window switch LH connector	Terminal		Continuity	
D203	5	Ground	No	
	4		INO	

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-44, "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-44, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace rear power window motor LH. Refer to GW-25, "Removal and Installation".

REAR LH: Component Inspection

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.

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

Te	rminal	Motor condition
(+)	(–)	Wotor condition
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

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

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-45, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. 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	Voltage
Rear power window motor RH connector	Terminal	(–)	switch RH condition	(Approx.)
	4	Ground	UP	Battery voltage
D304	ı		DOWN	0
	2		UP	0
	3		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 rear power window switch RH.
- Check continuity between rear power window switch RH connector D303 and rear power window motor RH connector D304.

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[LH FRONT ONLY ANTI-PINCH]

Rear power window switch RH connector	Terminal	Rear power window motor RH connector	Terminal	Continuity	
D303	5	D304	1	Yes	
D303	4	2304	3	163	

4. Check continuity between rear power window switch RH connector D303 and ground.

Rear power window switch RH connector	Terminal		Continuity
D303	5	Ground	No
	4	1	

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-46, "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-46, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace rear power window motor RH. Refer to GW-25, "Removal and Installation".

REAR RH: Component Inspection

INFOID:0000000007987663

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.

Terr	ninal	Motor condition	
(+)	(-)	- Wotor Condition	
3	1	DOWN	
1	3	UP	

Is the inspection result normal?

YES >> Power window motor is OK.

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

ENCODER

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:0000000007987665

1. CHECK ENCODER OPERATION

Check front door glass LH perform AUTO open/close 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-47, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007987666

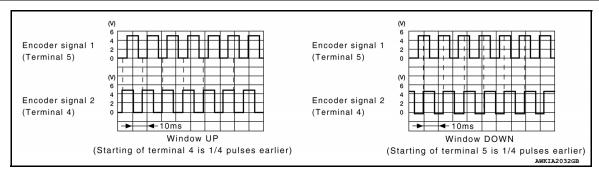
Regarding Wiring Diagram information, refer to <u>PWC-18</u>, "Wiring <u>Diagram - With Left Front Only Power Window Anti- Pinch"</u>.

Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Connect front power window motor LH.
- Turn ignition switch ON.
- 3. Check signal between main power window and door lock/unlock switch connector D12 and ground with oscilloscope.

(+)			Signal		
Main power window and door lock/ unlock switch connector	Terminal	(-)	(Reference value)		
D12	4 Ground		D12		Refer to following signal
512	5	Giodila	Trefer to following signal		



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> GO TO 2.

2. CHECK FRONT POWER WINDOW MOTOR LH POWER SUPPLY

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

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< DTC/CIRCUIT DIAGNOSIS >

Termin	V 16			
(+)	(-)	Voltage (Approx.)		
Front power window motor LH connector	notor LH connector Terminal		, , ,	
D9	2	Ground	10	

Is the inspection result normal?

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.
- 3. Check continuity between main power window and door lock/unlock switch connector D12 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
D12	14	D9	2	Yes

4. Check continuity between main power window and door lock/unlock switch connector D12 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D12	14		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-66, "Removal and Installation". After that, refer to PWC-49, "DRIVER SIDE: Special Repair Requirement".

NO >> Repair or replace harness or connectors.

4. CHECK GROUND CIRCUIT

- 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	4	Oround	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 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
D12	12	D9	4	Yes

Is the inspection result normal?

- YES >> Check main power window and door lock/unlock switch. Refer to PWC-33, "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.

ENCODER

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

2. Check continuity between main power window D12 and door lock/unlock switch connector 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
D12	4	D9	6	Yes
DIZ	5	Б	5	163

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

Main power window and door lock/unlock switch connector	Terminal		Continuity
D12	4	Ground	No
DIZ	5		INO

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-16</u>, "<u>Removal and Installation - Front Regulator</u>". After that, refer to <u>PWC-49</u>, "<u>DRIVER SIDE</u>: <u>Special Repair Requirement</u>".

NO >> Repair or replace harness or connectors.

DRIVER SIDE: Special Repair Requirement

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

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DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

DOOR SWITCH

Description

Detects door open/close condition.

Component Function Check

INFOID:0000000008655989

1. CHECK FUNCTION

(II) With CONSULT

Check door switches DOOR SW-DR, DOOR SW-AS, DOOR SW-RL, DOOR SW-RR in Data Monitor mode with CONSULT.

Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	CLOSE → OPEN: OFF → ON
DOOR SW-RL	GLOGE - OF EIN. OFF - OIN
DOOR SW-RR	

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to PWC-50, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000008655990

Regarding Wiring Diagram information, refer to DLK-50, "Wiring Diagram".

1. CHECK DOOR SWITCH INPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.

[LH FRONT ONLY ANTI-PINCH]

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	Terminals					
BCM connector	+) Terminal	(-)	Door co	ndition	Voltage (V) (Approx.)	
				OPEN	0	
	96		Front door switch LH	CLOSE	(V) 15 10 5 0 JPMIA0011GB	
				OPEN	0	
M19	94	Ground	Front door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	
IVITO		- Glound -		OPEN	0	
	93		Rear door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB	
				OPEN	0	
	82			Rear door switch LH	CLOSE	(V) 15 10 5 0 10 ms

Is the inspection result normal?

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

2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM connector and door switch connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
	96	Front door switch LH	Ground	
M19	94	Front door switch RH	part of	Yes
WITE	93	Rear door switch RH	door switch	165
	82	Rear door switch LH	SWILCIT	

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DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
	96		
M19	94	Ground	No
WITS	93		INO
	82		

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and door switch.

3.check door switch

Refer to PWC-52, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace malfunctioning door switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End.

Component Inspection

INFOID:0000000008655991

1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- Disconnect door switch connector.
- 3. Check door switch.

Tern	ninal	Door switch condition	Continuity	
Door	switch	Door switch condition		
3	Ground part of	Pressed	No	
	door switch	Released	Yes	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch.

POWER WINDOW LOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description INFOID:0000000007987672

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

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-66, "Removal and Installation". After that, refer to PWC-53, "Special Repair Requirement".

NO >> Check condition of harness and connector.

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

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POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:0000000007987687

1. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-71, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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

Check main power window and door lock/unlock switch.

Refer to PWC-33, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

 $oldsymbol{3}$. Check main power window and door lock/unlock switch power supply and ground circuit

Check main power window and door lock/unlock switch power supply and ground circuit.

Refer to PWC-30, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

1. CHECK FRONT POWER WINDOW MOTOR LH

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Check front power window motor LH.

Refer to PWC-40, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987689

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

Check power window and door lock/unlock switch RH.

Refer to PWC-34, "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 FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to PWC-42, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987690

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH.

Refer to PWC-37, "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-43, "REAR LH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987691

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to PWC-37, "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 RH

Check rear power window motor RH.

Refer to PWC-42, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

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

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-27</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-47, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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ANTI-PINCH SYSTEM DOES NOT OPERATE NORMALLY (DRIVER SIDE) [LH FRONT ONLY ANTI-PINCH]

< SYMPTOM DIAGNOSIS >

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

Diagnosis Procedure

INFOID:0000000007987692

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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-47, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

INFOID:0000000007987694

Diagnosis Procedure

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to DLK-99, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

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

Replace main power window and door lock/unlock switch.

Refer to PWC-66, "Removal and Installation". After that, PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

>> Inspection End.

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed.

Refer to PWC-27, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

 $2.\mathsf{CHECK}$ FRONT DOOR LOCK ASSEMBLY LH (DOOR KEY CYLINDER SWITCH)

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

Refer to PWC-53, "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-47, "Intermittent Incident".

NO >> GO TO 1.

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH FRONT ONLY ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000008527327

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-143, "Component Function Check"</u>.

2. CHECK POWER WINDOW OPERATION

Check power window operation.

In the inspection result normal?

YES >> GO TO 3.

NO >> Refer to PWC-40, "DRIVER SIDE : Diagnosis Procedure".

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

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

Is the inspection result normal?

YES >> GO TO 4.

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

4. CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> GO TO 1.

PRE-INSPECTION FOR DIAGNOSTIC

< PERIODIC MAINTENANCE >

[LH FRONT ONLY ANTI-PINCH]

PERIODIC MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1.INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW MAIN SWITCH

< REMOVAL AND INSTALLATION >

[LH FRONT ONLY ANTI-PINCH]

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Removal and Installation

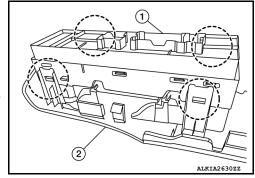
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REMOVAL

- Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the main power window and door lock/unlock switch and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the main power window and door lock/unlock switch.
- Release the four pawls (two on each side) using a suitable tool, then separate the main power window and door lock/unlock switch (1) from the main power window and door lock switch finisher (2).



Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

When the main power window and door lock/unlock switch is disconnected from the harness connector it is necessary to perform the initialization procedure. Refer to PWC-27, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

FRONT POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

[LH FRONT ONLY ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Removal and Installation

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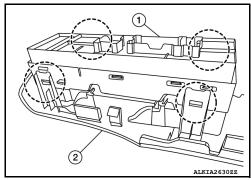
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REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the power window switch RH and door lock/unlock RH finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the power window and door lock/unlock switch RH.
- Release the four pawls (two on each side) using a suitable tool, then separate the power window and door lock/unlock switch RH (1) from the power window and door lock/unlock switch finisher RH (2).



Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

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REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

[LH FRONT ONLY ANTI-PINCH]

REAR POWER WINDOW SWITCH

Removal and Installation

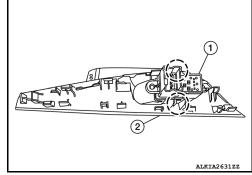
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REMOVAL

- 1. Release the pawls using a suitable tool and lift the rear power window switch and finisher as an assembly by starting at the rear, then pull upward and remove
- 2. Disconnect the harness connector from the rear power window switch.
- 3. Release the pawl (one on each side) using a suitable tool, then separate the rear power window switch (1) from the rear power switch finisher (2).



Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

PRECAUTIONS

< PRECAUTION >

[LH & RH FRONT ANTI-PINCH]

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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

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[LH & RH FRONT ANTI-PINCH]

PREPARATION

PREPARATION

Special Service Tool

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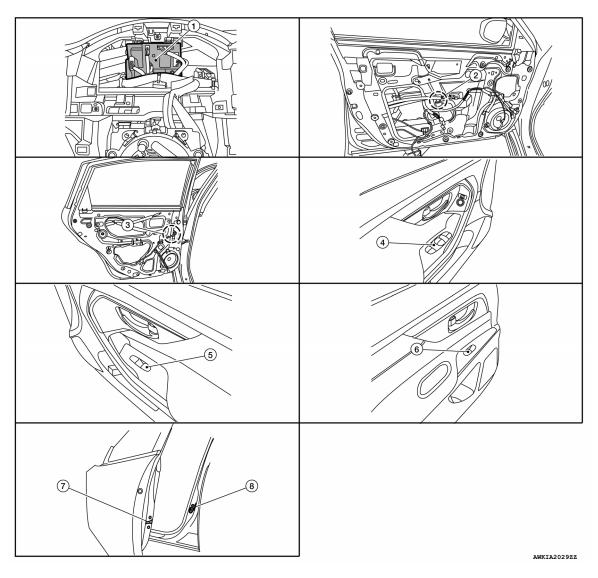
Tool number (Kent-Moore No.) Tool name		Description
 (J-46534) Trim tool set	AWJIA04832Z	Removing trim components

[LH & RH FRONT ANTI-PINCH]

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



- BCM (view with combination meter removed)
- 4. Main power window and door lock/ unlock switch
- 7. Front door lock assembly LH (key cylinder switch)
- Front power window motor LH (RH similar)
- Power window and door lock/unlock 6. switch RH
- 8. Front door switch LH (RH similar)
- Rear power window motor LH (RH similar)
- Rear power window switch LH (RH similar)

Component Description

FRONT WINDOW ANTI-PINCH SYSTEM

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COMPONENT PARTS

[LH & RH FRONT ANTI-PINCH]

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

SYSTEM

System Diagram

INFOID:0000000007987788

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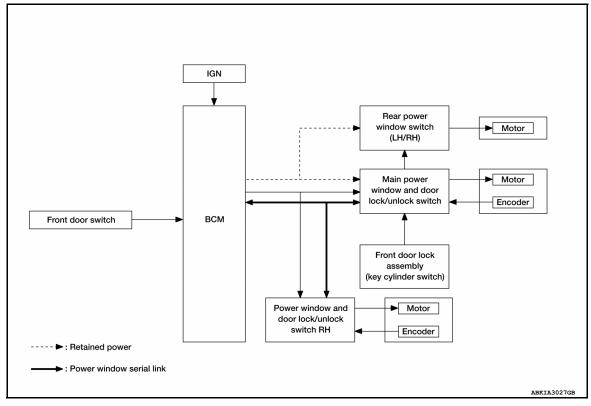
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FRONT WINDOW ANTI-PINCH SYSTEM



System Description

INFOID:0000000007987789

POWER WINDOW MAIN SWITCH INPUT/OUTPUT SIGNAL CHART

Item	Input signal to main power window and door lock/unlock switch Main power window and lock/unlock switch full lock/unlock switch		Actuator	
Key cylinder switch	LOCK/UNLOCK signal (more than 1 seconds over)			
Encoder	Encoder pulse signal		Front power window motor	
Main power window and door lock/unlock switch	Front power window motor LH UP/ DOWN signal	Power window control		
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	rower window control		
BCM	RAP signal			
Rear power window switch	Rear power window motor UP/DOWN signal		Rear power window motor	

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH INPUT/OUTPUT SIGNAL CHART

Revision: August 2012 PWC-73 2013 Altima Sedan

Item	Input signal to front power window switch	Front power window switch function	Actuator	
Power window and door lock/unlock switch RH	Front power window motor RH UP/ DOWN signal	Power window control	Front power window motor RH	
Encoder	Encoder pulse signal			
BCM	RAP signal			

POWER WINDOW OPERATION

- Power window system 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 (driver side) can open/close all windows.
- Front & rear power window switch can open/close the corresponding windows.
- If door glass receives resistance that is more than the specified value and the power window is in the AUTO-UP operation (Front LH & RH), power window will move in the reverse direction (Anti-Pinch Function).

POWER WINDOW AUTO-OPERATION (FRONT LH & RH)

- AUTO UP/DOWN operation can be performed when main power window and door lock/unlock switch & power window and door lock/unlock switch RH turns to AUTO.
- Encoder continues detecting the movement of power window motor and transmits to power window switch as the encoder pulse signal while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- · Power window motor is operable in case encoder is malfunctioning.
- · AUTO 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.
- 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 switch.

ANTI-PINCH OPERATION (FRONT LH & RH)

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

OPERATION CONDITION

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

NOTE:

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

KEY CYLINDER SWITCH OPERATION

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

OPERATION CONDITION

· Ignition switch OFF

SYSTEM

< SYSTEM DESCRIPTION >

[LH & RH FRONT ANTI-PINCH]

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

KEYLESS POWER WINDOW DOWN OPERATION (FRONT LH & RH)

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

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

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

While retained power operation activate, keyless power window down function cannot be operated. Keyless power window down operation function can be changed by "PW DOWN SET" in "WORK SUPPORT" mode of "INTELLIGENT KEY" of "BCM" using CONSULT.

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
- · 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)

< SYSTEM DESCRIPTION >

[LH & RH FRONT ANTI-PINCH]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000008682966

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 [Diagnosti	c 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			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
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			×	×			
Trunk 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 ANTI-PINCH]

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000008682965

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 ANTI-PINCH]

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000008598858

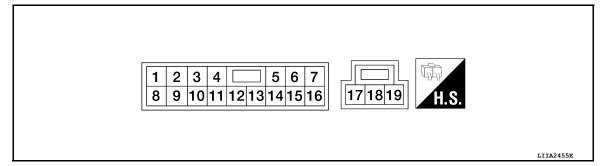
ECU	Reference
	BCS-28, "Reference Value"
BCM	BCS-47, "Fail Safe"
BCIVI	BCS-47, "DTC Inspection Priority Chart"
	BCS-49, "DTC Index"

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	Voltage (Approx.)
1 (B)	Ground	Ground	_	_	0
3 (P)	Ground	Door key cylinder switch LH LOCK signal	Input	Key position (Neutral/Unlocked → Locked)	5 → 0
4 (BG)	12	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
5 (R)	12	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
6 (SB)	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 (Y)	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

[LH & RH FRONT ANTI-PINCH]

Termina	al No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	Voltage (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 JPMIA0013GB
12 (P)	Ground	Encoder ground	_	_	0
14 (LG)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
15 (G)	Ground	Door key cylinder switch LH UNLOCK signal	Input	Key position (Neutral/Locked → Unlocked)	5 → 0
17 (W)	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 (LG)		Battery power supply	Input	_	Battery voltage
19 (R)	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).

POWER WINDOW MAIN SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT ANTI-PINCH]

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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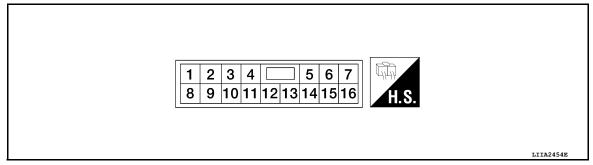
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FRONT POWER WINDOW SWITCH

Reference Value

TERMINAL LAYOUT



PHYSICAL VALUES

POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Termi	nal No.	Description			Voltage
+	-	Signal name	Input/ Output	Condition	(Approx.)
3 (P)	Ground	Power window serial link	Input/ Output	IGN SW ON or power window timer operating.	(V) 15 10 5 0 10 ms JpmIa0013GB
4 (BG)	Ground	Encoder ground	_	_	0
5 (W)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates	10
7 (B)	Ground	Ground	_	_	0
8 (LG)	Ground	Battery power supply	Input	_	Battery voltage
9 (LG)	4	Encoder pulse signal 1	Input	When power window motor operates.	(V) 6 4 2 0 10 ms JMKIA0070GB
10 (G)	4	Encoder pulse signal 2	Input	When power window motor operates.	(V) 6 4 2 0 10 ms

FRONT POWER WINDOW SWITCH

< ECU DIAGNOSIS INFORMATION >

[LH & RH FRONT ANTI-PINCH]

Termi	nal No.	Description			Voltage	
+	-	Signal name	Input/ Output	Condition	(Approx.)	
11 (R)	12	Power window motor UP signal	Output	When power window motor is UP at operated.	Battery voltage	
12 (P)	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.
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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.
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It changes to condition before initialization and the following functions do not operate when switched to failsafe control.

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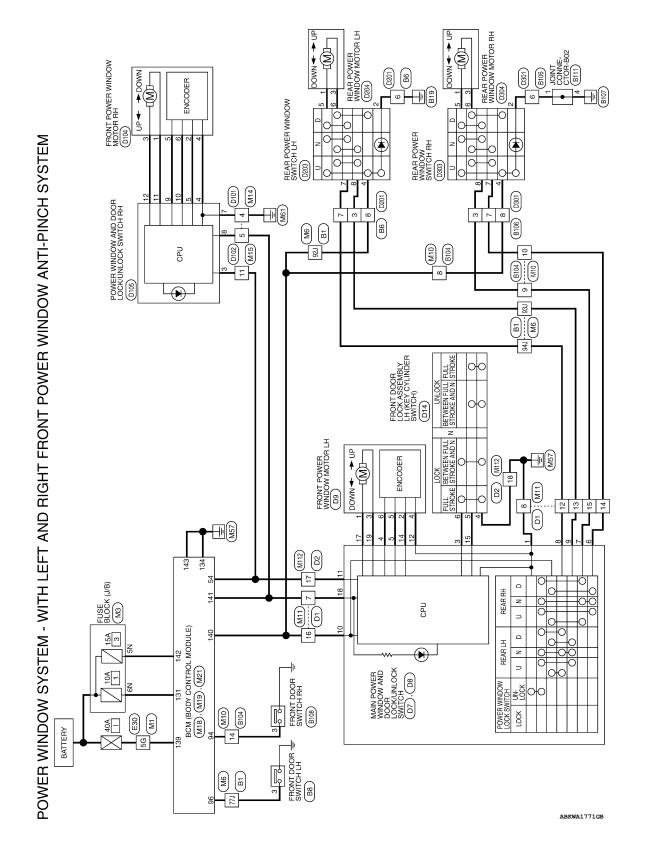
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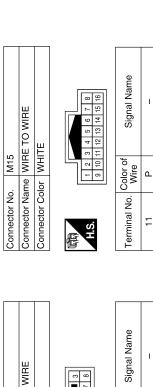
WIRING DIAGRAM

POWER WINDOW SYSTEM

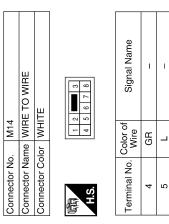
Wiring Diagram - With Left And Right Front Power Window Anti-Pinch



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Connector No. Miles Conn		В
MG		С
MINDOW Months M		D
Connector No. Connector Name Connector Name Connector Name Connector No. Atlanta No. T7J E92J 1 Columbia 1 Sala		Е
SONT P		F
ID RIGHT FF	Signal Name	G
M3 FUSE BLOCK (J/B) WHITE or of Signal Name of Sig	Signa	Н
H LEFT A Vo. M3 Vo. M3 Volor of Wire BB Wine BB	Color of Wire SB SB	I
Connector No. Connector Name Connector Name Connector Name Son Color 5N K	Terminal No. 8 8 9 10 10 14 14	J
VECTO		PWC
M1	F W C O O O O O O O O O	L
VER WINDOW SYSTEM C Connector No. M1	Connector No. M10 Connector Name WIRE TO WIRE Connector Color BROWN To 5 4 C TO 10 10 10 11 10 10 11 10 10 11 10 10 11 10 10	M
MINDOW M1 M1 M1 M1 M2 M2 M2 M2	or No. M10 or Name WIRI or Color BRO	Ν
Connector No. Connector Name Connector Color H.S. Terminal No. Co	Connector No. Connector Color Connector Color	0
<u>ă</u>	ABKIA3682GB	Р



	BCM (BODY CONTROL MODULE)	IE	137 (138) (138) (138) (138) (138) (138) (138) (138)	Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	P/W POWER SUPPLY IGN	P/W POWER SUPPLY BAT	BAT FRONT DOOR	GND1
. M21		lor WHITE	137138135	Color of Wire	8	<u>m</u>	×	9	>	BB	<u>m</u>
Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No. Wire	131	134	139	140	141	142	143



Connector No.	. M19	
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	lor GRAY	١٨
H.S.	92 91 90 89	SS 80 20 90 80 90 90 90 90 90 9
Terminal No.	Color of Wire	Signal Name
94	SB	AS DOOR SW
96	BR	DR DOOR SW

Connector No.	M11
Connector Name	Connector Name WIRE TO WIRE
Connector Color WHITE	WHITE
<u>-</u>	2 3 4 5 6 7
8	8 9 10 11 12 13 14 15 16

Signal Name	ı	_	1	-	_	_	_
Color of Wire	>	В	SB	>	BR	>	LG
Terminal No. Wire	7	8	12	13	14	15	16

M18	Connector Name BCM (BODY CONTROL MODULE)	BLACK	
Connector No.	Connector Name	Connector Color BLACK	

	42 41	62 61	
	44 43 42	63	
	5 44	65 64	
	46 45	9 99	
	47	19	
	48	89	
117	49	69	
W	50	2	
IN.	51	11	
Ш	52	72	
\Box	53	73	
	54	74	
	55	75	
	56	76	
	57	77	
8	28	78	
Ö	29	79	
₹	99	80	

Ferminal No.

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Connector No. M112 Connector Name WIRE TO WIRE		Connector No. E30	5. E30	TO WIRE		Connector No. B1	o. B1	TO WIRE		
Connector Color WHITE		Connector Color	olor WHITE	Э		Connector Color	olor GRAY	5		
H.S. (13 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24		斯 H.S.		56 46 36 26 16 106 96 86 76 66		H.S.		5J 4J 3J 2J 1J 10J 9J 8J 7J 6J		
Terminal No Color of Sirnal Name			216200	21G20G19G18G17G16G15G14G13G12G11G 30G29G28G27G28G25G24G23G22G	[5]		21.1 20.1 19.	21.1 20.1 19.1 18.1 17.1 16.1 15.1 14.1 13.1 12.1 11.1 3.0 12.0 11.0 3.0 26.1 26.1 25.1 24.1 23.1 22.0		
Wire B P			416400	41G49G39G38G37G38G38G34G33G32G31G 50G49G48G47G48G45G44G43G42G	[9]		41.) 40.) 39.	41.1 40.1 39.1 38.1 37.1 38.1 38.1 34.1 33.1 32.1 31.1 50.1 49.1 48.1 47.1 48.1 48.1 44.1 43.1 42.1	317	
]		019	61G60G59G58G57G56G55G54G53G52G51G 70G69G68G67G66G65G64G63G62G	9		61) 60) 59.	61J 60J 59J 58J 57J 56J 55J 54J 53J 52J 51J 70J 69J 68J 68J 67J 66J 65J 64J 63J 62J 67J	[217]	
			816800	81 G 80 G 79 G 78 G 77 G 76 G 75 G 74 G 73 G 72 G 71 G 90 G 89 G 88 G 87 G 86 G 85 G 84 G 83 G 82 G	[5]		81,1 80,1 79,	81.0 80.0 79.0 78.0 77.0 76.0 75.0 74.0 75.0 72.0 77.0 77.0 90.0 89.0 88.0 87.0 86.0 85.0 84.0 83.0 82.0	[17]	
				95G 94G 93G 92G 91G 100G 99G 98G 97G 96G			[6] -	95. 94.1 93.1 92.1 91.1 100.1 99.1 98.1 97.1 96.1		
						1				
		Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name		
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Connector No. B6 Connector Name WIRE TO WIRE		Terminal No.	Color of Wire	Signal Name						
Connector Color WHITE	T	3	SB	-						
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Connector No. B8 Connector Name FRONT DOOR SWITCH LH Connector Color WHITE	Connector No. B104 Connector Name WIRE TO WIRE Connector Color BROWN	B104 ne WIRE TC	TO WIRE	<u> </u>	Connector No. Connector Name Connector Color	me WIRE T	Connector No. B106 Connector Name WIRE TO WIRE Connector Color WHITE	
H.S.	品.	8 10 3	11 12 13 14 15 16 T	管工	H.S.	1 2 4 5	© © 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Terminal No. Color of Wire Signal Name	Terminal No.	Color of Wire	Signal Name	Ter	Terminal No.	Color of Wire	Signal Name	
3 L	8	_	I		3	>	1	
	6	>	1		9	В	ı	
	10	SB	ı		7	SB	ı	
	14	_	I		8	_	ı	
Connector No. B108	Connector No.	B111		S	Connector No.	-		
Connector Name FRONT DOOR SWITCH RH Connector Color WHITE	Connector Name Connector Color	ne JOINT	Connector Name JOINT CONNECTOR-B02 Connector Color WHITE	ÖÖ	Connector Name Connector Color	ime WIRE T	Connector Name WIRE TO WIRE Connector Color WHITE	
H.S.	原 H.S.	4 3	2 1 0		S	7 6 5 4 16 15 14 13	1 2 2 1 1 1 2 2 1 1	
Terminal No. Color of Signal Name	Terminal No.	Color of Wire	Signal Name	Ter	Terminal No.	Color of Wire	Signal Name	
3 L	-	В	ı		7	LG	I	

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ENCODER SIG2 ENCODER SIG1

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LOCK

Signal Name	UNLOCK	AR UP	AS UP	ENCODER SIG2	NÐI	COM	ENCODER GND	-	ENCODER +	NNFOCK	-
Color of Wire	SB	>	٦	>	BR	۵	Ь	-	ГG	В	-
Terminal No.	9	7	8	6	10	11	12	13	14	15	16

D7	MAIN POWER WINDOW AND DOOR LOCKUNLOCK SWITCH (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name

Color of Wire

Terminal No.

GND

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	9	22	
	Ξ	23	
	12	24	
L			_

Connector Name WIRE TO WIRE

D2

Connector No.

Connector Color WHITE

Signal Name	ı	1
Color of Wire	Д	В
Terminal No.	17	18

Signal Name	UP	VCC	NO	GND	PSL A	PSL B
Color of Wire	Ν	LG	В	۵	æ	BG
Terminal No. Wire	-	2	3	4	5	9

D9	Connector Name FRONT POWER WINDOW MOTOR LH	GREEN	
Connector No.	Connector Name	Connector Color GREEN	



	D8	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH	WHITE	17 18 19
Ŀ.	_	_ < 0	_	

Connector Name Connector Color

Connector No.

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	200	
뜩	17	
		J



Signal Nam	DR UP	BAT	DR DN
Color of Wire	M	ГG	В
Terminal No. Color of Wire	17	18	19

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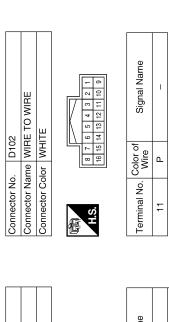
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Terminal No.	Color of Wire	Signal Name
1	1	1
2	_	_
က	۵	COM
4	BG	ENCODER GND
5	M	ENCODER +
9	1	1
7	В	GND
8	ГG	BAT
6	LG	ENCODER SGN1
10	Э	ENCODER SGN2
11	В	UP
12	۵	DOWN

	_					_
_	RE TO WIRE	ТЕ	7 6 5 4 4	Signal Name	ı	
	me WIF	lor WH	8 8	Color of Wire	В	-
connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	京司 H.S.	Terminal No.	4	ı

D105	POWER WINDOW AND DOOR LOCKUNLOCK SWITCH RH (WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	WHITE	
Connector No.	connector Name	Sonnector Color WHITE	



Z	0	
Connector N	onnector	
ect	150	
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Connector No.	D14
Connector Name	Connector Name FRONT DOOR LOCK ASSEMBLY LH
Connector Color GRAY	GRAY

3 4 5 6	Signal Name	-	-	ı
1 2	Color of Wire	В	Э	۵
用.S.	Terminal No. Wire	4	2	9

D104	FRONT POWER WINDOW MOTOR RH (WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)	GREEN	
Connector No.	Connector Name	Connector Color GREEN	

5 2 3	Signal Name	UP SW	NCC	DOWN SW	GND	PULSE A	BINGEB
4	Color of Wire	В	>	Д	BG	LG	ט
南 H.S.	Terminal No.	-	2	3	4	5	y

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			А
D204 REAR POWER WINDOW MOTOR LH GREEN To rof Signal Name To rof Signal Name		Signal Name	В
	1 1 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		D D
Connector No. Connector Name Connector Color H.S. Terminal No. W	2 4 4 5 Connector No.	Connector Color H.S. Terminal No. Vo. 2 2 3 1	ιο φ E
			F
D203 REAR POWER WINDOW SWITCH LH WHITE STORE 2 1 STORE 2 1 STORE 3 4 STORE 3 4 STORE 3 4 STORE 3 4	WER WINDOW	WHITE WHITE If of Signal Name	G
			B >
Connector No. Connector Name Connector Color H.S. Color Terminal No. Color 2 E	6 L Connector No.	Connector Color H.S. Terminal No. Col 2 4 4 5 6 6	7 8 J
			PWC
O WIRE		Signal Name	L
Connector No. D201 Connector Name WIRE TO WIRE Connector Color WHITE A.S. Terminal No. Color of Signa 3 V	6 B R Y BR Y Connector No. D301 Connector Name WIRE TO WIRE	Connector Color WHITE A.S. Terminal No. Wire B. V B. BR A. V B. BR	_
Connector No. Connector Color Connector Color H.S.	6 8 8 Connector No.	Connector Co	O ABKIA3688GB

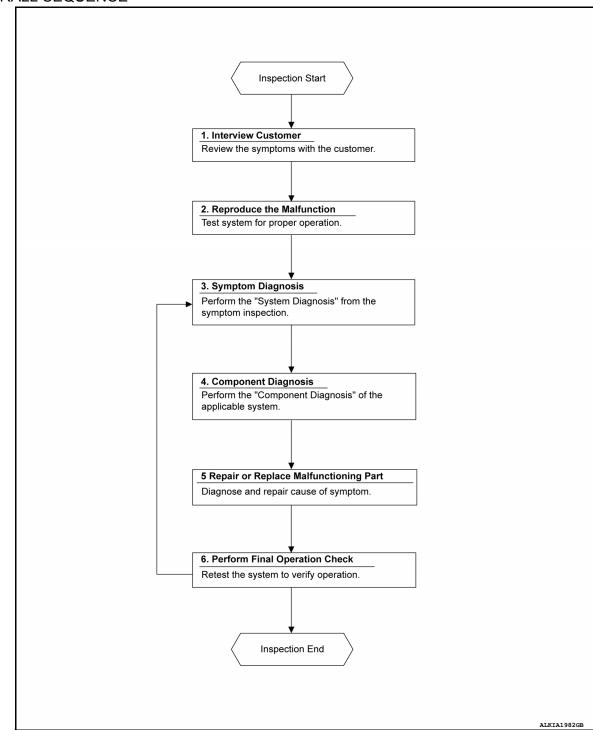
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BASIC INSPECTION

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 & RH FRONT ANTI-PINCH]

>> 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.
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.
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.
NO >> GO TO 3.

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INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

[LH & RH FRONT ANTI-PINCH]

INSPECTION AND ADJUSTMENT

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description

Initial setting is necessary when battery terminal is disconnected.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement

INITIALIZATION PROCEDURE

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

CHECK ANTI-PINCH FUNCTION

- 1. Fully open the door window.
- 2. Place a piece of wood near fully closed position.
- 3. Close door glass completely with AUTO-UP.
- Check that glass lowers for approximately 150 mm (5.91 in.)or 2 seconds without pinching piece of wood and stops.
- Check that glass does not rise when operating the power window main switch while lowering.

CAUTION:

- Do not check with hands and other part of body because they may be pinched. Do not get pinched.
- Check that AUTO-UP operates before inspection when system initialization is performed.
- It may switch to fail-safe mode if open/close operation is performed continuously. Perform initial setting in that situation. Refer to PWC-80, "Fail Safe"
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- 2. Anti-pinch function
- 3. Retained power operation when ignition switch is OFF.

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Description

INFOID:0000000008527517

Initial setting is necessary when replacing power window main switch.

CAUTION:

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

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

ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement

INITIALIZATION PROCEDURE

	INSPECTION AND ADJUSTMENT
< B	ASIC INSPECTION > [LH & RH FRONT ANTI-PINCH]
1.	Disconnect battery minus terminal or power window main switch connector. Reconnect it after a minute or more.
2.	Turn ignition switch ON.
3.	Operate power window switch to fully open the window. (This operation is unnecessary if the window is already fully open)
4.5.	Continue pulling the power window switch UP (AUTO-UP operation). Even after glass stops at fully closed position, keep pulling the switch for 4 seconds or more. Inspect anti-pinch function.
СН	ECK ANTI-PINCH FUNCTION
1.	Fully open the door window.
2.	Place a piece of wood near fully closed position.
	Close door glass completely with AUTO-UP.
	theck that glass lowers for approximately 150 mm (5.91 in.) or 2 seconds without pinching piece of wood and stops.
• C	heck that glass does not rise when operating the power window main switch while lowering.
CA	UTION:
	o not check with hands and other part of body because they may be pinched. Do not get pinched.
	heck that AUTO-UP operates before inspection when system initialization is performed.
• It	may switch to fail-safe mode if open/close operation is performed continuously. Perform initial set-

- ting in that situation. Refer to PWC-80, "Fail Safe".
- Perform initial setting when auto-up operation or anti-pinch function does not operate normally.
- Finish initial setting. Otherwise, next operation cannot be done.
- 1. Auto-up operation
- Anti-pinch function 2.
- 3. Retained power operation when ignition switch is OFF.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000008702104

INFOID:0000000008700706

Regarding Wiring Diagram information, refer to BCS-52, "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	I (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 M21.
- 2. Check voltage between BCM connector M21 terminals 131, 139 and ground.

BCM		Ground	Voltage (Approx.)	
Connector	Terminal	Ground	(Approx.)	
M21	131	— Battery v	Pottory voltago	
	139		ballery vollage	

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 M21 terminals 134, 143 and ground.

В	BCM		Continuity	
Connector	Terminal	Ground	Continuity	
M21	134		Yes	
MZT	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

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 & RH FRONT ANTI-PINCH]

POWER WINDOW MAIN SWITCH: Component Function Check

INFOID:0000000008700707

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-97, "POWER WINDOW MAIN SWITCH: Diagnosis Procedure".

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000008700708

Regarding Wiring Diagram information, refer to <u>PWC-84</u>, "Wiring <u>Diagram - With Left And Right Front Power Window Anti-Pinch"</u>.

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

1. CHECK POWER SUPPLY CIRCUIT

Turn ignition switch ON.

2. Check voltage between main power window and door lock/unlock switch connectors and ground.

Н

(+)			Voltage	
Main power window and door lock/un- lock switch connector Terminal		(–)	(Approx.)	
D7	10	Ground	Battery voltage	
D8	18	Ground	Dattery Voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK HARNESS CONTINUITY

PWC

- 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.

	N	

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В	CM connector	Terminal	switch connector	Terminal	Continuity
	M21	140	D7	10	Yes
	IVIZ I	141	D8	18	163

Check continuity between BCM connector M21 and ground.

BCM connector	Terminal		Continuity
M21	140	Ground	No
	141	1	INO

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

$3.\,$ CHECK GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

- 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 D7 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	1		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.

f 4 . CHECK BCM OUTPUT SIGNAL

- Connect BCM.
- 2. Turn ignition switch ON.
- 3. Check voltage between BCM connector M21 and ground.

	Terminals		
(+)		()	Voltage (Approx.)
BCM connector	Terminal	(-)	()
M21	140	Ground	Pottony voltago
IVIZ I	141	Giouna	Battery voltage

Is the measurement value within the specification?

- YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
- NO >> Replace BCM. Refer to <u>BCS-77</u>, "Removal and Installation".

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 connector D7 and ground.

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(–)	position (rear LH)	(Approx.)
	9	0	UP	Battery voltage
D7	Ground 8	Cround	DOWN	0
Di		Ground	UP	0
		DOWN	Battery voltage	

Is the inspection result normal?

NO

- YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
 - >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

6. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH OUTPUT SIGNAL (REAR POWER WINDOW SWITCH RH)

- 1. 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 D7 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Terminal				
(+)			Window switch	Voltage
Main power window and door lock/unlock switch connector	Terminal	(-)	position (rear RH)	(Approx.)
	7		UP	Battery voltage
D7	,	, Crawad	DOWN	0
6	6	Ground	UP	0
		DOWN	Battery voltage	

Is the inspection result normal?

- YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".
- NO >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="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 connector D7 and ground.

Terminal						
(+)			Window switch	Voltage		
Main power window and door lock/unlock switch connector	Terminal	(-)	position (front LH)	(Approx.)		
	47		UP	Battery voltage		
D7	17	17	17	Cround	DOWN	0
19	Ground	Ground	UP	0		
		DOWN	Battery voltage			

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and Installation".

POWER WINDOW MAIN SWITCH: Component Inspection

INFOID:0000000008700709

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

1. Check main power window and door lock/unlock switch D7.

Teri	minal	Main power window and door lock/unlock switch condition		Continuity
10	1	Rear LH	UP	
10	7	Rear RH	UP	
8	9	Rear LH	NEUTRAL	
6	7	Rear RH	NEUTRAL	Yes
10	8	Rear LH	DOWN	
10	6	Rear RH	DOWN	
1	12		-	

Check continuity between main power window and door lock/unlock switch D7 (power window lock switch). (Lock operation).

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Tern	ninal	Main power window and do	oor lock/unlock switch condition	Continuity	
9		Rear LH	UP		
7		Rear RH	UP		
8		Rear LH			
9	1	Real LFI	NEUTRAL	No	
7	'	Deer DII	Rear RH	NEOTIVAL	INO
6		Real KII			
8		Rear LH	DOWN		
6		Rear RH	DOWN		

3. Check continuity between main power window and door lock/unlock switch D7 (power window lock switch). (Unlock operation).

Terr	minal	Main power window and do	or lock/unlock switch condition	Continuity
9		Rear LH	UP	
7		Rear RH	OF .	
8		Rear LH		
3	1	Real Lin	NEUTRAL	Yes
9	1	Rear RH	NEOTRAL	ies
7		Real KIT		
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-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

POWER WINDOW MAIN SWITCH: Special Repair Requirement

INFOID:0000000008700710

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-94</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT</u>: <u>Special Repair Requirement"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

$oldsymbol{2}$. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-106, "DRIVER SIDE : Component Function Check".

FRONT POWER WINDOW SWITCH

FRONT POWER WINDOW SWITCH: Description

INFOID:0000000008700711

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

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

FRONT POWER	R WINDOW SWITCH:	Component Function Check
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INFOID:0000000008700712

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Power Window And Door Lock/unlock Switch RH

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-101, "FRONT POWER WINDOW SWITCH: Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000008700713

Regarding Wiring Diagram information, refer to PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch".

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 D105 and ground.

Ter			
(+)		Voltage (Approx.)	
Power window and door lock/unlock switch RH connector	Terminal	(–)	(Approx.)
D105	8	Ground	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 BCM and power window and door lock/unlock switch RH.
- Check continuity between BCM connector M21 and power window and door lock/unlock switch RH connector D105.

BCM connector	Terminal	Power window and door lock/un- lock switch RH connector	Terminal	Continuity
M21	141	D105	8	Yes

4. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal	Ground	Continuity
M21	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.
- 3. Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH	lock/unlock switch RH Terminal		Continuity
D105	11	- Ground	Yes

Is the inspection result normal?

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the harness or connectors.

f 4 . CHECK BCM OUTPUT SIGNAL

- Connect BCM.
- 2. Turn ignition switch ON.
- Check voltage between BCM connector M21 and ground.

(+)		()	Voltage (Approx.)	
BCM connector	Terminal	(-)	()	
M21	141	Ground	Battery voltage	

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-77, "Removal and Installation".

FRONT POWER WINDOW SWITCH: Special Repair Requirement

INFOID:0000000008700714

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>PWC-94</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

2. CHECK ANTI-PINCH OPERATION

Check anti-pinch operation.

Refer to <u>PWC-94</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Refer to PWC-101, "FRONT POWER WINDOW SWITCH: Component Function Check".

REAR POWER WINDOW SWITCH

REAR POWER WINDOW SWITCH: Description

INFOID:0000000008700715

- 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

INFOID:0000000008700716

Rear Power Window Switch

1. CHECK REAR POWER WINDOW MOTOR FUNCTION

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

Is the inspection result normal?

YES >> Rear power window switch power supply and ground circuit are OK.

NO >> Refer to PWC-102, "REAR POWER WINDOW SWITCH: Diagnosis Procedure".

REAR POWER WINDOW SWITCH: Diagnosis Procedure

INFOID:0000000008700717

Regarding Wiring Diagram information, refer to PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch".

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Rear Power Window Switch Power Supply Circuit Check

1. CHECK POWER SUPPLY CIRCUIT

Check voltage between rear power window switch connector and ground.

	Ter	minal				
	(+)		(+)		Condition	Voltage
	wer window connector	Terminal	(-)		(Approx.)	
LH	D203	1 0-	Ground	Ignition switch ON	Pattory voltage	
RH	D303	1	Ground	Igrillion Switch ON	Battery voltage	

Is the inspection result normal?

>> 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.

3. Check continuity between main power window and door lock/unlock switch connector D7 and rear power window switch LH connector D203.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch LH connector	Terminal	Continuity
	8 D203		3	Yes
υį	9	D203	2	163

Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity
	8	Ground	No
DI .	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)

Turn ignition switch OFF.

2. Disconnect main power window and door lock/unlock switch and rear power window switch RH.

3. Check continuity between main power window and door lock/unlock switch connector D7 and rear power window switch RH connector D303.

Main power window and door lock/ unlock switch connector	Terminal	Rear power window switch RH connector	Terminal	Continuity
	6	D303	3	Yes
DI.	7		2	163

Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal		Continuity	
D7	6	Ground	No	
Ul	7		NO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace the harness or connectors.

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

4. CHECK HARNESS CONTINUITY

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

BCM connector	Terminal	Rear power window switch connector		Terminal	Continuity
M21	140	LH	D203	1	Yes
IVIZI	140	RH	D303	1	165

3. Check continuity between BCM connector M21 and ground.

BCM connector	Terminal	Ground	Continuity
M21	140	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-77, "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-104, "REAR POWER WINDOW SWITCH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace rear power window switch. Refer to <u>PWC-146, "Removal and Installation"</u>.

REAR POWER WINDOW SWITCH: Component Inspection

INFOID:0000000008700718

COMPONENT INSPECTION

1. CHECK REAR POWER WINDOW SWITCH LH

Check rear power window switch LH D203.

Terminal		Power window switch condition	Continuity	
1	5	UP		
2	4	Ur Ur		
2	4	NEUTRAL	Yes	
5	3	NEOTIVAL	103	
1	4	DOWN		
5	3	BOWN		

Is the inspection result normal?

YES >> Rear power window switch LH is OK.

NO >> Replace rear power window switch. Refer to PWC-146, "Removal and Installation".

2.CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH D303.

Terminal		Power window switch condition	Continuity
1	5	UP	
3	4	UF UF	
3	4	NEUTRAL	Yes
5	2	NEOTIVAL	163
1	4	DOWN	
5	2	DOWIN	

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

YES >> Rear power window switch RH is OK.

NO >> Replace rear power window switch. Refer to PWC-146, "Removal and Installation".

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POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

POWER WINDOW MOTOR

DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000007987809

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

DRIVER SIDE : Component Function Check

INFOID:0000000007987810

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-106, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:000000007987811

Regarding Wiring Diagram information, refer to PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch".

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	Ierminal		lock/unlock switch condition	(Approx.)	
	1		UP	Battery voltage	
D9	,	Ground	DOWN	0	
	3		UP	0	
			DOWN	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

$oldsymbol{2}$. CHECK HARNESS CONTINUITY

- Turn ignition switch OFF.
- 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 D8 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	
D8	17	D9	1	Yes	
Во	19	99	3	165	

4. Check continuity between main power window and door lock/unlock switch connector D8 and ground.

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Main power window and door lock/unlock switch connector	Terminal		Continuity
-	17	Ground	
D8	19		No
Is the inspection result normal?			
YES >> Replace main power window Installation". After that, refer to >> Repair or replace the harness	PWC-107, "DRIVE	ock switch. Refer to <u>PV</u> R SIDE : Special Repair	VC-144, "Removal and Requirement".
3. CHECK POWER WINDOW MOTOR			
Check front power window motor LH. Refer to PWC-107, "DRIVER SIDE: Comp	onent Inspection".		
Is the inspection result normal?	f		
YES >> Check intermittent incident. Re NO >> Replace power window motor After that, refer to PWC-107, "I	LH. Refer to GW-1	<u>6, "Removal and Installa</u>	
DRIVER SIDE : Component Inspe	ection		INFOID:000000007987812
COMPONENT INSPECTION			
1. CHECK FRONT POWER WINDOW MO	OTOR LH		
Check motor operation by connecting the b	attery voltage direc	tly to power window mot	tor D9.
Terminal			
(+)	Motor condition		
3	(-)	DOWN	
1	3	UP	
Is the inspection result normal? YES >> Front power window motor LH		W 46 "Demoval and Inc	tollation Front Dogula
NO >> Replace front power window m tor". After that, refer to PWC-10	07, "DRIVER SIDE	: Special Repair Require	ement".
DRIVER SIDE : Special Repair Re			INFOID:000000007987813
1. PERFORM INITIALIZATION PROCEDU	JRE		
Perform initialization procedure. Refer to <u>PWC-94, "ADDITIONAL SERVICI ment"</u> .	E WHEN REPLACI	NG CONTROL UNIT : S	Special Repair Require-
Is the inspection result normal?			
YES >> GO TO 2	for to CL 47 "Into-	oittont Ingident"	
NO >> Check intermittent incident. Re	elei to <u>GI-47, "Interr</u>	illent incident".	
2. CHECK ANTI-PINCH OPERATION			
Check anti-pinch operation. Refer to <u>PWC-94, "ADDITIONAL SERVICI</u> <u>Repair Requirement"</u> .	E WHEN REMOVII	NG BATTERY NEGATIV	<u>E TERMINAL : Special</u>
s the inspection result normal?			
YES >> Inspection End. NO >> Refer to PWC-114, "DRIVER SPASSENGER SIDE	SIDE : Component I	Function Check".	

POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

PASSENGER SIDE : Description

INFOID:0000000007987814

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.

PASSENGER SIDE : Component Function Check

INFOID:0000000007987815

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-108, "PASSENGER SIDE : Diagnosis Procedure".

PASSENGER SIDE: Diagnosis Procedure

INFOID:0000000007987816

Regarding Wiring Diagram information, refer to <u>PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch"</u>.

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 D104 and ground.

Т	erminal				
(+)			Front power window motor	Voltage	
Front power window motor RH connector	Terminal	(–)	RH condition	(Approx.)	
	1	- Ground	UP	Battery voltage	
D104			DOWN	0	
	3		UP	0	
			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 D105 and front power window motor RH connector D104.

Power window and door lock/un- lock switch RH connector	lerminal		Terminal	Continuity	
D105	11	D104	1	Yes	
D103	12	5104	3	1 163	

^{4.} Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

		T	
Power window and door lock/unlock switch RH connector	Terminal	Crawad	Continuity
D105	11	Ground	No
2.00	12		
s the inspection result normal?			
YES >> Replace power window and			
<u>lation</u>". After that, refer to <u>PV</u>NO >> Repair or replace harness or		<u>ER SIDE : Special Rep</u>	air Requirement".
CHECK FRONT POWER WINDOW			
Check front power window motor RH.	WIOTOICICIT		
Refer to PWC-109, "PASSENGER SIDE	: Component Inspec	ction".	
s the inspection result normal?			
YES >> Check intermittent incident. I			
NO >> Replace front power window			
lator". After that, refer to PW		R SIDE . Special Repa	an Requirement.
PASSENGER SIDE : Compone	nt Inspection		INFOID:000000007987817
COMPONENT INSPECTION			
	MOTOR BU		
. CHECK FRONT POWER WINDOW			
Check motor operation by connecting the	e battery voltage dire	ectly to front power wind	dow motor RH D104.
Terminal			_
(+)	(–)	— Moto	or condition
3	1	1	DOWN
1	3		UP
s the inspection result normal?			
YES >> Front power window motor F			
NO >> Replace front power window lator". After that, refer to PW			
		•	all Requirement.
ASSENGER SIDE : Special Re	epair Requireme	nt	INFOID:000000007987818
. PERFORM INITIALIZATION PROCE	DURE		
Perform initialization procedure.			
Refer to PWC-94, "ADDITIONAL SERVI	CE WHEN REPLAC	ING CONTROL UNIT	: Special Repair Require-
<u>nent"</u> .			
s the inspection result normal?			
YES >> GO TO 2. NO >> Check intermittent incident. I	Pofor to GL 47 "Inter	mittent Incident"	
CHECK ANTI-PINCH OPERATION	Telel to GI-47, Intel	millent moldent.	
Check anti-pinch operation. Refer to <u>PWC-94, "ADDITIONAL SERVI</u>	CE WHEN REMOV	ING BATTERY NEGA	TIVE TERMINAL Special
Repair Requirement".	OL VIIILIN IXLIVIOV	INO DALIENT NEGA	TIVE TERMINAL . Opecial
s the inspection result normal?			
YES >> Inspection End.			
NO >> Refer to <u>PWC-116, "PASSEN</u>	NGER SIDE : Compo	onent Function Check"	·
REAR LH			

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

REAR LH: Description

INFOID:0000000007987819

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

REAR LH: Component Function Check

INFOID:0000000007987820

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-110, "REAR LH: Diagnosis Procedure"

REAR LH: Diagnosis Procedure

INFOID:0000000007987821

Regarding Wiring Diagram information, refer to <u>PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch"</u>.

Power Window Motor Circuit Check

1. CHECK REAR POWER WINDOW SWITCH OUTPUT SIGNAL

- Turn ignition switch OFF.
- 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.

Te	erminal			
(+)			Window	Voltage
Rear power window motor LH connector	Terminal	(–)	condition	(Approx.)
	1	Ground	UP	Battery voltage
D204			DOWN	0
D204	3	Giouria	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.
- 3. Check continuity between rear power window switch LH connector D203 and rear power window motor LH connector D204.

Rear power window switch LH connector	Terminal	Rear power window motor LH connector	Terminal	Continuity
D203	5	D204	1	Yes
5203	4	D20 4	3	163

Check continuity between rear power window switch LH connector D203 and ground.

Rear power window switch LH connector	tor Terminal		Continuity
D203	5	Ground	No
	4		INO

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Is the inspection result normal?

YES >> Check rear power window switch LH. Refer to PWC-104, "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-111, "REAR LH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

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

REAR LH: Component Inspection

INFOID:0000000007987822

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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.

Terminal		Motor condition
(+)	(–)	Wiotor condition
3	1	DOWN
1	3	UP

Is the inspection result normal?

YES >> Rear power window motor LH is OK.

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

REAR RH

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REAR RH: Description

INFOID:0000000007987823

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

INFOID:0000000007987824

${f 1}$. 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?

YES >> Rear power window motor RH is OK.

>> Refer to PWC-111, "REAR RH: Diagnosis Procedure".

REAR RH: Diagnosis Procedure

INFOID:0000000007987825

Regarding Wiring Diagram information, refer to PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch".

PWC-111

Rear Power Window Motor RH Circuit Check

1. CHECK REAR POWER WINDOW SWITCH RH OUTPUT SIGNAL

- 1. Turn ignition switch OFF.
- 2. Disconnect rear power window motor RH.
- Turn ignition switch ON.

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4. Check voltage between rear power window motor RH connector D304 and ground.

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Tei	minal			
(+)			Rear power window	Voltage
Rear power window motor RH connector	Terminal	(–)	switch RH condition	(Approx.)
	1	Ground	UP	Battery voltage
D304			DOWN	0
D304	3	Giouna	UP	0
	3		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.
- 2. Disconnect rear power window switch RH.
- Check continuity between rear power window switch RH connector D303 and rear power window motor RH connector D304.

Rear power window switch RH connector	Terminal	Rear power window motor RH con- nector	Terminal	Continuity
D303	5	D304	1	Yes
D303	4	D304	3	165

4. Check continuity between rear power window switch RH connector D303 and ground.

Rear power window switch RH connector	Terminal		Continuity
D303	5	Ground	No
	4		INO

Is the inspection result normal?

YES >> Check rear power window switch RH. Refer to PWC-104, "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-112, "REAR RH: Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

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

REAR RH: Component Inspection

INFOID:0000000007987826

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	
(+)	(–)	Wiotor Condition	
3	1	DOWN	
1	3	UP	

Is the inspection result normal?

YES >> Rear power window motor RH is OK.

[LH & RH FRONT ANTI-PINCH]

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< DTC/CIRCUIT DIAGNOSIS > >> Replace rear power window motor RH. Refer to GW-25, "Removal and Installation". NO Α В С D Е F G Н PWC L M Ν 0 Р

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DRIVER SIDE

DRIVER SIDE : Description

INFOID:0000000007987827

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:0000000007987828

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-114, "DRIVER SIDE : Diagnosis Procedure".

DRIVER SIDE: Diagnosis Procedure

INFOID:0000000007987829

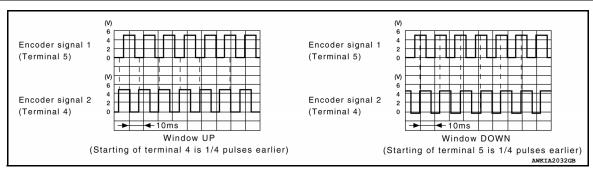
Regarding Wiring Diagram information, refer to <u>PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch"</u>.

Encoder Circuit Check

1. CHECK ENCODER OPERATION

- 1. Turn ignition switch ON.
- Check signal between main power window and door lock/unlock switch connector D7 and ground with oscilloscope.

(+)			Signal (Reference value)
Main power window and door lock/un- lock switch connector	Terminal	(–)	
D7	4	Ground	Refer to following signal
DI.	5	Giouria	Trefer to following signal



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "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.

(+)			Voltage (Approx.)
Front power window motor LH connector	Terminal	(–) (Approx.)	(Approx.)
D9	2	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.
- 3. Check continuity between main power window and door lock/unlock switch connector D7 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
D7	14	D9	2	Yes

Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal	Ground	Continuity
D7	14		No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> Repair or replace the harness or connectors.

4. CHECK GROUND CIRCUIT

- 1. Turn ignition switch OFF.
- 2. 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	4	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 D7 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
D7	12	D9	4	Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

NO >> Repair or replace the harness or connectors.

$6.\,$ CHECK HARNESS CONTINUITY 3

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[LH & RH FRONT ANTI-PINCH]

- 1. Disconnect main power window and door lock/unlock switch.
- Check continuity between main power window and door lock/unlock switch connector D7 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
DZ	5	D9	5	Yes
D1	4	50	6	103

3. Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal	_	Continuity
D7	5	Ground	No
וט	4		140

Is the inspection result normal?

YES >> Replace front power window motor LH. Refer to <u>GW-16</u>, "Removal and Installation - Front Regulator". After that, refer to <u>PWC-94</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : <u>Special Repair Requirement"</u>.

NO >> Repair or replace the harness or connectors.

PASSENGER SIDE

PASSENGER SIDE : Description

INFOID:0000000007987830

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

INFOID:0000000007987831

1. 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.

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

PASSENGER SIDE: Diagnosis Procedure

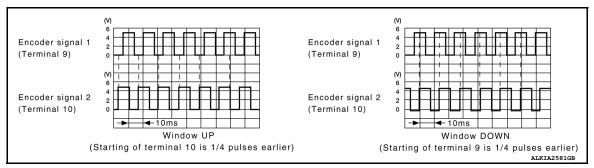
INFOID:0000000007987832

Regarding Wiring Diagram information, refer to <u>PWC-84</u>, "Wiring <u>Diagram - With Left And Right Front Power</u> Window Anti-Pinch".

1. CHECK ENCODER SIGNAL

- 1. Connect front power window motor RH.
- 2. Turn ignition switch ON.
- Check signal between power window and door lock/unlock switch RH connector D105 and ground with oscilloscope.

(+)			Signal (Reference value)	
Power window and door lock/unlock switch RH connector	Terminal	(–)		
D105	9 Ground		Refer to following signal	
D103	10	Ground	There is following signal	



Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "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.

(+)			Voltage (Approx.)
Front power window motor RH con- nector	Terminal	(–)	(Approx.)
D105	5	Ground	10

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

${f 3}$. CHECK HARNESS CONTINUITY 1

- Turn ignition switch OFF.
- 2. 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 D105 and front power window motor RH connector D104.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	5	D104	2	Yes

Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH connector	Terminal	Ground	Continuity
D105	5		No

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-145, "Removal and Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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 D104 and ground.

Front power window motor RH connector	Terminal	Ground	Continuity
D104	4		Yes

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[LH & RH FRONT ANTI-PINCH]

YES >> GO TO 6. NO >> GO TO 5.

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 D105 and front power window motor RH connector D104.

Power window and door lock/unlock switch RH connector	Terminal	Front power window motor RH connector	Terminal	Continuity
D105	4	D104	4	Yes

Is the inspection result normal?

- YES >> Replace power window and door lock/unlock switch RH. Refer to PWC-145, "Removal and Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".
- NO >> Repair or replace the harness or connectors.

6. CHECK HARNESS CONTINUITY 3

- 1. Disconnect power window and door lock/unlock switch RH.
- Check continuity between power window and door lock/unlock switch RH connector D105 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
D105 9	9	D104	5	Yes
	10	D104	6	Yes

3. Check continuity between power window and door lock/unlock switch RH connector D105 and ground.

Power window and door lock/unlock switch RH connector	Terminal	0	Continuity
D105	9	Ground	No
D 105	10		No

Is the inspection result normal?

- YES >> Replace front power window motor RH. Refer to <u>GW-16</u>, "<u>Removal and Installation Front Regulator</u>". After that, refer to <u>PWC-94</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL</u> UNIT: Special Repair Requirement".
- NO >> Repair or replace the harness or connectors.

DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

V DTC/CINCOTT DIAGNOSIS >	
DOOR SWITCH	
Description	INFOID:000000008702105
Detects door open/close condition.	
Component Function Check	INFOID:000000008702106
1.check function	
With CONSULT Check door switches DOOR SW-DR, DOOR SW-A with CONSULT.	S, DOOR SW-RL, DOOR SW-RR in Data Monitor mode
Monitor item	Condition
DOOR SW-DR	
DOOR SW-AS	CLOSE → OPEN: OFF → ON
DOOR SW-RL	CLOSE → OPEN. OPP → ON
DOOR SW-RR	
Is the inspection result normal? YES >> Door switch is OK. NO >> Refer to PWC-119, "Diagnosis Procedure."	<u>e"</u> .
Diagnosis Procedure	INFOID:000000008702107
Regarding Wiring Diagram information, refer to <u>DLK</u>	-50, "Wiring Diagram".

- 1. Turn ignition switch OFF.
- 2. Check signal between BCM connector and ground with oscilloscope.

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	Terminals										
BCM connector	+) Terminal	(-)	Door co	ndition	Voltage (V) (Approx.)						
connector				ODEN	0						
	96		Front door switch LH	OPEN	0 (V) 15 10 5 0 JPMIA0011GB						
				OPEN	0						
M19	94	Ground —							Front door switch RH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB
WHY			Rear door switch RH	OPEN	0						
	93			CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB						
				OPEN	0						
	82		Rear door switch LH	CLOSE	(V) 15 10 5 0 10 ms JPMIA0011GB						

Is the inspection result normal?

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

2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between BCM connector and door switch connector.

BCM connector	Terminal	Door switch connector	Terminal	Continuity
	96	Front door switch LH	Ground	Yes
M19	94	Front door switch RH	part of	
	93	Rear door switch RH	door switch	
	82	Rear door switch LH	SWILCH	

DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

3. Check continuity between BCM connector and ground.

BCM connector	Terminal		Continuity
	96	Ground	No
M19	94		
	93		NO
	82		

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Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness between BCM and door switch.

3. CHECK DOOR SWITCH

Refer to PWC-121, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4

NO >> Replace malfunctioning door switch.

4. CHECK INTERMITTENT INCIDENT

Refer to GI-47, "Intermittent Incident".

>> Inspection End.

Component Inspection

1. CHECK DOOR SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect door switch connector.
- 3. Check door switch.

Terminal Door switch		Door switch condition	Continuity	
		Door switch condition		
Ground part		Pressed	No	
	door switch	Released	Yes	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch.

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DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

DOOR KEY CYLINDER SWITCH

Description INFOID.000000007987837

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

Component Function Check

INFOID:0000000007987838

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

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

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

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Refer to PWC-122, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000007987839

Regarding Wiring Diagram information, refer to <u>PWC-84</u>, "Wiring <u>Diagram - With Left And Right Front Power Window Anti-Pinch"</u>.

1. CHECK DOOR KEY CYLINDER SWITCH INPUT SIGNAL

- Turn ignition switch ON.
- 2. Check voltage between main power window and door lock/unlock switch connector D7 and ground.

Terminals				
(+) Main power window and door lock/unlock switch connector Terminal			Key position	Voltage
		(–)	, , , , , , , , , , , , , , , , , , , ,	(Approx.)
D7 -	4	Crownd	Lock	0
	4		Neutral/Unlock	5
	6	Ground	Unlock	0
			Neutral/Lock	5

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. After that, refer to PWC-124, "Special Requirement".

NO >> GO TO 2.

2. CHECK DOOR KEY CYLINDER SIGNAL CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect main power window and door lock/unlock switch and front door lock assembly LH (key cylinder switch).
- Check continuity between main power window and door lock/unlock switch connector D7 and front door lock assembly LH (key cylinder switch) connector D10.

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Main power window and door lock/ unlock switch connector	Terminal	Front door lock assembly LH (key cylinder switch) connector	Terminal	Continuity
D7	4	D10	6	Yes
6		210	5	103

Check continuity between main power window and door lock/unlock switch connector D7 and ground.

Main power window and door lock/unlock switch connector	Terminal	•	Continuity
	4	Ground	No
D7	6		NO

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

$3.\,$ CHECK DOOR KEY CYLINDER SWITCH GROUND CIRCUIT

Check continuity between front door lock assembly LH (key cylinder switch) connector D10 and ground.

Front door lock assembly LH (key cylinder switch) connector	Terminal	Ground	Continuity
D10	4		Yes

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness or connectors.

4. CHECK DOOR KEY CYLINDER SWITCH

Check door key cylinder switch.

Refer to PWC-123, "Component Inspection".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace front door lock assembly LH (door key cylinder switch). After that, refer to PWC-124, "Special Repair Requirement".

Component Inspection

COMPONENT INSPECTION

1. CHECK DOOR KEY CYLINDER SWITCH

Check front door lock assembly LH (key cylinder switch) D14.

Term	inal		
Front door lock assembly LH (key cylinder switch) connector		Key position	Continuity
5	- 4	Unlock	Yes
5		Neutral/Lock	No
6		Lock	Yes
6		Neutral/Unlock	No

Is the inspection result normal?

YES >> Key cylinder switch is OK.

NO >> Replace front door lock assembly LH (key cylinder switch). After that, refer to PWC-124, "Special Requirement".

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Revision: August 2012 PWC-123 2013 Altima Sedan

DOOR KEY CYLINDER SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Special Repair Requirement

INFOID:0000000007987841

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to <u>DLK-83</u>, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection End.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

POWER WINDOW SERIAL LINK POWER WINDOW MAIN SWITCH

POWER WINDOW MAIN SWITCH: Description

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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:0000000007987843

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> (<u>BCM - DOOR LOCK</u>)".

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

Is the inspection result normal?

YES >> Power window serial link is OK.

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

POWER WINDOW MAIN SWITCH: Diagnosis Procedure

INFOID:0000000007987844

Regarding Wiring Diagram information, refer to <u>PWC-84</u>, "Wiring <u>Diagram - With Left And Right Front Power Window Anti-Pinch"</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.
- 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".

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Revision: August 2012 PWC-125 2013 Altima Sedan

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< DTC/CIRCUIT DIAGNOSIS >

Terminal (+)			Signal (Reference value)	
		(_)		
BCM connector	Terminal	(–)	(
M18	54	Ground	(V) 15 10 5 0 15 15 10 15 15 15 15 15 15 15 15 15 15 15 15 15	

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.
- 3. Check continuity between BCM connector M18 and main power window and door lock/unlock switch connector D7.

BCM connector	Terminal	Main power window and door lock/unlock switch connector	Terminal	Continuity
M18	54	D7	11	Yes

4. Check continuity between BCM connector M18 and ground.

BCM connector	Terminal	Ground	Continuity
M18	54	Ground	No

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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

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

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 ANTI-PINCH]

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

Is the inspection result normal?

YES >> Power window serial link is OK.

NO >> Refer to PWC-127, "FRONT POWER WINDOW SWITCH : Diagnosis Procedure".

FRONT POWER WINDOW SWITCH: Diagnosis Procedure

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Regarding Wiring Diagram information, refer to PWC-84, "Wiring Diagram - With Left And Right Front Power Window Anti-Pinch".

Power Window Serial Link Check

${f 1}$. 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	(-)	(13.3.3.3.3
M18	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.

$oldsymbol{2}$. CHECK POWER WINDOW SERIAL LINK CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM.
- Check continuity between BCM connector M18 and power window and door lock/unlock switch RH connector D105.

BCM connector	Terminal	Power window and door lock/unlock switch RH connector	Terminal	Continuity
M18	54	D105	3	Yes

4. Check continuity between BCM connector M18 and ground.

BCM connector	Terminal	Ground	Continuity
M18	54	Oround	No

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< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

Is the inspection result normal?

- YES >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".
- NO >> Repair or replace the harness or connectors.

POWER WINDOW LOCK SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

POWER WINDOW LOCK SWITCH

Description INFOID:000000007987848

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

1. CHECK POWER WINDOW LOCK SIGNAL

Exchanges for a normal main power window and door lock/unlock switch, and operation is checked. Does power window lock operate?

YES >> Replace main power window and door lock/unlock switch. Refer to PWC-144, "Removal and <a href="Installation". After that, refer to PWC-129, "Special Repair Requirement".

NO >> Check condition of harness and connector.

Special Repair Requirement

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> Inspection end.

NO >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

SYMPTOM DIAGNOSIS

POWER WINDOWS DO NOT OPERATE WITH ANY POWER WINDOW SWITCHES

Diagnosis Procedure

INFOID:0000000007987865

${f 1}$. CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to BCS-71, "Diagnosis Procedure".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

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

Check main power window and door lock/unlock switch.

Refer to PWC-99, "POWER WINDOW MAIN SWITCH: Component Inspection".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

3. CHECK MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH POWER SUPPLY AND GROUND CIRCUIT

Check power window switch main power supply and ground circuit.

Refer to PWC-97, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning parts.

f 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-125, "POWER WINDOW MAIN SWITCH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

DRIVER SIDE POWER WINDOW ALONE DOES NOT OPERATE Diagnosis Procedure

1. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

FRONT PASSENGER SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987867

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

Check power window and door lock/unlock switch RH.

Refer to PWC-101, "FRONT POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

$oldsymbol{2}.$ 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-126, "FRONT POWER WINDOW SWITCH: Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

${f 3}.$ CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

Check front power window motor RH circuit.

Refer to PWC-108, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

REAR LH SIDE POWER WINDOW ALONE DOES NOT OPER		
Diagnosis Procedure	INFOID:000000007987868	Α
1. CHECK REAR POWER WINDOW SWITCH LH		В
Check rear power window switch LH. Refer to PWC-102, "REAR POWER WINDOW SWITCH: Component Function Check". Is the inspection result normal?		С
YES >> GO TO 2. NO >> Repair or replace the malfunctioning parts. 2. CHECK REAR POWER WINDOW MOTOR LH		D
Check rear power window motor LH. Refer to PWC-110, "REAR LH: Component Function Check". Is the inspection result normal?		Е
YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident". NO >> Repair or replace the malfunctioning parts.		F
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REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

REAR RH SIDE POWER WINDOW ALONE DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987869

1. CHECK REAR POWER WINDOW SWITCH RH

Check rear power window switch RH.

Refer to PWC-102, "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 RH

Check rear power window motor RH.

Refer to PWC-111, "REAR RH: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000007987870

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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-114, "DRIVER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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Revision: August 2012 PWC-135 2013 Altima Sedan

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000007987871

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

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-116, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000007987872

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1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

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

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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Revision: August 2012 PWC-137 2013 Altima Sedan

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

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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

Diagnosis Procedure

INFOID:0000000007987873

1. PERFORM INITIALIZATION PROCEDURE

Perform initialization procedure.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

2. CHECK ENCODER

Check encoder.

Refer to PWC-116, "PASSENGER SIDE: Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

INFOID:0000000007987874

Diagnosis Procedure

1. CHECK FRONT DOOR SWITCH

Check front door switch.

Refer to DLK-99, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

Diagnosis Procedure

INFOID:0000000007987877

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

Replace main power window and door lock/unlock switch.

Refer to <u>PWC-144</u>, "Removal and <u>Installation"</u>. After that, <u>PWC-100</u>, "<u>POWER WINDOW MAIN SWITCH</u>: <u>Special Repair Requirement"</u>.

>> INSPECTION END

DOOR KEY CYLINDER SWITCH DOES NOT OPERATE POWER WINDOWS

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

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

Diagnosis Procedure

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1. PERFORM INITIALIZATION PROCEDURE

Initialization procedure is performed and operation is confirmed.

Refer to PWC-94, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT: Special Repair Requirement".

Is the inspection result normal?

>> 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 PWC-122, "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-47, "Intermittent Incident".

NO >> GO TO 1.

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KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

[LH & RH FRONT ANTI-PINCH]

KEYLESS POWER WINDOW DOWN DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000007987876

1. CHECK INTELLIGENT KEY FUNCTION

Check Intelligent Key function.

Refer to <u>DLK-145</u>, "Component Function Check".

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-47, "Intermittent Incident".

NO >> Replace BCM. Refer to BCS-77, "Removal and Installation".

PRE-INSPECTION FOR DIAGNOSTIC

< PERIODIC MAINTENANCE >

[LH & RH FRONT ANTI-PINCH]

PERIODIC MAINTENANCE

PRE-INSPECTION FOR DIAGNOSTIC

Basic Inspection

BASIC INSPECTION

1.INSPECTION START

- 1. Check the service history.
- 2. Check the following parts.
- Fuse/circuit breaker blown.
- Poor connection, open or short circuit of harness connector.
- · Battery voltage.

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace the malfunctioning parts.

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POWER WINDOW MAIN SWITCH

< REMOVAL AND INSTALLATION >

[LH & RH FRONT ANTI-PINCH]

REMOVAL AND INSTALLATION

POWER WINDOW MAIN SWITCH

Removal and Installation

INFOID:0000000007987879

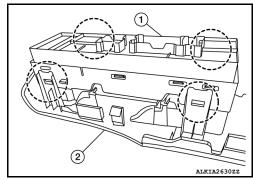
REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the main power window and door lock/unlock switch and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the main power window and door lock/unlock switch.
- Release the four pawls (two on each side) using a suitable tool, then separate the main power window and door lock/unlock switch (1) from the main power window and door lock switch finisher (2).

(_): Pawl

CAUTION:

Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

When the main power window and door lock/unlock switch is disconnected from the harness connector it is necessary to perform the initialization procedure. Refer to PWC-27, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL: Special Repair Requirement".

FRONT POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

[LH & RH FRONT ANTI-PINCH]

FRONT POWER WINDOW SWITCH

Removal and Installation

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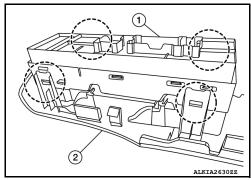
REMOVAL

- 1. Remove the front door pull handle outer finisher using a suitable tool.
- 2. Release the pawls using a suitable tool and lift the power window and door lock/unlock switch RH and finisher as an assembly by starting at the rear, then pull upward and remove.
- 3. Disconnect the harness connector from the power window and door lock/unlock switch RH.
- 4. Release the four pawls (two on each side) using a suitable tool, then separate the main power window and door lock/unlock switch RH (1) from the main power window and door lock switch RH finisher (2).

(): Pawl

CAUTION:

Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.

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REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

[LH & RH FRONT ANTI-PINCH]

REAR POWER WINDOW SWITCH

Removal and Installation

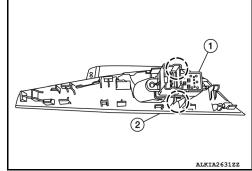
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REMOVAL

- 1. Release the pawls using a suitable tool and lift the rear power window switch and finisher as an assembly by starting at the rear, then pull upward and remove
- 2. Disconnect the harness connector from the rear power window switch.
- 3. Release the pawl (one on each side) using a suitable tool, then separate the rear power window switch (1) from the rear power switch finisher (2).



Do not bend back the pawls on the switch finisher too far or breakage may occur.



INSTALLATION

Installation is in the reverse order of removal.