

# PWC

## SECTION

### POWER WINDOW CONTROL SYSTEM

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

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

INFOID:0000000011345938

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 three minutes before performing any service.

#### Precaution for Work

INFOID:0000000011278666

- 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

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## PREPARATION

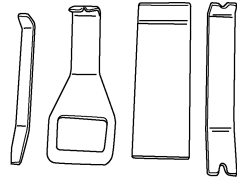
### PREPARATION

#### Special Service Tool

INFOID:0000000011278667

The actual shape of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set	Removing trim components



AWJIA0483ZZ

#### Commercial Service Tools

INFOID:0000000011278668

(TechMate No.) Tool name	Description
( — ) Power tool	Loosening nuts, screws and bolts



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# COMPONENT PARTS

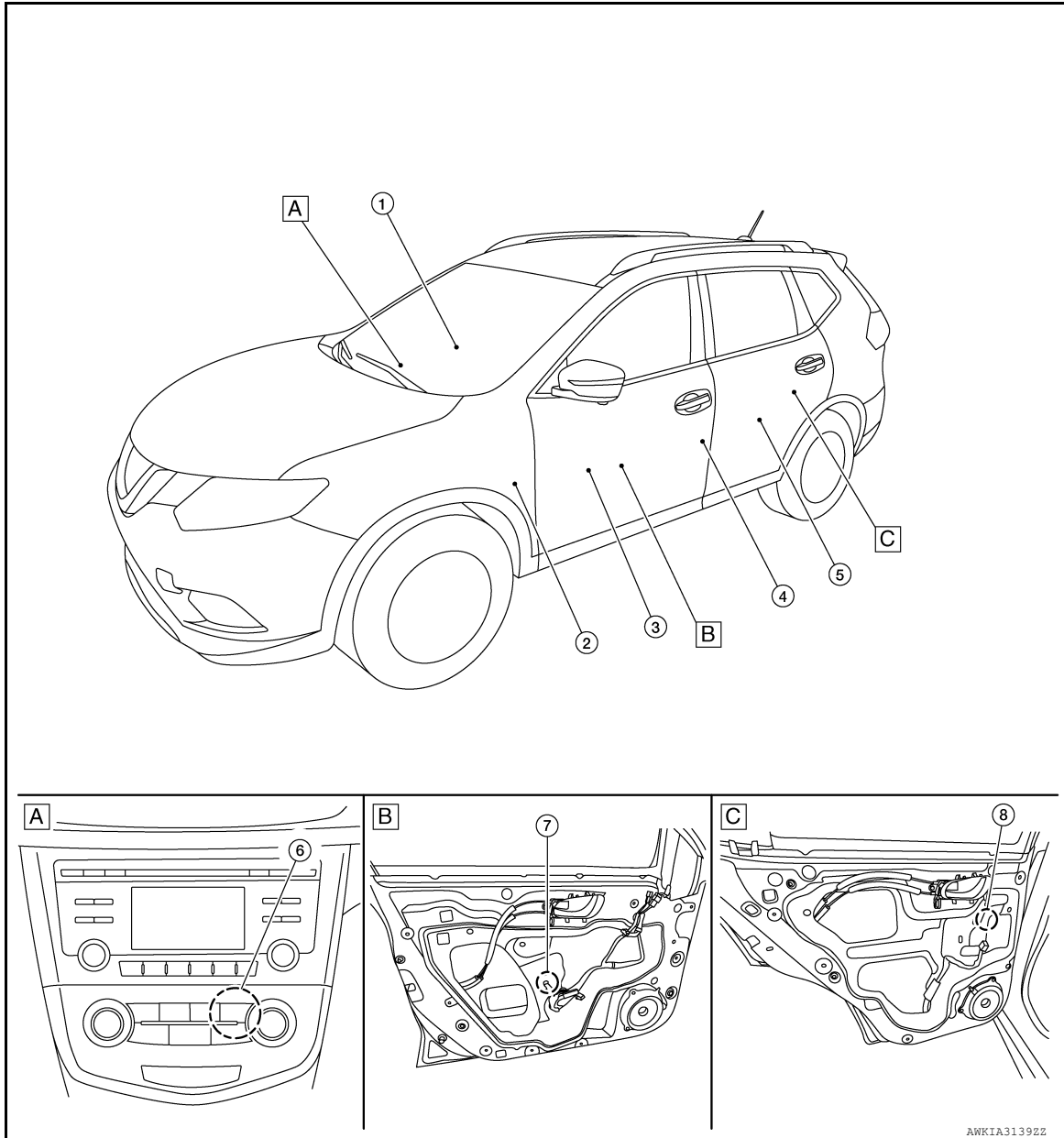
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## SYSTEM DESCRIPTION

### COMPONENT PARTS

#### Component Parts Location

INFOID:0000000011278669



A. A/C switch assembly

B. View with front door finisher removed

C. View with rear door finisher removed

No.	Component parts	Function
1.	Power window and door lock/unlock switch RH	Refer to <a href="#">PWC-7, "Power Window Switch RH"</a> .
2.	BCM	<ul style="list-style-type: none"> <li>Supplies power supply to power window relay.</li> <li>Controls retained power.</li> <li>Refer to <a href="#">BCS-7, "BODY CONTROL SYSTEM : Component Parts Location"</a> for detailed installation location.</li> </ul>
3.	Main power window and door lock/unlock switch	Refer to <a href="#">PWC-7, "Main Power Window And Door Lock/Unlock Switch"</a> .

# COMPONENT PARTS

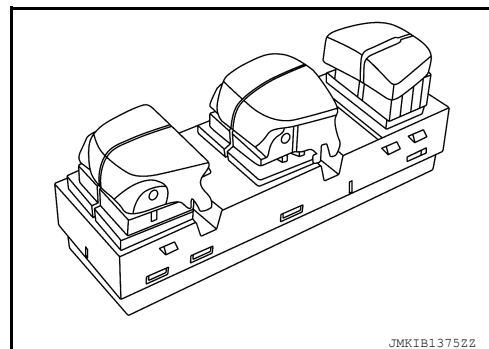
## < SYSTEM DESCRIPTION >

No.	Component parts	Function
4.	Front door switch LH (RH similar)	<ul style="list-style-type: none"> <li>Inputs door open/close condition to BCM.</li> <li>Refer to <a href="#">DLK-23, "Front Door Switch"</a>.</li> </ul>
5.	Rear power window switch LH (RH similar)	Refer to <a href="#">PWC-7, "Rear Power Window Switch"</a> .
6.	Power window relay	Operates the power window system with the control signal from the BCM.
7.	Front power window motor LH (RH similar)	Refer to <a href="#">PWC-8, "Power Window Motor"</a> .
8.	Rear power window motor LH (RH similar)	Refer to <a href="#">PWC-8, "Power Window Motor"</a> .

## Main Power Window And Door Lock/Unlock Switch

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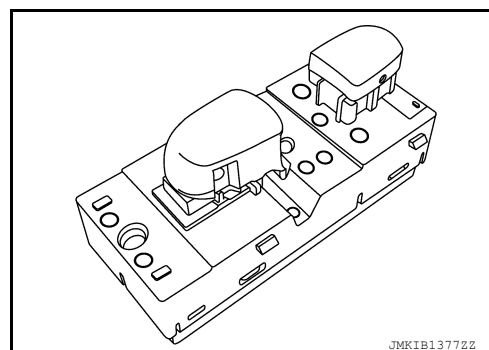
- Main power window and door lock/unlock switch controls all power windows.
- Main power window and door lock/unlock switch integrates UP/DOWN switch, power window lock switch, and door lock/unlock switch.
- Main power window and door lock/unlock switch controls power window lock function, AUTO UP/DOWN function, and anti-pinch function.



## Power Window Switch RH

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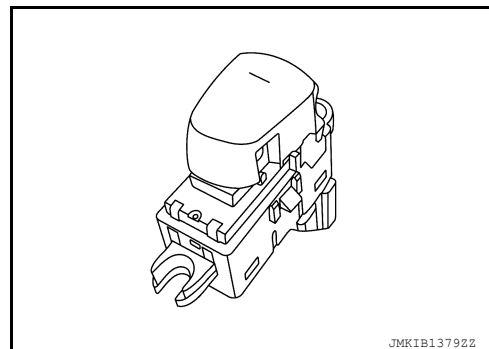
- Power window and door lock/unlock switch RH transmits UP/DOWN signal to front power window motor RH.
- Power window and door lock/unlock switch RH transmits UP/DOWN signal from main power window and door lock/unlock switch to front power window motor RH.
- Power window and door lock/unlock switch RH integrates UP/DOWN switch and door lock/unlock switch.



## Rear Power Window Switch

INFOID:0000000011278672

- Each rear power window switch transmits UP/DOWN signal to each rear power window motor.
- Each rear power window switch transmits UP/DOWN signal from main power window and door lock/unlock switch to each rear power window motor.



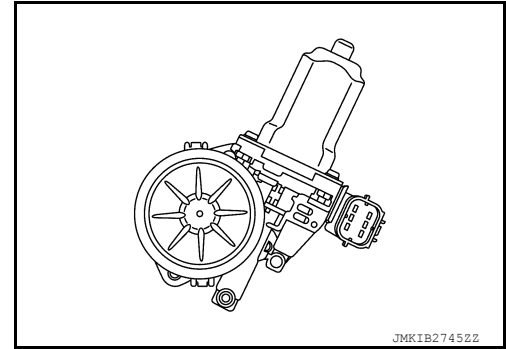
## COMPONENT PARTS

### < SYSTEM DESCRIPTION >

#### Power Window Motor

INFOID:0000000011278673

- Integrates the encoder and power window motor LH.
- Starts operation according to signals from the main power window and door lock/unlock switch.
- Transmits front power window motor LH rotation as a pulse signal to main power window and door lock/unlock switch.
- Excepting power window motor for driver door, starts operation according to signals from main power window and door lock/unlock switch or each power window switches.





# SYSTEM

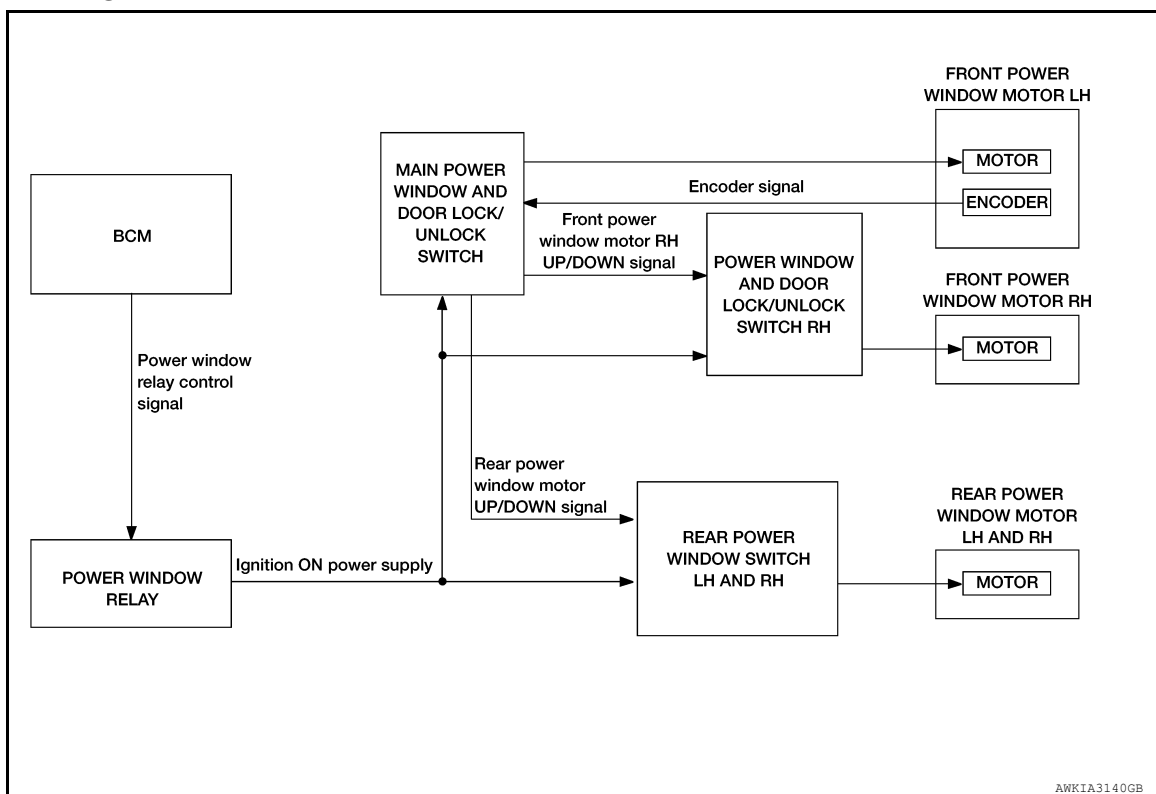
< SYSTEM DESCRIPTION >

## SYSTEM

### System Description

INFOID:0000000011278674

### SYSTEM DIAGRAM



### POWER WINDOW OPERATION

- Main power window and door lock/unlock switch can open/close all windows.
- Front and rear power window switches can open/close the corresponding windows.

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

- 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 power window switch as the encoder pulse signal while power window motor is operating.
- Power window switch reads the changes of encoder signal and stops AUTO operation when door glass is at fully opened/closed position.
- Power window motor is operable in case encoder is malfunctioning.

### RETAINED POWER OPERATION

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

#### RETAINED POWER CANCEL CONDITIONS:

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

### POWER WINDOW LOCK

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 SYSTEM (FRONT DRIVER SIDE)

- Pinch foreign material in the door glass during AUTO-UP operation, and it is the anti-pinch function that lowers the door glass 150 mm (5.9 in.) when detected.

# SYSTEM

## < SYSTEM DESCRIPTION >

- Encoder continues detecting the movement of front power window motor (driver side) and transmits to main power window and door lock/unlock switch as the encoder pulse signal while front power window motor (driver side) is operating.
- Resistance is applied to the front power window motor (driver side) rotation that changes the frequency of encoder pulse signal if foreign material is trapped in the door glass.
- Main power window and door lock/unlock switch controls to lower the window glass for 150 mm (5.9 in) after it detects encoder pulse signal frequency change.

### OPERATION CONDITION

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

#### NOTE:

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

## Fail Safe

INFOID:0000000011278675

### 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 malfunction	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.

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 the motor.

## DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)

< SYSTEM DESCRIPTION >

### DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011384970

#### 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	<ul style="list-style-type: none"><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing BCM.</li></ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions.

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

#### RETAINED PWR

## DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)

< SYSTEM DESCRIPTION >

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:000000011384971

### 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.

## DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)

< SYSTEM DESCRIPTION >

### DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011384972

#### 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	<ul style="list-style-type: none"><li>The vehicle specification can be read and saved.</li><li>The vehicle specification can be written when replacing BCM.</li></ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions.

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

#### RETAINED PWR

RETAINED PWR : CONSULT Function (BCM - RETAINED PWR)

INFOID:0000000011384973

#### DATA MONITOR

## DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)

### < SYSTEM DESCRIPTION >

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 >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000011278680

ECU	Reference
BCM (with Intelligent Key system)	<a href="#">BCS-28, "Reference Value"</a>
	<a href="#">BCS-46, "Fail Safe"</a>
	<a href="#">BCS-46, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-47, "DTC Index"</a>
BCM (without Intelligent Key system)	<a href="#">BCS-96, "Reference Value"</a>
	<a href="#">BCS-107, "Fail Safe"</a>
	<a href="#">BCS-107, "DTC Inspection Priority Chart"</a>
	<a href="#">BCS-108, "DTC Index"</a>

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# MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

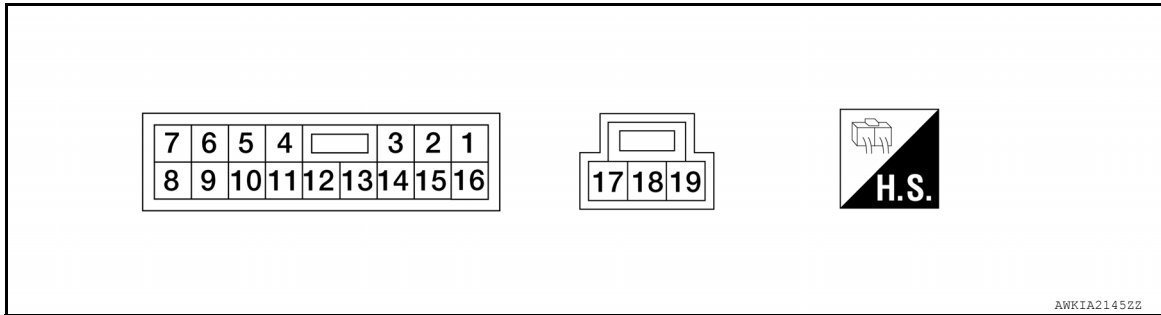
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## MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

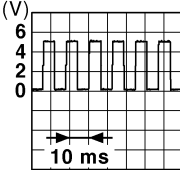
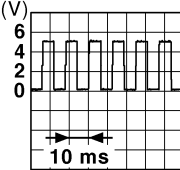
Reference Value

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### TERMINAL LAYOUT



### PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Voltage (Approx.)
+	-	Signal name	Input/ Output		
1 (B)	Ground	Ground	—	—	0
2 (LA/GR)	16 (LA/SB)	Front power window motor RH DOWN signal	Output	When the front RH switch on the main power window and door lock/unlock is op- erated in the DOWN posi- tion.	Battery voltage
4 (R)	12 (Y)	Encoder pulse signal 2	Input	When the power window motor operates.	 <p>JMKIA0070GB</p>
5 (W)	12 (Y)	Encoder pulse signal 1	Input	When the power window motor operates.	 <p>JMKIA0070GB</p>
6 (P)	Ground	Rear power window motor RH DOWN signal	Output	When the rear RH switch on the main power window and door lock/unlock is op- erated in the DOWN posi- tion.	Battery voltage
7 (LG)	Ground	Rear power window motor RH UP signal	Output	When the rear RH switch on the main power window and door lock/unlock is op- erated in the UP position.	Battery voltage



# MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

## < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (Approx.)
+	-	Signal name	Input/ Output		
8 (LA/Y)	Ground	Rear power window motor LH DOWN signal	Output	When the rear LH switch on the main power window and door lock/unlock is op- erated in the DOWN posi- tion.	Battery voltage
9 (LA/W)	Ground	Rear power window motor LH UP signal	Output	When the rear LH switch on the main power window and door lock/unlock is op- erated in the UP position.	Battery voltage
10 (SB)	Ground	Ignition power supply	Input	IGN SW ON	Battery voltage
				IGN SW OFF	0
12 (Y)	Ground	Encoder ground	—	—	0
14 (G)	Ground	Encoder power supply	Output	When ignition switch ON or power window timer operates.	10
16 (LA/SB)	2 (LA/GR)	Front power window motor RH UP signal	Output	When the front RH switch on the main power window and door lock/unlock is op- erated in the UP position.	Battery voltage
17 (LA/L)	19 (LA/BR)	Front power window motor LH UP signal	Output	When the front LH switch on the main power window and door lock/unlock is op- erated in the UP position.	Battery voltage
18 (LA/R)	Ground	Battery power supply	Input	—	Battery voltage
19 (LA/BR)	17 (LA/L)	Front power window motor LH DOWN signal	Output	When the front LH switch on the main power window and door lock/unlock is op- erated in the DOWN posi- tion.	Battery voltage

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# POWER WINDOW SYSTEM

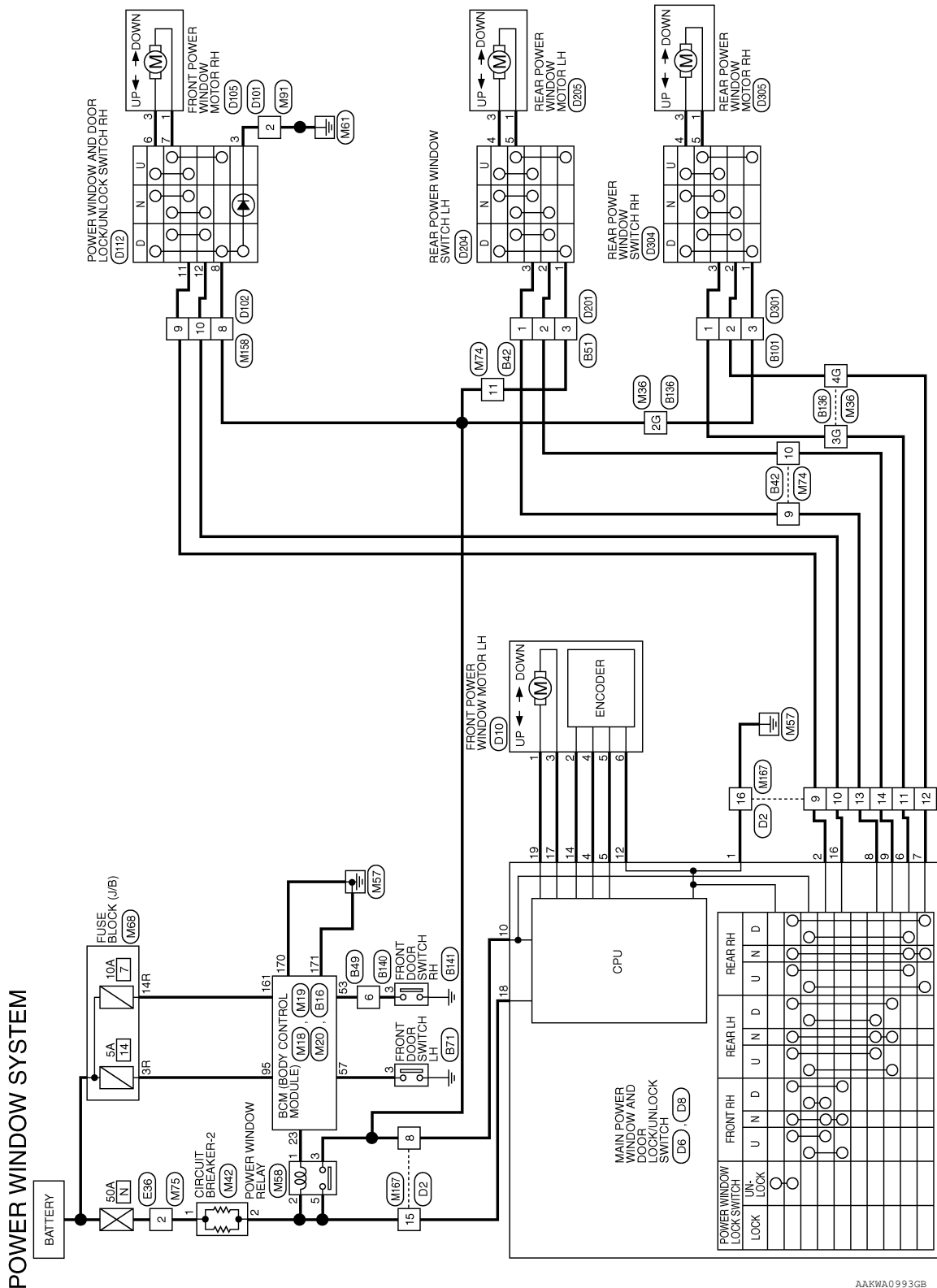
< WIRING DIAGRAM >

## WIRING DIAGRAM

### POWER WINDOW SYSTEM

#### Wiring Diagram

INFOID:0000000011278682



## POWER WINDOW SYSTEM CONNECTORS

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



20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21



Terminal No.	Color of Wire	Signal Name
23	G	0 WL AUTHORIZATION RL

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BLACK



100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101



Terminal No.	Color of Wire	Signal Name
95	V	I SHORTING PIN

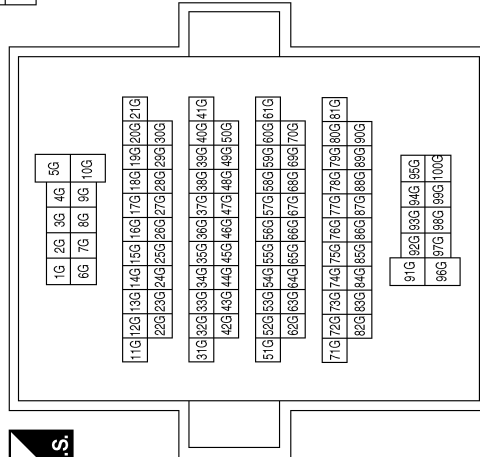
Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	BROWN



167	166	165	164	163	162	161
176	175	174	173	172	171	170

Terminal No.	Color of Wire	Signal Name
161	W	I PWR ECU
170	B	I GND1
171	B	I GND2

Connector No.	M36
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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Connector No.	M42
Connector Name	CIRCUIT BREAKER-2
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	W	-
2	P	-

# POWER WINDOW SYSTEM

< WIRING DIAGRAM >

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	WHITE



7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8	7	6	5	4	3

Terminal No.	Color of Wire	Signal Name
9	G	-
10	R	-
11	LG	-

Connector No.	M68
Connector Name	FUSE BLOCK (J/B)
Connector Color	BROWN



7B	6B	5B	4B	3B	2B	1B
16B	15B	14B	13B	12B	11B	10B
9B	8B	7B	6B	5B	4B	3B

Terminal No.	Color of Wire	Signal Name
3R	V	-
14R	W	-

Connector No.	M58
Connector Name	POWER WINDOW RELAY
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	G	-
2	W	-
3	L	-
5	P	-

Connector No.	M158
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21

Terminal No.	Color of Wire	Signal Name
8	SB	-
9	BR	-
10	GR	-

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE



1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
2	GR	-

Connector No.	M75
Connector Name	WIRE TO WIRE
Connector Color	BLACK




Terminal No.	Color of Wire	Signal Name
2	W	-

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# POWER WINDOW SYSTEM

< WIRING DIAGRAM >

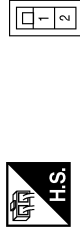
Connector No.	B16
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

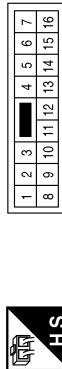
Terminal No.	Color of Wire	Signal Name
53	SB	I AS DOOR2 SW
57	SB	I DR DOOR2 SW

Connector No.	E36
Connector Name	WIRE TO WIRE
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
2	W	-

Connector No.	M167
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
8	L	-
9	BR	-
10	GR	-
11	Y	-
12	BG	-
13	G	-
14	R	-
15	P	-
16	B	-

Connector No.	B51
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	P	-
2	R	-
3	LA/V	-

Connector No.	B49
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
6	SB	-

Connector No.	B42
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
9	P	-
10	R	-
11	LA/V	-

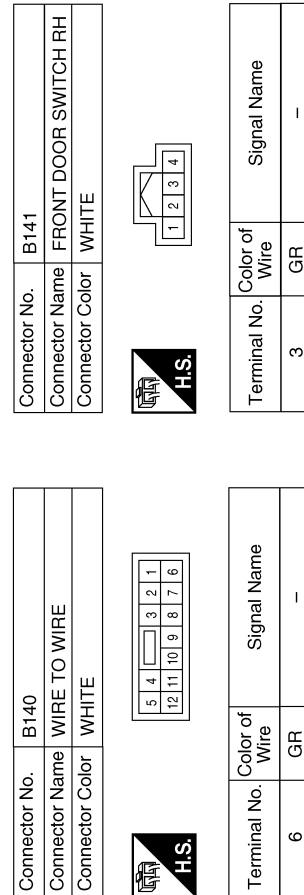
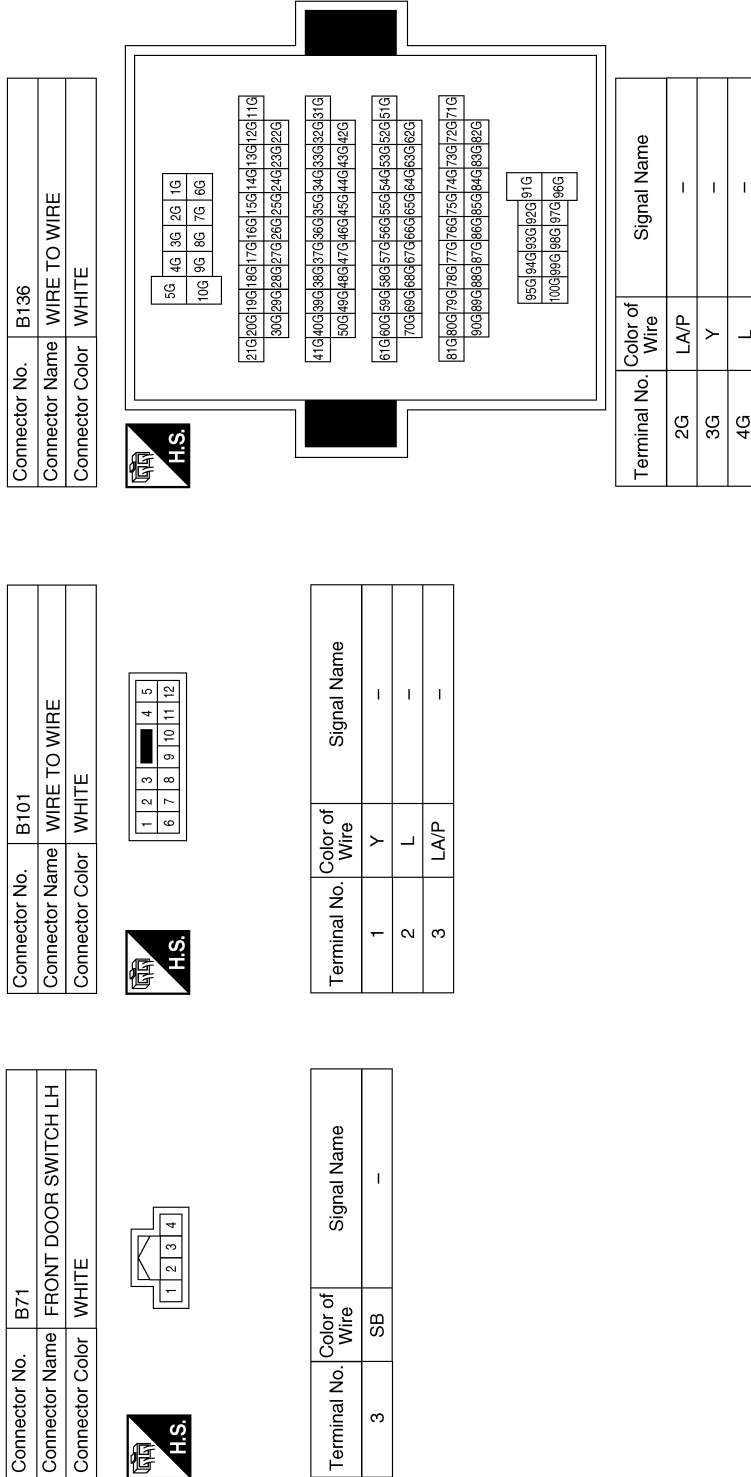
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# POWER WINDOW SYSTEM

< WIRING DIAGRAM >



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# POWER WINDOW SYSTEM

## < WIRING DIAGRAM >

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

7	6	5	4	<div></div>	3	2	1	
16	15	14	13	12	11	10	9	8



Terminal No.	Color of Wire	Signal Name
8	SB	-
9	LA/GR	-
10	LA/SB	-
11	P	-
12	LG	-
13	LA/Y	-
14	LA/W	-
15	LA/R	-
16	B	-

Connector No.	D6
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

7	6	5	4	3	2	1			
8	9	10	11	<div></div>	12	13	14	15	16



Terminal No.	Color of Wire	Signal Name
1	B	GND
2	LA/GR	MOTOR AS DOWN
3	-	-
4	R	ENCODER SIG-2 (ULP)
5	W	ENCODER SIG-1 (DLP)
6	P	MOTOR RR DOWN
7	LG	MOTOR RR UP
8	LA/Y	MOTOR RL DOWN
9	LA/W	MOTOR RL UP
10	SB	IGN
11	-	-
12	Y	ENCODER GND
13	-	-
14	G	ENCODER +
15	-	-
16	LA/SB	MOTOR AS UP

Connector No.	D10
Connector Name	FRONT POWER WINDOW MOTOR LH
Connector Color	GREEN

3	2	1
6	5	4



Terminal No.	Color of Wire	Signal Name
1	LA/BR	-
2	G	-
3	LA/L	-
4	R	-
5	W	-
6	Y	-

Connector No.	D8
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

17	18	19
----	----	----



Terminal No.	Color of Wire	Signal Name
17	LA/L	MOTOR DR UP
18	LA/R	B+
19	LA/BR	MOTOR DR DOWN

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13



Terminal No.	Color of Wire	Signal Name
2	B	-

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# POWER WINDOW SYSTEM

## < WIRING DIAGRAM >

Connector No.	D112
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

1	2	3	4	5
6	7	8	9	10
11	12			



Connector No.	D105
Connector Name	FRONT POWER WINDOW MOTOR RH (WITH LEFT FRONT ONLY AUTO UP/DOWN)
Connector Color	GREEN

3	2	1
6	5	4



Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

7	6	5	4	3	2	1
16	15	14	13	12	11	10
9	8					



Terminal No.	Color of Wire	Signal Name
3	B	-
6	LA/L	-
7	LA/R	-
8	LA/GR	-
11	LA/Y	-
12	LA/BR	-

Terminal No.	Color of Wire	Signal Name
1	LA/R	-
2	-	-
3	LA/L	-
4	-	-
5	-	-
6	-	-

Terminal No.	Color of Wire	Signal Name
8	LA/GR	-
9	LA/Y	-
10	LA/BR	-

Connector No.	D205
Connector Name	REAR POWER WINDOW MOTOR LH
Connector Color	GREEN

3	2	1
6	5	4



Connector No.	D204
Connector Name	REAR POWER WINDOW SWITCH LH
Connector Color	WHITE

3	2	1
8	7	6
5	4	



Connector No.	D201
Connector Name	WIRE TO WIRE
Connector Color	WHITE

5	4	3	2	1
12	11	10	9	8
7	6			



Terminal No.	Color of Wire	Signal Name
1	R	-
2	-	-
3	G	-
4	-	-
5	-	-
6	-	-

Terminal No.	Color of Wire	Signal Name
1	LA/GR	-
2	LA/BR	-
3	LA/Y	-
4	G	-
5	R	-
6	-	-
7	-	-
8	-	-

Terminal No.	Color of Wire	Signal Name
1	LA/Y	-
2	LA/BR	-
3	LA/GR	-

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# POWER WINDOW SYSTEM

## < WIRING DIAGRAM >

Connector No.	D305
Connector Name	REAR POWER WINDOW MOTOR RH
Connector Color	GREEN



3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name
1	R	-
2	-	-
3	G	-
4	-	-
5	-	-
6	-	-

Connector No.	D304
Connector Name	REAR POWER WINDOW SWITCH RH
Connector Color	WHITE



3	2	1
8	7	6
5	4	

Terminal No.	Color of Wire	Signal Name
1	LA/GR	-
2	LA/BR	-
3	LA/Y	-
4	G	-
5	R	-
6	-	-
7	-	-
8	-	-

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



5	4	3	2	1
12	11	10	9	8
7	6			

Terminal No.	Color of Wire	Signal Name
1	LA/Y	-
2	LA/BR	-
3	LA/GR	-

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# DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

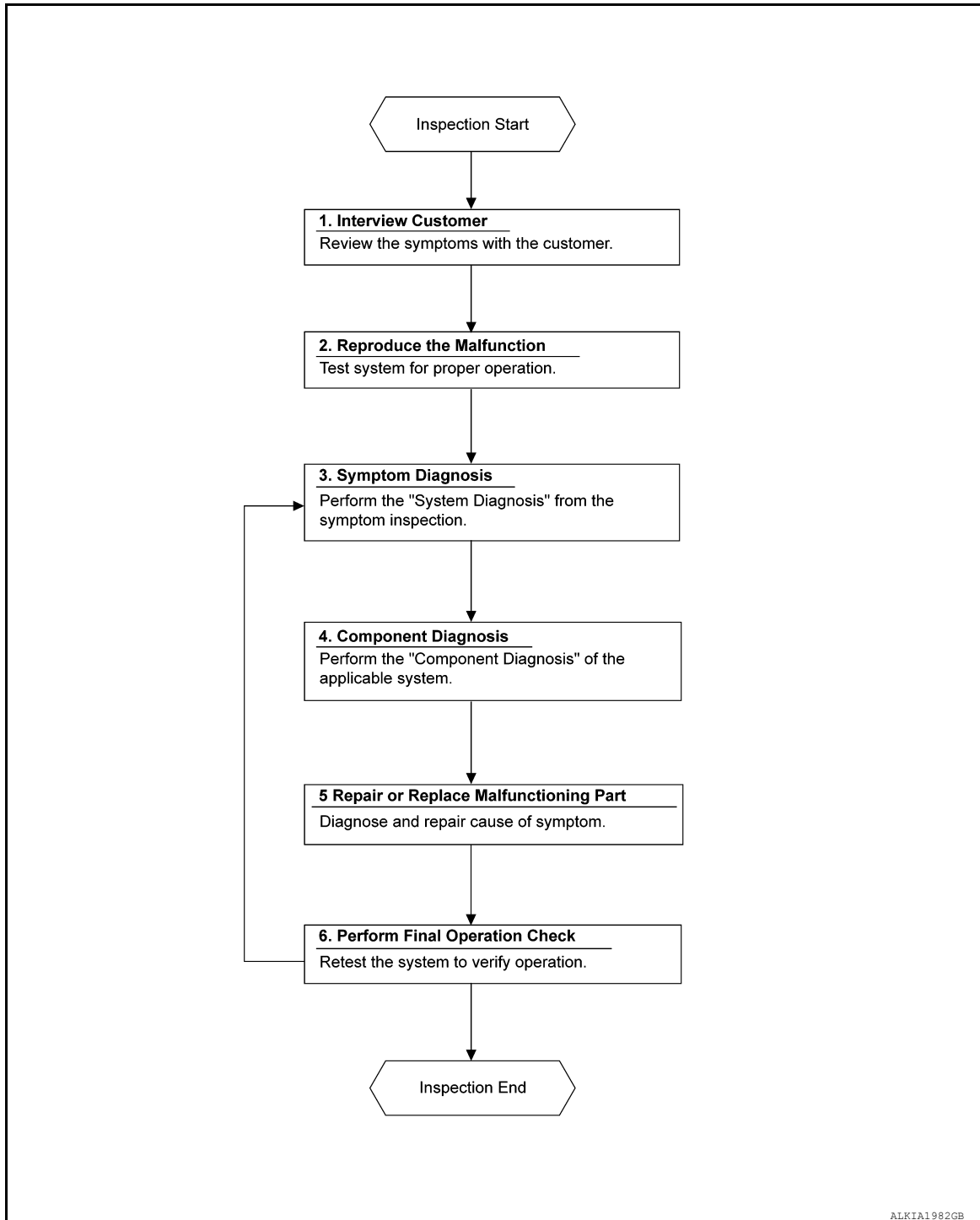
## BASIC INSPECTION

### DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000011278683

#### OVERALL SEQUENCE



#### DETAILED FLOW

##### 1. INTERVIEW CUSTOMER

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 >

>> GO TO 2.

### 2. REPRODUCE THE MALFUNCTION

Reproduce 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. 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. COMPONENT DIAGNOSIS

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

### 5. REPAIR OR REPLACE THE MALFUNCTIONING PART

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

### 6. PERFORM FINAL OPERATIONAL CHECK

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

Are the malfunctions corrected?

YES >> Inspection End.

NO >> GO TO 3.

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# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

## INSPECTION AND ADJUSTMENT

### ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL

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

INFOID:0000000011278684

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

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

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

- Auto-up operation
- Anti-pinch function

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

INFOID:0000000011278685

#### INITIALIZATION PROCEDURE

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

#### CHECK ANTI-PINCH FUNCTION

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

#### **CAUTION:**

- **Perform initial setting when auto-up operation or anti-pinch function does not operate normally.**
- **Check that AUTO-UP operates before inspection when system initialization is performed.**
- **Do not check with hands and other body parts because they may be pinched. Do not get pinched.**
- **It may switch to fail-safe mode if open/close operation is performed continuously without full close. Perform initial setting in that situation. Refer to [BCS-46, "Fail Safe"](#)**
- **Finish initial setting. Otherwise, next operation cannot be done.**

1. Auto-up operation
2. Anti-pinch function

### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description

INFOID:0000000011278686

Refer to [PWC-28, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

#### ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Re-

# INSPECTION AND ADJUSTMENT

< BASIC INSPECTION >

quirement

INFOID:0000000011278687

Refer to [PWC-28, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#) for initialization procedure and check anti-pinch function.

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## POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

### DTC/CIRCUIT DIAGNOSIS

#### POWER SUPPLY AND GROUND CIRCUIT

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000011384974

Regarding Wiring Diagram information, refer to [BCS-50, "Wiring Diagram"](#).

#### 1. CHECK FUSE

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

##### Is the fuse blown?

- YES >> Replace the blown fuse after repairing the affected circuit.  
NO >> GO TO 2.

#### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.
2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	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 M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

##### Is the inspection result normal?

- YES >> Inspection End.  
NO >> Repair or replace harness or connectors.

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM)

#### BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000011384975

Regarding Wiring Diagram information, refer to [BCS-110, "Wiring Diagram"](#).

#### 1. CHECK FUSE

## POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

Check that the following fuse is not blown.

Terminal No.	Signal name	Fuse No.
161	BCM power supply	7 (10A)

#### Is the fuse blown?

- YES >> Replace the blown fuse after repairing the affected circuit.  
NO >> GO TO 2.

### 2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M20.
2. Check voltage between BCM connector M20 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M20	161	—	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 M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	170	—	Yes
	171		

#### Is the inspection result normal?

- YES >> Inspection End.  
NO >> Repair or replace harness or connectors.

## POWER WINDOW MAIN SWITCH

### POWER WINDOW MAIN SWITCH : Diagnosis Procedure

INFOID:0000000011278690

PWC

### 1.CHECK POWER SUPPLY CIRCUIT 1

1. Turn ignition OFF.
2. Disconnect main power window and door lock/unlock switch connector.
3. Turn ignition switch ON.
4. Check voltage between main power window and door lock/unlock switch harness connector and ground.

(+)		(−)	Voltage (Approx.)
Main power window and door lock/unlock switch			
Connector	Terminal		
D6	10	Ground	Battery voltage

#### Is the inspection result normal?

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

### 2.CHECK POWER SUPPLY CIRCUIT 2

1. Check voltage between main power window and door lock/unlock switch harness connector and ground.

## POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Voltage (Approx.)
Main power window and door lock/unlock switch			
Connector	Terminal		
D8	18	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair power supply circuit.

### 3.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between main power window and door lock/unlock switch harness connector and ground.

Main power window and door lock/unlock switch		Ground	Continuity
Connector	Terminal		
D6	1		Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness.

### 4.CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Disconnect power window relay connector.
3. Check continuity between power window relay harness connector and main power window and door lock/unlock switch harness connector.

Power window relay		Main power window and door lock/unlock switch		Continuity
Connector	Terminal	Connector	Terminal	
M58	3	D6	10	Yes

4. Check continuity between power window relay harness connector and ground.

Power window relay		Ground	Continuity
Connector	Terminal		
M58	3		No

Is the inspection result normal?

YES >> Refer to [PWC-49, "Diagnosis Procedure"](#).

NO >> Repair or replace harness.

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

### FRONT POWER WINDOW SWITCH (PASSENGER SIDE) : Diagnosis Procedure

INFOID:0000000011278691

### 1.CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH connector.
3. Turn ignition switch ON.
4. Check voltage between power window and door lock/unlock switch RH harness connector and ground.

(+)		(-)	Condition	Voltage (Approx.)
Power window and door lock/unlock switch RH				
Connector	Terminal			
D112	8	Ground	Ignition switch ON	Battery voltage



## POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

#### Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

### 2.CHECK HARNESS CONTINUITY

1. Turn ignition switch OFF.
2. Disconnect power window relay connector.
3. Check continuity between power window relay harness connector and power window and door lock/unlock switch RH harness connector.

Power window relay		Power window and door lock/unlock switch RH		Continuity
Connector	Terminal	Connector	Terminal	
M58	3	D112	8	Yes

4. Check continuity between the power window relay harness connector and ground.

Power window relay		Ground	Continuity
Connector	Terminal		
M58	3		No

#### Is the inspection result normal?

YES >> Refer to [PWC-49, "Diagnosis Procedure"](#).

NO >> Repair or replace harness.

## REAR POWER WINDOW SWITCH

### REAR POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:0000000011278692

### 1.CHECK POWER SUPPLY CIRCUIT

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

(+)		(-)	Condition	Voltage (Approx.)
Rear power window switch				
Connector	Terminal			
LH	D204	Ground	Ignition switch ON	Battery voltage
RH	D304			

#### Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

### 2.CHECK HARNESS CONTINUITY

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

Power window relay		Rear power window switch		Continuity
Connector	Terminal	Connector	Terminal	
M58	3	LH	D204	Yes
		RH	D304	

4. Check continuity between power window relay harness connector and ground.

## POWER SUPPLY AND GROUND CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

Power window relay		Ground	Continuity
Connector	Terminal		
M58	3		No

Is the inspection result normal?

YES >> Refer to [PWC-49, "Diagnosis Procedure"](#).

NO >> Repair or replace harness.

# FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

< DTC/CIRCUIT DIAGNOSIS >

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

### Description

INFOID:0000000011278693

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

### Component Function Check

INFOID:0000000011278694

#### 1. CHECK POWERWINDOW AND DOOR LOCK/UNLOCK SWITCH 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 is OK.  
NO >> Refer to [PWC-35, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011278695

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

1. Turn ignition switch OFF.
2. Disconnect power window and door lock/unlock switch RH connector.
3. Turn ignition switch ON.
4. Check voltage between power window and door lock/unlock switch RH harness connector and ground.

(+) Power window and door lock/unlock switch RH		(-)	Condition		Voltage (Approx.)
Connector	Terminal				
D112	12	Ground	Power window main switch RH	UP	Battery voltage
				DOWN	0
	11			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

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

#### 2. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-36, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-66, "Removal and Installation"](#).

#### 3. CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH CIRCUIT

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

Main power window and door lock/unlock switch		Power window and door lock/unlock switch RH		Continuity
Connector	Terminal	Connector	Terminal	
D6	16	D112	12	Yes
	2		11	

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

## FRONT POWER WINDOW SWITCH (PASSENGER SIDE)

### < DTC/CIRCUIT DIAGNOSIS >

Main power window and door lock/unlock switch		Ground	Continuity
Connector	Terminal		
D6	16		No
	2		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-65. "Removal and Installation"](#).

NO >> Repair or replace harness.

### 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44. "Intermittent Incident"](#).

>> Inspection End.

## Component Inspection

INFOID:0000000011278696

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

1. Turn ignition OFF.
2. Disconnect power window and door lock/unlock switch RH connector.
3. Check power window and door lock/unlock switch RH.

Power window and door lock/unlock switch RH	Terminal		Front power window switch condition	Continuity
D112	8	7	DOWN	Yes
	11	6		
	11	6	NEUTRAL	
	12	7		
	8	6	UP	
	12	7		

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power window and door lock/unlock switch RH. Refer to [PWC-66. "Removal and Installation"](#).

# REAR POWER WINDOW SWITCH

< DTC/CIRCUIT DIAGNOSIS >

## REAR POWER WINDOW SWITCH

### Description

INFOID:0000000011278697

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

### Component Function Check

INFOID:0000000011278698

#### 1. CHECK REAR POWER WINDOW SWITCH FUNCTION

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

Is the inspection result normal?

- YES >> Rear power window switch is OK.  
NO >> Refer to [PWC-37, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011278699

#### 1. CHECK REAR POWER WINDOW SWITCH INPUT SIGNAL

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

(+) Rear power window switch			(-)	Condition		Voltage (Approx.)
Connector		Terminal				
LH	D204	2	Ground	Power window main switch: LH	UP	Battery voltage
					DOWN	0
		3			UP	0
					DOWN	Battery voltage
RH	D304	2		Power window main switch: RH	UP	Battery voltage
					DOWN	0
		3			UP	0
					DOWN	Battery voltage

Is the inspection result normal?

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

#### 2. CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-38, "Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace rear power window switch. Refer to [PWC-66, "Removal and Installation"](#).

#### 3. CHECK REAR POWER WINDOW SWITCH CIRCUIT

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

## REAR POWER WINDOW SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

Main power window and door lock/unlock switch		Rear power window switch			Continuity
Connector	Terminal	Connector		Terminal	
D6	9	LH	D204	2	Yes
	8			3	
	6	RH	D304	3	
	7			2	

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

Main power window and door lock/unlock switch			Continuity
Connector	Terminal		
D6	9	Ground	No
	8		
	6		
	7		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-65, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## Component Inspection

INFOID:0000000011278700

### 1. CHECK REAR POWER WINDOW SWITCH

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

Terminal		Rear power window switch condition	Continuity
1	5	DOWN	Yes
3	4		
3	4	NEUTRAL	
2	5		
1	4	UP	
2	5		

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace rear power window switch. Refer to [PWC-67, "Removal and Installation"](#).

# POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

## POWER WINDOW MOTOR DRIVER SIDE

### DRIVER SIDE : Description

INFOID:0000000011278701

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

### DRIVER SIDE : Component Function Check

INFOID:0000000011278702

#### 1. CHECK FRONT POWER WINDOW MOTOR LH OPERATION

Check front power window motor LH operation with 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-39, "DRIVER SIDE : Diagnosis Procedure"](#).

### DRIVER SIDE : Diagnosis Procedure

INFOID:0000000011278703

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

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

(+) Power window motor LH		(-)	Condition		Voltage (Approx.)
Connector	Terminal				
D10	3	Ground	Main power window and door lock/unlock switch	UP	Battery voltage
				DOWN	0
	1			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

#### 2. CHECK POWER WINDOW MOTOR CIRCUIT

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

Main power window and door lock/unlock switch		Front power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D8	17	D10	3	Yes
	19		1	

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

Main power window and door lock/unlock switch		Ground	Continuity
Connector	Terminal		
D8	17		No
	19		

Is the inspection result normal?

# POWER WINDOW MOTOR

## < DTC/CIRCUIT DIAGNOSIS >

- YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-65, "Removal and Installation"](#).  
NO >> Repair or replace harness.

### 3. CHECK FRONT POWER WINDOW MOTOR LH

Check front power window motor LH.

Refer to [PWC-40, "DRIVER SIDE : Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace front power window motor LH. Refer to [GW-16, "Removal and Installation"](#).

### 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## DRIVER SIDE : Component Inspection

INFOID:0000000011278704

### 1. CHECK FRONT POWER WINDOW MOTOR LH

1. Turn ignition switch OFF.
2. Disconnect front power window motor LH connector.
3. Check motor operate by connecting the battery voltage directly to front power window motor LH connector.

Front power window motor LH connector	Terminal		Motor condition
	(+)	(-)	
D10	1	3	DOWN
	3	1	UP

Is the inspection result normal?

- YES >> Inspection End.  
NO >> Replace front power window motor LH. Refer to [GW-16, "Removal and Installation"](#).

## PASSENGER SIDE

### PASSENGER SIDE : Description

INFOID:0000000011278705

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

### PASSENGER SIDE : Component Function Check

INFOID:0000000011278706

### 1. CHECK FRONT POWER WINDOW MOTOR RH OPERATION

Check front power window motor RH operation with 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-40, "PASSENGER SIDE : Diagnosis Procedure"](#).

### PASSENGER SIDE : Diagnosis Procedure

INFOID:0000000011278707

### 1. CHECK FRONT POWER WINDOW MOTOR RH INPUT SIGNAL

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



# POWER WINDOW MOTOR

## < DTC/CIRCUIT DIAGNOSIS >

(+)		(-)	Condition		Voltage (Approx.)
Front power window motor RH					
Connector	Terminal				
D105	7	Ground	Power window and door lock/unlock switch RH	UP	Battery voltage
				DOWN	0
	6			UP	0
				DOWN	Battery voltage

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2.CHECK FRONT POWER WINDOW MOTOR RH CIRCUIT

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

Power window and door lock/unlock switch RH		Front power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D112	6	D105	3	Yes
	7		1	

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

Power window and door lock/unlock switch RH		Ground	Continuity
Connector	Terminal		
D112	6		No
	7		

Is the inspection result normal?

YES >> Replace power window and door lock/unlock switch RH. Refer to [PWC-66, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 3.CHECK FRONT POWER WINDOW MOTOR RH

Check front power window motor RH.

Refer to [PWC-41, "PASSENGER SIDE : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace front power window motor RH. Refer to [GW-16, "Removal and Installation"](#).

### 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## PASSENGER SIDE : Component Inspection

INFOID:0000000011278708

### 1.CHECK FRONT POWER WINDOW MOTOR RH

- Turn ignition switch OFF.
- Disconnect front power window motor RH connector.
- Check motor operate by connecting the battery voltage directly to front power window motor RH connector.

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
L  
M  
N  
O  
P

PWC

# POWER WINDOW MOTOR

## < DTC/CIRCUIT DIAGNOSIS >

Front power window motor RH connector	Terminal		Motor condition
	(+)	(-)	
D105	1	3	DOWN
	3	1	UP

### Is the inspection result normal?

YES >> Inspection End.

NO >> Replace front power window motor RH. Refer to [GW-16, "Removal and Installation"](#).

## REAR LH

### REAR LH : Description

INFOID:0000000011278709

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

### REAR LH : Component Function Check

INFOID:0000000011278710

#### 1.CHECK REAR POWER WINDOW MOTOR LH OPERATION

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-42, "REAR LH : Diagnosis Procedure"](#)

### REAR LH : Diagnosis Procedure

INFOID:0000000011278711

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

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

(+) Rear power window motor LH		(-)	Condition		Voltage (Approx.)
Connector	Terminal				
D205	1	Ground	Rear power window switch LH	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 REAR POWER WINDOW MOTOR LH CIRCUIT

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

Rear power window switch LH		Rear power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D204	4	D205	3	Yes
	5		1	

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

# POWER WINDOW MOTOR

## < DTC/CIRCUIT DIAGNOSIS >

Rear power window switch LH		Ground	Continuity
Connector	Terminal		
D204	4		No
	5		

Is the inspection result normal?

YES >> Replace rear power window switch LH. Refer to [PWC-66, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 3. CHECK REAR POWER WINDOW MOTOR LH

Check rear power window motor LH.

Refer to [PWC-43, "REAR LH : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace rear power window motor LH. Refer to [GW-22, "Removal and Installation"](#).

### 4. CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## REAR LH : Component Inspection

INFOID:0000000011278712

### COMPONENT INSPECTION

#### 1. CHECK REAR POWER WINDOW MOTOR LH

1. Turn ignition switch OFF.
2. Disconnect rear power window motor LH connector.
3. Check motor operation by connecting the battery voltage directly to rear power window motor LH connector.

Rear power window motor LH connector	Terminal		Motor condition
	(+)	(-)	
D205	3	1	DOWN
	1	3	UP

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace rear power window motor LH. Refer to [GW-22, "Removal and Installation"](#).

## REAR RH

### REAR RH : Description

INFOID:0000000011278713

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:0000000011278714

#### 1. CHECK REAR POWER WINDOW MOTOR RH OPERATION

Check rear power window motor RH operation with 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.

NO >> Refer to [PWC-44, "REAR RH : Diagnosis Procedure"](#).

# POWER WINDOW MOTOR

## < DTC/CIRCUIT DIAGNOSIS >

### REAR RH : Diagnosis Procedure

INFOID:000000011278715

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

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

(+)Rear power window motor RH		(−)	Condition		Voltage (Approx.)
Connector	Terminal				
D305	1	Ground	Rear power window switch RH	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 REAR POWER WINDOW MOTOR RH CIRCUIT

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

Rear power window switch RH		Rear power window motor RH		Continuity
Connector	Terminal	Connector	Terminal	
D304	4	D305	3	Yes
	5		1	

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

Rear power window switch RH		Ground	Continuity
Connector	Terminal		
D304	4		No
	5		

Is the inspection result normal?

- YES >> Replace rear power window switch RH.Refer to [PWC-67, "Removal and Installation"](#).  
NO >> Repair or replace harness.

#### 3.CHECK REAR POWER WINDOW MOTOR RH

Check rear power window motor RH.  
Refer to [PWC-45, "REAR RH : Component Inspection"](#).

Is the inspection result normal?

- YES >> GO TO 4.  
NO >> Replace rear power window motor RH. Refer to [GW-22, "Removal and Installation"](#).

#### 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

# POWER WINDOW MOTOR

< DTC/CIRCUIT DIAGNOSIS >

## REAR RH : Component Inspection

INFOID:0000000011278716

### COMPONENT INSPECTION

#### 1. CHECK REAR POWER WINDOW MOTOR RH

1. Turn ignition switch OFF.
2. Disconnect rear power window motor RH connector.
3. Check motor operation by connecting the battery voltage directly to rear power window motor RH connector.

Rear power window motor RH connector	Terminal		Motor condition
	(+)	(-)	
D305	3	1	DOWN
	1	3	UP

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace rear power window motor RH. Refer to [GW-22, "Removal and Installation"](#).

PWC

# ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## ENCODER CIRCUIT

### Description

INFOID:0000000011278717

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

### Component Function Check

INFOID:0000000011278718

#### 1.CHECK ENCODER OPERATION

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

Is the inspection result normal?

YES >> Encoder operation is OK.

NO >> Refer to [PWC-46. "Diagnosis Procedure"](#)

### Diagnosis Procedure

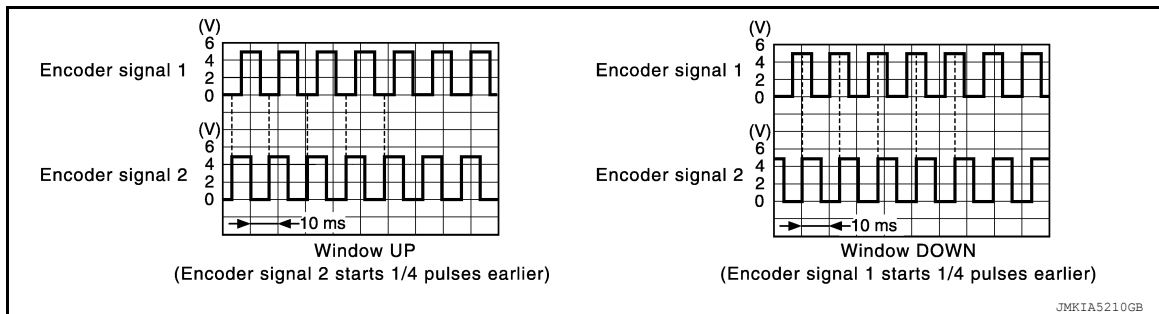
INFOID:0000000011278719

#### Encoder Circuit Check

#### 1.CHECK ENCODER OPERATION

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

(+) Main power window and door lock/unlock switch		(-)	Signal (Reference value)
Connector	Terminal		
D6	4	Ground	Refer to following signal
	5		



Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 2.

#### 2.CHECK ENCODER SIGNAL CIRCUIT

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

Main power window and door lock/unlock switch		Front power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D6	4	D10	4	Yes
	5		5	

## ENCODER CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

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

Main power window and door lock/unlock switch		Ground	Continuity
Connector	Terminal		No
D6	4		
	5		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### 3.CHECK ENCODER POWER SUPPLY CIRCUIT

1. Connect main power window and door lock/unlock switch connector.
2. Turn ignition switch ON.
3. Check voltage between front power window motor LH harness connector and ground.

(+)		(-)	Voltage (Approx.)
Front power window motor LH			
Connector	Terminal		
D10	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

### 4.CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between front power window motor LH harness connector and ground.

Front power window motor LH		Ground	Continuity
Connector	Terminal		Yes
D10	6		

Is the inspection result normal?

YES >> GO TO 7.

NO >> GO TO 6.

### 5.CHECK HARNESS CONTINUITY 1

1. Turn ignition switch OFF.
2. Check continuity between main power window and door lock/unlock switch harness connector and front power window motor LH harness connector.

Main power window and door lock/unlock switch		Front power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D6	12	D10	6	Yes

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

Main power window and door lock/unlock switch		Ground	Continuity
Connector	Terminal		No
D6	12		

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-66. "Removal and Installation"](#).

NO >> Repair or replace harness.

## ENCODER CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

### 6.CHECK HARNESS CONTINUITY 2

1. Disconnect main power window and door lock/unlock switch connector.
2. Check continuity between main power window and door lock/unlock switch harness connector and front power window motor LH harness connector.

Main power window and door lock/unlock switch		Front power window motor LH		Continuity
Connector	Terminal	Connector	Terminal	
D6	14	D10	2	Yes

Is the inspection result normal?

YES >> Replace main power window and door lock/unlock switch. Refer to [PWC-66, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 7.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.



# POWER WINDOW RELAY

< DTC/CIRCUIT DIAGNOSIS >

## POWER WINDOW RELAY

### Description

INFOID:0000000011278720

Power is supplied to the main power window and door lock/unlock with BCM control.

### Component Function Check

INFOID:0000000011278721

#### 1. CHECK POWER WINDOW RELAY POWER SUPPLY CIRCUIT

Check that an operation noise of power window relay [located behind the A/C switch assembly (automatic A/C) or Front air control (manual A/C)] can be heard when turning the main power window and door lock/unlock switch ON.

Is the inspection result normal?

YES >> Power window relay power supply circuit is OK.

NO >> Refer to [PWC-49, "Diagnosis Procedure"](#).

### Diagnosis Procedure

INFOID:0000000011278722

Regarding Wiring Diagram information, refer to [PWC-18, "Wiring Diagram"](#).

#### 1. CHECK POWER WINDOW RELAY CONTROL CIRCUIT

1. Disconnect BCM connector.
2. Turn ignition switch ON.
3. Check voltage between BCM connector and ground.

(+)		(-)	Voltage (Approx.)
Connector	Terminal	Ground	Battery voltage
M18	23		

Is the inspection result normal?

YES >> Replace the BCM. Refer to [BCS-75, "Removal and Installation"](#) (with Intelligent Key system) or [BCS-135, "Removal and Installation"](#) (without Intelligent Key system).

NO >> GO TO 2.

#### 2. CHECK HARNESS CONTINUITY

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

BCM		Power window relay		Continuity
Connector	Terminal	Connector	Terminal	
M18	23	M58	1	Yes

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### 3. CHECK POWER WINDOW RELAY

Check power window relay.

Refer to [PWC-50, "Component Inspection"](#).

Is the inspection result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> Replace power window relay.

# POWER WINDOW RELAY

< DTC/CIRCUIT DIAGNOSIS >

## Component Inspection

INFOID:0000000011278723

### 1. CHECK POWER WINDOW RELAY

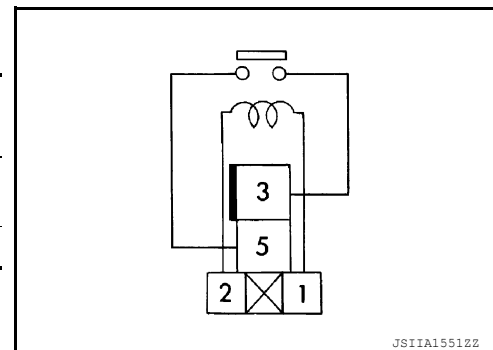
Check power window relay.

Terminal		Condition	Continuity
Power window relay			
3	5	12V direct current supply between terminals 1 and 2.	Yes
		No current supply	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace power window relay.



# DOOR SWITCH

< DTC/CIRCUIT DIAGNOSIS >

## DOOR SWITCH WITH INTELLIGENT KEY

### WITH INTELLIGENT KEY : Component Function Check

INFOID:0000000011385883

#### 1.CHECK FUNCTION

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

Monitor item	Condition		Status
DOOR SW-DR	Front door LH	Open	On
		Closed	Off
DOOR SW-AS	Front door RH	Open	On
		Closed	Off
DOOR SW-RL	Rear door LH	Open	On
		Closed	Off
DOOR SW-RR	Rear door RH	Open	On
		Closed	Off

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [PWC-51. "WITH INTELLIGENT KEY : Diagnosis Procedure"](#).

### WITH INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000011385884

Regarding Wiring Diagram information, refer to [DLK-73. "Wiring Diagram"](#).

#### 1.CHECK DOOR SWITCH INPUT SIGNAL

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

(+)		Terminal	(-)	Signal (Reference value)
Door switch				
Connector				
Front LH	B71	3	Ground	<div><div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><di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Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

#### 2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch harness connector and BCM harness connector.

A  
B  
C  
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E  
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PWC

## DOOR SWITCH

### < DTC/CIRCUIT DIAGNOSIS >

Door switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
Front LH	B71	B16	57	Yes
Front RH	B141		53	
Rear LH	B70		52	
Rear RH	B142		50	

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

Door switch		Ground	Continuity
Connector	Terminal		
Front LH	B71	3	No
Front RH	B141		
Rear LH	B70		
Rear RH	B142		

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-75, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 3.CHECK DOOR SWITCH

Refer to [PWC-52, "WITH INTELLIGENT KEY : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to [DLK-276, "Removal and Installation"](#).

### 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## WITH INTELLIGENT KEY : Component Inspection

INFOID:0000000011385885

### 1.CHECK DOOR SWITCH

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

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch. Refer to [DLK-276, "Removal and Installation"](#).

## WITHOUT INTELLIGENT KEY

### WITHOUT INTELLIGENT KEY : Description

INFOID:0000000011385889

Detects door open/close condition.

## WITHOUT INTELLIGENT KEY : Component Function Check

INFOID:0000000011385890

### 1.CHECK FUNCTION

# DOOR SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

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

Monitor item	Condition		Status
DOOR SW-DR	Front door LH	Open	On
		Closed	Off
DOOR SW-AS	Front door RH	Open	On
		Closed	Off
DOOR SW-RL	Rear door LH	Open	On
		Closed	Off
DOOR SW-RR	Rear door RH	Open	On
		Closed	Off

Is the inspection result normal?

YES >> Door switch is OK.

NO >> Refer to [PWC-53, "WITHOUT INTELLIGENT KEY : Diagnosis Procedure"](#).

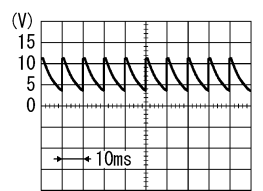
## WITHOUT INTELLIGENT KEY : Diagnosis Procedure

INFOID:0000000011385891

Regarding Wiring Diagram information, refer to [DLK-299, "Wiring Diagram"](#).

### 1.CHECK DOOR SWITCH INPUT SIGNAL

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

(+)Door switch		Terminal	(-)	Signal (Reference value)
Connector				
Front LH	B71	3	Ground	 7.0 - 8.0 V
Front RH	B141			
Rear LH	B70			
Rear RH	B142			

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

### 2.CHECK DOOR SWITCH CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door switch harness connector and BCM harness connector.

# DOOR SWITCH

## < DTC/CIRCUIT DIAGNOSIS >

Door switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
Front LH	B71	B16	57	Yes
Front RH	B141		53	
Rear LH	B70		52	
Rear RH	B142		50	

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

Door switch		Ground	Continuity
Connector	Terminal		
Front LH	B71	3	No
Front RH	B141		
Rear LH	B70		
Rear RH	B142		

Is the inspection result normal?

YES >> Replace BCM. Refer to [BCS-135, "Removal and Installation"](#).

NO >> Repair or replace harness.

### 3.CHECK DOOR SWITCH

Refer to [PWC-52, "WITH INTELLIGENT KEY : Component Inspection"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace malfunctioning door switch. Refer to [DLK-396, "Removal and Installation"](#).

### 4.CHECK INTERMITTENT INCIDENT

Refer to [GI-44, "Intermittent Incident"](#).

>> Inspection End.

## WITHOUT INTELLIGENT KEY : Component Inspection

INFOID:0000000011385892

### 1.CHECK DOOR SWITCH

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

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace malfunctioning door switch. Refer to [DLK-396, "Removal and Installation"](#).

# POWER WINDOW CONTROL SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

## SYMPTOM DIAGNOSIS

### POWER WINDOW CONTROL SYSTEM SYMPTOMS

#### Symptom Table

INFOID:0000000011278731

Symptom	Reference page
None of the power windows can be operated using any switch.	Refer to <a href="#">PWC-56, "Diagnosis Procedure"</a> .
Driver side power window alone does not operate.	Refer to <a href="#">PWC-57, "Diagnosis Procedure"</a> .
Front passenger side power window does not operate (with both main power window and door lock/unlock switch and power window and door lock/unlock switch).	Refer to <a href="#">PWC-58, "WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH : Diagnosis Procedure"</a> .
Front passenger side power window does not operate (with front power window switch only).	Refer to <a href="#">PWC-58, "WITH FRONT POWER WINDOW SWITCH ONLY : Diagnosis Procedure"</a> .
Rear LH side power window does not operate (with both main power window and door lock/unlock switch and rear power window switch LH).	Refer to <a href="#">PWC-59, "WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH LH : Diagnosis Procedure"</a> .
Rear LH side power window does not operate (with rear power window switch LH only).	Refer to <a href="#">PWC-59, "WITH REAR POWER WINDOW SWITCH LH ONLY : Diagnosis Procedure"</a> .
Rear RH side power window does not operate (with both main power window and door lock/unlock switch and rear power window switch RH).	Refer to <a href="#">PWC-60, "WITH BOTH POWER WINDOW MAIN SWITCH AND REAR POWER WINDOW SWITCH RH : Diagnosis Procedure"</a> .
Rear RH side power window does not operate (with rear power window switch RH only).	Refer to <a href="#">PWC-60, "WITH REAR POWER WINDOW SWITCH RH ONLY : Diagnosis Procedure"</a> .
Anti-pinch system does not operate normally (drivers side).	Refer to <a href="#">PWC-61, "Diagnosis Procedure"</a> .
Power window retained power operation does not operate properly.	Refer to <a href="#">PWC-62, "Diagnosis Procedure"</a> .
Auto operation does not operate manual operate normally (driver side).	Refer to <a href="#">PWC-63, "Diagnosis Procedure"</a> .
Power window lock switch does not function.	Refer to <a href="#">PWC-64, "Diagnosis Procedure"</a> .

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

< SYMPTOM DIAGNOSIS >

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

### Diagnosis Procedure

INFOID:0000000011278732

#### 1.CHECK BCM POWER SUPPLY AND GROUND CIRCUIT

Check BCM power supply and ground circuit.

Refer to [BCS-68, "Diagnosis Procedure"](#) (with Intelligent Key system) or [BCS-128, "Diagnosis Procedure"](#) (without Intelligent Key system).

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 POWER SUPPLY AND GROUND CIRCUIT

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

Refer to [PWC-31, "POWER WINDOW MAIN SWITCH : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.



# DRIVER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## DRIVER SIDE POWER WINDOW DOES NOT OPERATE

### Diagnosis Procedure

INFOID:0000000011278733

#### 1.CHECK FRONT POWER WINDOW MOTOR LH

Check power window motor.

Refer to [PWC-39, "DRIVER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

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# FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

## FRONT PASSENGER SIDE POWER WINDOW DOES NOT OPERATE WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH

### WITH BOTH POWER WINDOW MAIN SWITCH AND FRONT PASSENGER SIDE POWER WINDOW SWITCH : Diagnosis Procedure

INFOID:000000011278734

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

Check power window and door lock/unlock switch RH.

Refer to [PWC-35, "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

Check front power window motor RH.

Refer to [PWC-40, "PASSENGER SIDE : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

## WITH FRONT POWER WINDOW SWITCH ONLY

### WITH FRONT POWER WINDOW SWITCH ONLY : Diagnosis Procedure

INFOID:000000011278735

#### 1.CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH POWER SUPPLY AND GROUND CIRCUIT

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

Refer to [PWC-32, "FRONT POWER WINDOW SWITCH \(PASSENGER SIDE\) : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2.CHECK POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

Check power window and door lock/unlock switch RH.

Refer to [PWC-35, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

## REAR LH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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

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

INFOID:0000000011278736

### 1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-37, "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-42, "REAR LH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH LH ONLY

WITH REAR POWER WINDOW SWITCH LH ONLY : Diagnosis Procedure

INFOID:0000000011278737

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

Check rear power window switch power supply and ground circuit.

Refer to [PWC-33, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-37, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

## REAR RH SIDE POWER WINDOW DOES NOT OPERATE

< SYMPTOM DIAGNOSIS >

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

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

INFOID:0000000011278738

### 1.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-37, "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-43, "REAR RH : Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

WITH REAR POWER WINDOW SWITCH RH ONLY

WITH REAR POWER WINDOW SWITCH RH ONLY : Diagnosis Procedure

INFOID:0000000011278739

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

Check rear power window switch power supply and ground circuit.

Refer to [PWC-33, "REAR POWER WINDOW SWITCH : Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

### 2.CHECK REAR POWER WINDOW SWITCH

Check rear power window switch.

Refer to [PWC-37, "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44, "Intermittent Incident"](#).

NO >> GO TO 1.

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

< SYMPTOM DIAGNOSIS >

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

### Diagnosis Procedure

INFOID:0000000011278740

#### 1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to [PWC-28. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

#### 2.CHECK ENCODER CIRCUIT

Check encoder circuit.

Refer to [PWC-46. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> GO TO 1.

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# POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

< SYMPTOM DIAGNOSIS >

## POWER WINDOW RETAINED POWER OPERATION DOES NOT OPERATE PROPERLY

### Diagnosis Procedure

INFOID:0000000011278741

#### 1. CHECK DOOR SWITCH

Check door switch.

Refer to [DLK-156. "Component Function Check"](#) (with Intelligent Key system) or [DLK-330. "Component Function Check"](#) (without Intelligent Key system).

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning parts.

#### 2. CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> GO TO 1.

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

< SYMPTOM DIAGNOSIS >

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

### Diagnosis Procedure

INFOID:0000000011278742

#### 1.PERFORM INITIALIZATION PROCEDURE

Initialization procedure is executed and operation is confirmed.

Refer to [PWC-28. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Special Repair Requirement"](#).

Is the inspection result normal?

YES >> Inspection End.

NO >> GO TO 2.

#### 2.CHECK ENCODER

Check encoder.

Refer to [PWC-46. "Component Function Check"](#).

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning parts.

#### 3.CONFIRM THE OPERATION

Confirm the operation again.

Is the result normal?

YES >> Check intermittent incident. Refer to [GI-44. "Intermittent Incident"](#).

NO >> GO TO 1.

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## POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

< SYMPTOM DIAGNOSIS >

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### POWER WINDOW LOCK SWITCH DOES NOT FUNCTION

#### Diagnosis Procedure

INFOID:0000000011278743

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

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Replace main power window and door lock/unlock switch.

>> Refer to [PWC-66. "Removal and Installation"](#).



# MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH

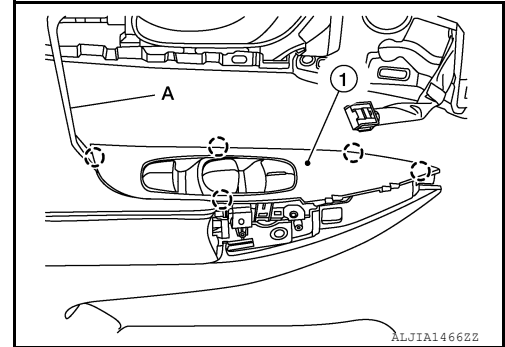
#### Removal and Installation

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#### REMOVAL

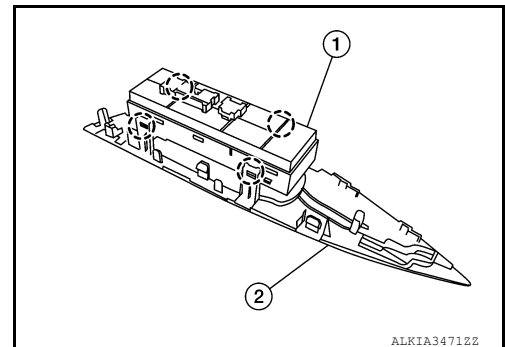
1. Remove the front door pull handle bracket (LH). Refer to [INT-15, "Exploded View"](#).
2. Release pawls using a suitable tool (A) and remove main power window and door lock/unlock switch finisher (1).

○: Pawl



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

○: Pawl



#### INSTALLATION

Installation is in the reverse order of removal.

#### NOTE:

When the main power window and door lock/unlock switch is removed or replaced, it is necessary to perform the initialization procedure. Refer to [PWC-28, "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

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# POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

< REMOVAL AND INSTALLATION >

## POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH

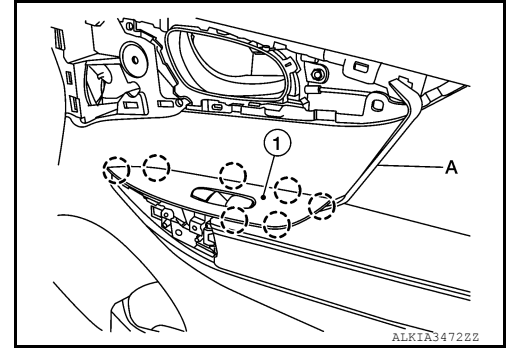
### Removal and Installation

INFOID:000000011278745

#### REMOVAL

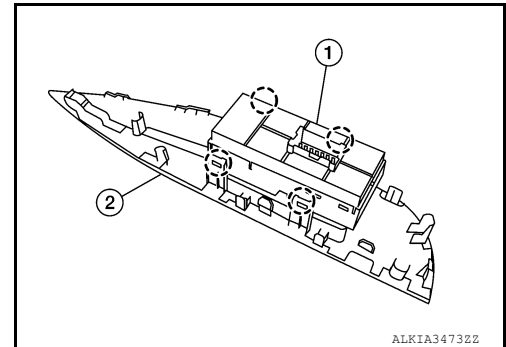
1. Remove the front door pull handle bracket (RH). Refer to [INT-15. "Exploded View"](#).
2. Release pawls using a suitable tool (A) and remove front door power window and door lock/unlock switch finisher (RH) (1).

(○): Pawl



3. Disconnect the harness connector from the front door power window and door lock/unlock switch (RH).
4. Release pawls, then separate front power window and door lock/unlock switch (RH) (1) from switch finisher (2).

(○): Pawl



#### INSTALLATION

Installation is in the reverse order of removal.

#### NOTE:

When the front power window and door lock/unlock switch (RH) is removed or replaced, it is necessary to perform the initialization procedure. Refer to [PWC-28. "ADDITIONAL SERVICE WHEN REMOVING BATTERY NEGATIVE TERMINAL : Description"](#).

# REAR POWER WINDOW SWITCH

< REMOVAL AND INSTALLATION >

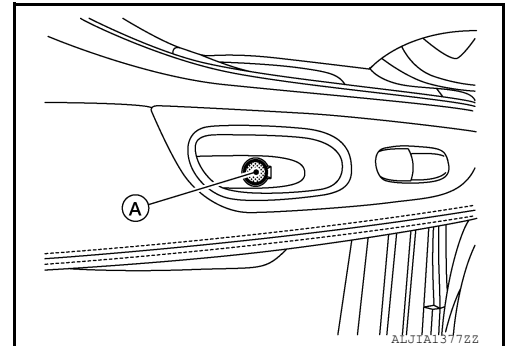
## REAR POWER WINDOW SWITCH

### Removal and Installation

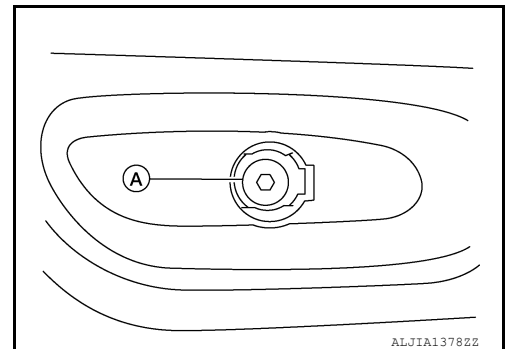
INFOID:0000000011278746

#### REMOVAL

1. Remove screw cover (1).

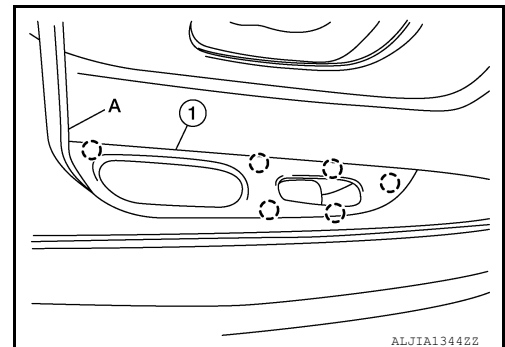


2. Remove screw (A).



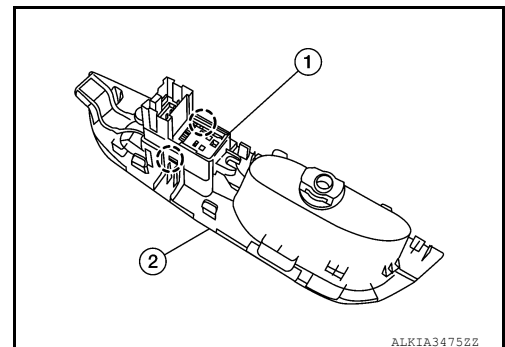
3. Release pawls using a suitable tool (A) and remove rear power window switch finisher (1).

(○): Pawl



4. Disconnect harness connector from rear power window switch.
5. Release the pawls, then separate the rear power window switch (1) from the switch finisher (2).

(○): Pawl



#### INSTALLATION

Installation is in the reverse order of removal.